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**SECTION: INTERNATIONAL BUSINESSES AND EUROPEAN
INTEGRATION**

SUB-SECTION: INTERNATIONAL BUSINESSES

THE SOVEREIGN DEBT CHALLENGE: AN OVERVIEW

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Recent years have seen profound changes in country risk and its components, in the context of crises multiplication and diversification; the sovereign risk, a main country risk component, has undergone important changes, mainly given by mutations in its determining factors; the economy of “indebtedness” represents a reality of the recent years.

In this context, our paper aims to capture new issues related to sovereign risk and its manifestations, and to bring to the fore a number of relevant indicators concerning the indebtedness problems. Currently, the increasing sovereign obligations, the Greece 2010 episode and the real sovereign debt crisis testify the important implications that the national economic policy decisions have on entire nations. In general, the countries with servicing difficulties present a total external or public debt that overcomes the average of the emerging states; however, we can not accurately identify a threshold beyond which we can say that a state is overly indebted. Therefore, questions such as “Starting from what point is a state overly indebted?” or “What is the cause of the excessive debts of a state?” are fully justified and the answer or answers deserve being sought.

Studies on the relationship between various economic variables and the countries ability to deal with external debt problems are present in the country risk literature since the 1970s; beginning with authors such as Frank and Cline (1971), which gave priority to external debt service indicators such as Exports, Imports / GDP, Imports / Reserves, and continuing with other specialists, among whom we mention Saini and Bates (1978), Abassi and Tafler (1982), Haque, Brewer and Rivoli (1990), North (2001) Bouchet (2003), Meunier (2005), Longueville (2010) and many others, many ratios and indicators were carefully analyzed.

In our short study, we also present a number of recent aspects concerning sovereign risk, and we analyze some relevant indicators, using statistical data, for four countries: Romania, Greece, Hungary and Bulgaria. We underline the fact that, even if sovereign risk indicators are in the good intervals, the crisis risk remains present, especially because of the liquidity issues. For us, this brief paper opens the way for a much broader study, which aims to develop a model of sovereign risk analysis, the dependent variable, the probability of default, being explained by the evolution of the selected relevant indicators.

Keywords: sovereign risk, external debt, sovereign crisis, external debt indicators, thresholds.

JEL Classifications: F3 (F31, F34).

I. Sovereign risk as a component of Country risk

The study of country risk has become increasingly important towards the end of the 20th century, prompting interest from both the academic and the professional sphere (banks, multinational companies, insurance companies, etc.), financial markets also becoming more sensitive to the information on country risk. Of course, this increase in importance is not accidental, as it could be attributed to the multiplication of risks, their increasingly frequent and intense occurrence, but also to the mutations of the political and economic international environment. In a general manner, we can define country risk as *a compound risk, representing all elements emanating from a state’s environment and which are able to affect a banking institution, an industrial or*

financial investor, an exporter and generally any foreign trader performing an operation in that country – political, commercial, financial and specific natural risks.

Country risk is often seen as *a tool used to assist the decision making process* (Meunier 2005: 16); the results of the studies related to this type of risk should be immediately usable by bankers, investors or exporters; from this perspective, it is situated at the confluence of the business world and the economic science. Sovereign and transfer risks are two classic forms of risk manifestation for an agent (bank, investor) who is conducting economic and financial operations in a foreign country. About the sovereign risk, identified as the “probability of default on sovereign external debt” (Heffernan 1986: 7), we can state that:

- it covers only the loans given to foreign governments (or guaranteed by them), loans that compound that country's foreign debt; it may affect both public and private legal subjects;

- this type of risk arises from the likelihood that at some point the government of the debtor country could not or would be unwilling to repay its external debt, the forms of manifestation being represented by the risk of rescheduling, of renegotiation or of repudiation of the foreign debt;

- there is a lack of legal approach; countries don't go bankrupt; despite waves of sovereign defaults and restructurings, the statement is still true at its core, the reason for this is to be found in the concept of sovereignty (Andritzky 2006: 15).

In this brief study, we intend to capture new issues related to sovereign risk and its manifestations, and to bring to the fore a number of relevant indicators in relation to the indebtedness issues. The probability of crisis remains difficult to quantify, but the key challenge is, for both academics and managers, to create a system of early warning indicators that highlight the macro and microeconomic fragilities of the states with risk of default. Evolution of certain values will be presented in the case of Romania and other countries in the region, some remarks being made on this occasion.

II. Brief overview of some recent issues concerning the sovereign debt. The indebtedness of an economy

Recent years have seen profound changes in country risk and its components, in the context of crises multiplication and diversification; in turn, sovereign risk has undergone important changes, mainly given by mutations in its determining factors. A distinction can be made among countries with strong currencies (EUR, USD, GBP, etc.), on one hand, and states with weaker currencies, on the other hand:

Table 1 – Specificities of sovereign risk according to the concerned states

| | Countries with strong currencies (developed ones) | States with weak currencies (generally developing countries) |
|---|--|--|
| Public debt/GDP | - the progressive increase in the share of public debt to GDP after 2008; | - maintaining a relatively constant level of public debt to GDP; |
| The dynamics of public debt/solvency crisis risk/default risk | <ul style="list-style-type: none"> - moderate risk/easy refinancing (even in the case of a high debt), strong currency, <i>real vaccine which immunizes states with default risk</i>; - positive feedback from the rating agencies; - the distinction between sovereign risk in foreign currency and sovereign risk in local currency disappears; - sovereign risk related to foreign currency debt, quasi -inexistent; - refinancing risk is lower and does not imply solvency risk; - besides the domestic financial market, central banks can provide the necessary funding; in the euro zone, government bonds are often purchased by commercial banks; in the U.S.A., Asian central banks currently buy treasury bills; - solvency depends directly on the central bank's monetary policy (interest rate guidelines, required reserves, mechanisms of action). | <ul style="list-style-type: none"> - high risk, especially when public debt to GDP evolves (1-3 points per year), based on average values (40-60% of GDP); - average or negative assessments from rating agencies; - the distinction between debt in foreign currency and the one in local currency can be operated; - the analysis of debt sustainability is achieved through budgetary balances and current balances, external liquidity and vulnerability to exogenous shocks analysis; - the risk of default, solvency and liquidity are closely related; - the importance of the good faith, of the willingness to pay; - degradation of solvency hinders refinancing difficulties and, as a consequence, liquidity crises; - the assessment of sovereign risk is influenced by the indebtedness of the private sector. |

Source: processed after Guy Longueville and Eric Vergnaud, 2010.

A country with a particular situation is Greece; until about two years ago, the Greek state was part of a group of countries characterized by the degradation of public sector solvency, in the absence of liquidity constraints. A year later, the rising of public debt to GDP has been dramatic, and the negative perceptions of solvency in the various markets has generated significant difficulties in financing and refinancing, boosted by speculative attacks. Solvency degradation can be attributed to the effects of the economic crisis on the budget balance, the lack of reliable measures for the purposes of recovery of public finances, the presence of some irregularities discovered late, in the context of a public accounting opacity of the Greek state (Longueville 2010: 11). Also, the evaluations provided by the rating agencies have contributed to the increase of the difficulties in refinancing, their procyclical effect being evident.

Among the factors that increase the country risk and its sovereign component, a state's indebtedness appears to us as having a particular importance. The situation recorded in South America in the mid 1980s, influencing the development and manifestation of the modern country risk, showed the world that a sovereign state can reach a point where it is no longer able to pay a debt in a foreign currency.

In general, the countries with payment difficulties present a total external or public debt over the average of the emerging nations (Meunier 2005: 23); however, we can not accurately identify a threshold beyond which we can say that a state is overly indebted. Therefore, questions such as

Starting from what point is a state overly indebted? or What is the source of overly indebtedness of a state? are fully justified and the answer or answers deserve being sought.

Whichever method is used in the study of country risk – rating systems, analytical techniques such as reports, econometric techniques, etc. – some indicators are irreplaceable (as inputs), holding a special relevance when it comes to the global risk assessment specific to an economy.

In the following table we present, without claim of completeness, few variables/indicators that have already become classics, whose observation is relevant in the context of analysing a state from the perspective of the country/sovereign risk:

Table 2 – Different indicators of the sovereign risk according literature

| Variable or indicator | Characteristics and significance |
|--|--|
| GDP/capita, GNP/capita | <ul style="list-style-type: none"> - genuine indicators of the wealth of a state; - allow the classification of the states according to their wealth; a small value, for example, points to a poor state, with probable difficulties in meeting its obligations to the outside and, consequently, a high country risk. |
| External debt/capita | - quantify the level of indebtedness, but also the ability to contract new loans safely. |
| External Debt/GDP | - specific indicator of the indebtedness of a state. |
| Imports/GNP | - measures the relative size of imports and is an indicator of the degree in which the trend of the national income is affected by a potential decision to reduce import due to the difficulties in managing debt. |
| Growth rate of exports | - exports can be seen as the cheapest source of foreign currency, countries with favorable trend in exports comprising good solvency premises. |
| Interest paid/debt service | - measures the cost of debt and the repayment ability of a state. |
| Inflation rate | - the inflation rate is an indicator of economic performance, in close conjunction with the monetary policy. The inflationary phenomenon involves reducing the real value of a state's income and causes a depreciation of the currency, reducing a country's ability to repay its debt. |
| Foreign direct investment/capita, foreign direct investment/GNP | - most theorists consider that a significant concentration of foreign firms in one country may be positively correlated with the risk of expropriation, because governments could consider this fact as an obstacle to economic efficiency of a state, foreign companies appropriating on the other hand a too large fraction of the profits made. |

Source: processed after Bouchet, Clark, Gros Lambert 2003, Hurson, Doumpos, Ricci-Xella, Zopounidis 2006, Meunier, Sollogoub 2005, Nagy 1984, and personal considerations.

Of course, we can bring to the fore many more variables and indicators that are important when we study an economy in terms of the emanated risk. But what we want to emphasize here is that the evolutions of the variables and those of the indicators are currently taking place very rapidly,

which requires a continuous analysis of the dynamics. Studies on the relationship between various economic variables and the countries ability to deal with external debt problems are present in the literature since the 1970s; from authors such as Frank and Cline (1971), which gave priority to external debt service indicators such as Exports, Imports / GDP, Imports / Reserves, and continuing with other specialists, among whom we mention Saini and Bates (1978), Abassi and Tafler (1982), Haque, Brewer and Rivoli (1990), North (2001) Bouchet (2003), Meunier (2005), Longueville (2010), were carefully analyzed the *variables that form the backbone of the economic and financial aspects of country risk analysis* (Bouchet, Clark, Gros Lambert 2003: 42).

Several elements are relevant when we propose an analysis of sovereign debt; first, *solvency and liquidity*, and, secondly, *external debt sustainability* (Meunier and Sollogoub 2005: 29). As regards solvency, the essence of the analysis consists in reporting the debt stock to the wealth of a state. Sustainability requires a more nuanced and dynamic analysis; in this context, the evolution of external debt relative to the evolution of global wealth is particularly important.

Liquidity refers to cash issues, relevant being the limit – the maximum level of debt – to which a state is able to repay; the elements to be compared are, of course, available liquidity and the amount refunded. When we try sizing the "safe" external debt, it seems useful to relate it to the state's assets, translated mainly by GDP. From the perspective of this reporting of external debt, to assets (GDP) or income (exports), the thresholds most often mentioned in the literature are 50% and 150%. The issue of the alert thresholds is extremely complex and, although they are widely used in the study of country risk, we believe that they do not offer a high degree of reliability. The diversity of the developing states, the extremely fast evolution of economic climate, the lack of a permanent correlation between the level of debt and the probability of entry in the default, require addressing risk from case to case.

III. Case study – a glimpse on the indicators of four countries

We will continue by presenting the evolution of some indicators and ratios that we consider relevant for sovereign risk analysis, for the following countries: Romania, Greece – the well-known example of sovereign debt problem, Bulgaria and Hungary.

| | | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|-----------------|--------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Romania | GDP/Capita Th. USD | 3,81 | 4,12 | 4,35 | 4,73 | 4,95 | 5,34 | 5,69 | 6,12 | 5,70 |
| | GDP growth | 5,7 | 5,1 | 5,2 | 8,4 | 4,2 | 7,9 | 6 | 9,4 | -8,5 |
| | Inflation r. % | 34,45 | 22,48 | 15,37 | 11,85 | 8,99 | 6,59 | 4,83 | 4,84 | 5,58 |
| | TED/GDP | 0,23 | 0,20 | 0,25 | 0,28 | 0,31 | 0,37 | 0,40 | 0,52 | 0,69 |
| | TED/Exports | 0,94 | 1,04 | 1,09 | 1,09 | 1,19 | 1,48 | 1,61 | 1,65 | 2,34 |
| | Ext. Db. Ser. Bil USD | 2,56 | 3,18 | 3,56 | 4,71 | 6,91 | 8,64 | 11,56 | 18,03 | 16,33 |
| | Tot. Reserves monhs of imports | 2 | 4 | 4 | 5 | 5 | 6 | 6 | 5 | 8 |
| | FDI Bil US | 1,15 | 1,14 | 1,84 | 6,44 | 6,48 | 11,39 | 9,92 | 13,88 | 6,31 |
| Greece | GDP/Capita Th. USD | 12,93 | 13,35 | 14,11 | 14,70 | 15,01 | 15,75 | 16,39 | 16,52 | 16,15 |
| | GDP growth | 4,2 | 3,4 | 5,9 | 4,6 | 2,2 | 4,5 | 4,5 | 2 | -2 |
| | Inflation r. % | 3,65 | 3,91 | 3,43 | 3,02 | 3,48 | 3,31 | 2,99 | 4,23 | 1,35 |
| | TED/GDP | | | 0,97 | 0,98 | 0,99 | 1,12 | 1,21 | 1,41 | 1,62 |
| | TED/Exports | | | 1,71 | 1,34 | 1,30 | 1,29 | 4,5 | 1,08 | 8,53 |
| | Ext. Db. Ser. | | | | | | | | | |
| | TRMI | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| | FDI Bil USD | 1,58 | 0,63 | 1,33 | 2,10 | 0,65 | 5,4 | 1,95 | 5,30 | 2,41 |
| Bulgaria | GDP/Capita Th. USD | 3,61 | 3,80 | 4,03 | 4,33 | 4,63 | 4,96 | 5,30 | 5,66 | 5,38 |
| | GDP growth | 4,2 | 4,7 | 5,5 | 6,7 | 6,4 | 6,5 | 6,4 | 6,2 | -4,9 |
| | Inflation r. % | 7,36 | 5,80 | 2,34 | 6,14 | 6,04 | 7,41 | 7,57 | 11,95 | 2,47 |
| | TED/GDP | | | 0,53 | 0,61 | 0,71 | 0,82 | 0,95 | 1,03 | 1,07 |
| | TED/Exports | 1,55 | 1,51 | 1,33 | 1,19 | 1,34 | 1,03 | 1,31 | 1,31 | 1,74 |
| | Ext. Db. Ser. Bil USD | 1,37 | 1,39 | 1,11 | 2,34 | 3,96 | 2,73 | 4,19 | 5,37 | 5,21 |
| | TRMI | 5 | 6 | 6 | 6 | 5 | 5 | 5 | 5 | 4 |
| | FDI Bil USD | 0,81 | 0,90 | 2,09 | 2,66 | 4,31 | 7,75 | 13,21 | 9,92 | 7,02 |
| Hungary | GDP/Capita Th. USD | 1,36 | 1,41 | 1,48 | 1,55 | 1,50 | 1,66 | 1,68 | 1,69 | 1,58 |
| | GDP growth | 4,1 | 4,4 | 4,3 | 4,7 | 4,7 | 4 | 1 | 0,6 | -6,3 |
| | Inflation r. % | 9,14 | 5,53 | 4,38 | 6,78 | 3,55 | 3,87 | 7,93 | 6,06 | 4,2 |
| | TED/GDP | 0,60 | 0,59 | 0,70 | 0,68 | 0,62 | 0,59 | 0,60 | 0,73 | 0,75 |
| | TED/Exports | | | 0,60 | 0,64 | 0,76 | 0,75 | 0,96 | 0,98 | 1,81 |
| | Ext. Db. Ser. | | | | | | | | | |
| | TRMI | 3 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 5 |
| | FDI Bil USD | 3,94 | 3,01 | 2,17 | 4,28 | 7,62 | 19,52 | 70,84 | 66,89 | 2,78 |

Table 3 – Sovereign risk ratios and indicators (Romania, Greece, Bulgaria, Hungary)
Source: World Bank, 2011

Analyzing the situation in terms of the established warning thresholds, a number of remarks can be made; in the case of the total external debt to GDP ratio, the evolution in Romania in the period 2001-2009 was an upward one, the critical threshold of 50% being exceeded in 2008 (52 %). In 2010, the indicator reaches 75%, and we can already speak of a over-indebtedness issue. Inflation rate, although rising, does not reach the benchmark value of 10.5%, overcome by countries in crisis such as Turkey in 2000, Indonesia in 2002 or Brazil in 2003. Meanwhile, total external debt to exports is growing significantly, exceeding the alert threshold of 150% in 2007. In the case of the sovereign debt crises of the 1990s (Argentina, Brazil, Ecuador, Uruguay, etc..) the level of this indicator reached values above 250%. Romania's liquidity reserves, in months of imports, however, kept a high level, the benchmark of three months being significantly exceeded. Moreover, it can be stated that these reserves could even be resized, creating positive effects in other areas.

For Greece, the issues related to the debts size are accompanied by an extremely low level of

reserves, which entitles us to talk about liquidity risk. One of the specific problems of the Greek state, unlike other countries examined, is the impossibility of implementation of its own monetary policy.

Hungary, after some problems related to the external debt in the mid-1990s (total external debt to exports of 250% in 1994), managed to bring under control the evolution of its indicators (91% in 1997 and, during 2000, values under 200%); in the same time, inflation rate is relatively low.

A higher level of external debt to GDP stands for Bulgaria, but the reserves are high enough to dissipate the liquidity risk. Also, the inflation rate is well below the alert threshold.

Liquidity risk appears as an extremely important one, and this because a number of seizures recorded in the last period were stimulated by it, even without indebtedness; the crises without over-indebtedness (Mexico, 1994, Turkey, 2000, etc.) have multiplied, making predictions more and more difficult: *pure liquidity crises occur at total external debt to GDP ratios of less than 45%* (Manasse and Roubini 2005: 57).

IV. Short conclusion and further researches

The *economy of indebtedness* is a reality of the recent years. Over-liquidity facilitated credits, the selection of borrowers being more and more permissive. In this context, the country risk analyst is increasingly concerned about sovereign crisis and its consequences; he raises the natural question, appealing to economic history: *What are the states that have recently experienced a sovereign crisis?* The answer will be surprising, inducing the idea of a reduced probability of default of the states. What the answer to that question hides is the fact that a significant number of states have avoided collapse thanks to the International Monetary Fund, or as a result of debt restructuring. Beyond liquidity risk, with the highest visibility, a number of other fragilities are particularly noteworthy: the current account deficit, the existence of an overvalued currency, the excessive government deficit, the high governmental debt, the difficult political situation, etc.

In Europe, many countries are facing problems due to high sovereign debt. Not only Greece, but also Spain, Portugal, Ireland or Italy represent well-known cases. Among the causes, we can mention the lack of controlling government deficits, the recession effects, the public accounting opacity, or the inability to use independent monetary policies.

In order to study the default probability for a given state, it is extremely important to take in consideration the economic fragility. A sovereign risk analysis is advised to include *a 360 degree review of the economy, including the banking system, political stability, monetary policy, and the current regime* (Andritzky 2006: 71). Finally, we add that, in addition to the specific vulnerabilities of an economy, we are also interested in the state's willingness to pay. Even today, not all countries are of *market-friendly* type, some continuing to compare the gains and the losses obtained for the fulfillment of international obligations, namely repudiation of foreign debt.

This short paper opens the way for a broader study that we will propose, and which aims to develop a model of sovereign risk analysis, the dependent variable, the probability of default, being explained by the evolution of the selected relevant indicators.

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COMMON AGRICULTURAL POLICY FROM HEALTH CHECK DECISIONS TO THE POST-2013 REFORM

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The paper proposed for being presented belongs to the field research “International Affairs and European Integration”. The paper entitled “Common Agricultural Policy from Health Check decisions to the post-2013 reform” aims to analyze the Common Agricultural Policy (CAP) from the Health Check adoption in November 2008 to a new reform post-2013. The objectives of the paper are the presentation of the Health Check with its advantages and disadvantages as well as the analysis of the opportunity of a new European policy and its reforming having in view that the analysis of Health Check condition was considered a compromise.

The paper is related to the internal and international research consisting in several books, studies, documents that analyze the particularities of the most debated, controversial and reformed EU policy. A personal study is represented by the first report within the PhD paper called “The reform of CAP and its implications for Romania’s agriculture”(coordinator prof. Gheorghe Hurduzeu PhD, Academy of Economic Studies Bucharest, Faculty of International Business, research studies in the period 2009-2012).

The research methodology used consists in collecting and analysis data from national and international publications, their validation, followed by a dissemination of the results in order to express a personal opinion regarding CAP and its reform. The results of the research consist in proving the opportunity of a new reform due to the fact that Health Check belongs already to the past. The paper belongs to the field research mentioned, in the attempt to prove the opportunity of building a new EU agricultural policy.

The challenges CAP is facing are: food safety, environmental and climate changes, territorial balance as well as new challenges-improving sustainable management of natural resources, maintaining competitiveness in the context of globalization growth, strengthening EU cohesion in rural areas, increasing the support of CAP for member states, farmers and active farmers-, sign in outlining the CAP contribution to the “EU 2020 Strategy”.

This paper aims to prove that the future CAP should become a more sustainable, balanced, better focused, simpler and more efficient, more responsible to the needs and expectations of EU citizens.

Key words: Common Agricultural Policy, reform, rural development, Health Check, EU 2020 Strategy

JEL Classification Code: Q18, O13, F59

I. Introduction

The paper presented belongs to the research field “International Affairs and European Integration”. Entitled “Common Agricultural Policy from Health Check decisions to the post-2013 reform”, it aims to analyze the Common Agricultural Policy (CAP) from the Health Check adoption in 2008 to a new reform post-2013 and tries to prove the need and importance of the reform. The objectives of the paper are the presentation of the Health Check with its advantages and disadvantages as well as the opportunity of a new EU agricultural policy need and its reforming having in view that the analysis of the health condition of this policy was considered a compromise.

II. Analysis of the research

The paper is related to the internal and international research consisting in several books, studies and documents that analyze these aspects of the most debated, controversial and reformed EU policy. Health Check was analyzed by several Romanian and foreign authors, the conclusion being that it made only small technical steps in the path of the reform. The Communication of the European Commission regarding Health Check represents a document that define that so-called analysis of the Health Check. In this context, the opportunity of a new EU agricultural policy and its reforming represent a subject deeply debated by EU member states and as well as a theme analyzed through many studies, documents like the research made by big European think-tank, the position of European Commission and European Commissioner for agriculture, regarding CAP after 2013 regarding the needs of carrying on the reform. A personal study is represented by the first report within the PhD paper called “The reform of CAP and its implications for Romania’s agriculture”(coordinator prof. Gheorghe Hurduzeu PhD, Academy of Economic Studies Bucharest, Faculty of International Business, research studies in the period 2009-2012).

III. Research methodology

The research methodology used consists in collecting and analysis of internal and international data, their validation followed by the dissemination of the results with a view to building and expressing a personal position regarding CAP. Health Check belongs already to the past and for that reason the paper tries to prove the need of building a new EC agricultural policy and of reform.

IV. Results of the research

Following the collecting and analysis of data regarding CAP since 2008 to present and after 2013, the results of the research can be expressed by the need of building a new EU policy having in view that Health Check, through its changes, made only small steps in the direction of a new reform.

Common Agricultural Policy (CAP), one of the first common policies adopted by European Union (EU) has been, in over half of century of existence, the most debated, controversial, analyzed and reformed EU policy.

If in the beginning it was based on output subsidy and protection of internal market against non-European producers, subsequently subsidy aimed to support directly the income, not the stimulation of the production, focusing on rural development and environment protection.

Health Check was adopted in November 2008 by the ministers of agriculture of the EU member states following the political agreement regarding the health condition of CAP and represents a package of amendments to policy regulations, amendments of small steps only at technical level towards the reform. Considered as being a compromise, Health Check gave the member states a significant number of instruments to support the producers. The changes adopted solved difficult problems that the Fischler Reform didn’t in order to avoid being rejected by member states. So, intervention on markets is reduced, modulation is extended and decoupling is carried on:

- national milk quotas were supplemented with 1% per year, going to be eliminated in 2015;
- in case of wheat bread, buying from the market at intervention price were limited to 3 million tonnes (on the entire EU), interventions over this quantity being done through public auction (at a lower price);
- keeping land fallow was eliminated (set-aside-the obligation to let a part of lands not cultivated in order to limit the offer of products);
- modulation foresees that payments for farms that receive more than 5000 euro to be reduced by 10% till 2012 (and those for farms receiving more than 300,000 euro to be extra-reduced by 4%), money being transferred to the rural development budget;

- decoupling, essential result of the 2003 Reform, achieved by introducing the single payment scheme at farm level (and in case of new member states the single area payment) was imposed also to those subsectors from some countries that chose the maintaining of coupled support [Luca 2009b: 15]

Among the disadvantages of Health Check are:

- deficiency in the implementation of guidelines that were going to be written by each member state;
- refuse of the Commission to discuss a proposal in order to equalize the rates of direct payments in the entire EU;
- falling to adopt an upper limit to the level of direct farm payments, big farms being further the main beneficiaries of CAP, in contradiction with its objectives to support family farms and to preserve rural environment;

The main provisions of Health Check were those that involve the disappearance of market regulation tools and those of rebalancing production support (crop, livestock, horticulture, etc.). While at European level discussions were held on subjects like: management tools of food market production, modulation, conditionality, biodiversity, price volatility of agricultural products, environment protection, climate changes, etc., at internal level farmers protested against decisions taken by state institutions regarding: fuels excise duties reduction, low amount received as payment area and falling to pay it on time, market of agricultural products, low price received by farmers within the pathway to recovery.

Debates regarding limits and modulation finalized in decisions providing: low limitation: minimal limit to 1 ha or 100 euro; for Portugal, Hungary, Slovenia the limit remains 0,3 ha; upper limitation: no legislative measure; compulsory modulation: an increase of 5% distributed in 4 steps, starting with 2009 (2%) and 1% for 2010-2012; progressive modulation: an additional discount of 4% for farms over 300,000 ha.

Health Check resumes to less tools for market regulation and for funds transfer from the first pillar to the second one, financing of the rural development programs. Although most member states were aware that a reduction of agriculture budget could not be avoided, the debates within Health Check could not define a common position of member states, not even as principles, regarding the direction of the reform after 2013.

Health Check is already a matter of past, debates within EU are subject to the new CAP after 2013 and its reform.

After the extended public debate organized by the European Commission in early 2010, the Council discussed the reform over four successive presidencies, the European Parliament adopted a report by its own will regarding CAP after 2013. The conclusion after these discussions was that the future CAP should remain a strong common policy structured around its two pillars.

The CAP is facing challenges like: food safety, environment and climate changes and territorial balance. Although CAP has developed, many changes are still needed in order to answer to new challenges like the improving of the sustainable management of natural resources (water, biodiversity, soil), the maintenance of competitiveness in the conditions of globalization growth, the recovery of the diversity of agricultural structures and output in EU, the strengthening of the territorial and social cohesion in rural areas of EU, the increase of CAP support for member states, farmers and active farmers.

Responding to these challenges, CAP will also contribute to the “EU 2020 Strategy” concerning: smart growth: by increasing resource efficiency through technology and innovation, developing high added value and quality of products, green technologies, investing in training, providing social incentives in rural areas; sustainable growth: ensuring sustainable land management through: providing environmental public goods, avoiding to lose biodiversity, promoting renewable energies, reducing gas emissions and developing the potential of rural areas; inclusive growth: by unlocking economic potential in rural areas, developing local markets and jobs,

sustaining the restructuring of agriculture and supporting farmers' income [European Commission]

The main three objectives of the future CAP are: viable food production, sustainable management of natural resources and climate action, balanced territorial development. The achievement of these objectives depends to the maintaining of public support for agriculture and rural areas.

An agricultural policy designed at EU level is necessary in order to ensure fair conditions with a common set of objectives, principles and rules and provides a more efficient use of budgetary resources than the coexistence of national policies.

The main orientation of the public debate is reflected by three general policy options which rely on the structure the policy's two pillars: an enhanced Status-quo; a more balanced, focused and sustainable support; less market tools and reduced income support.

With a view to improve the quality of legislative proposals, the improvement of smart regulation, simplifying the policy and reduction of administrative charges are required.

An important step for such an important policy like CAP is represented by the fact that the Parliament will be involved together with the Commission in the process of taking decisions and will respond in a better way to the expectations of farmers, inhabitants in rural areas, to citizens in general. The legal proposals will be submitted later this year and legal documents might enter into force in 2014.

The future CAP represent a subject extremely debated in working-papers, reports and conferences by several European think-tanks having different profiles from international and commercial relations to land use and food safety. Among these are: Groupe de Brouges, French Institute for International Relations, Land Use Policy Group, European Centre for International Political Economy, Notre Europe, Agriculteurs de France.

Europe must stimulate the building of a modern agriculture, to create working places and to ensure a fair management of the EU agricultural area. The future CAP should contain a more equitable distributed first pillar and a second pillar focusing more on competitiveness and innovation, climate change and environment. A special attention should be given to the development of rural area.

CAP reform must continue in order to promote competitiveness, efficient use of resources, adoption of appropriate measures in order to ensure food safety, social and territorial balance in the context of climate changes, taking into account the constraints of limited budgetary resources and the impact of the economic crisis in agriculture.

The future CAP should become a more sustainable, balanced, better targeted, simpler, more efficient, more responsible in order to meet expectations of the EU citizens.

V. Conclusions

The paper is related to the research papers in the field "International Affairs and European Integration" and tries to complete the studies regarding the opportunity of the CAP reform.

As Health Check represented only small steps in the direction of reform, being already a problem of past, the paper reflects the need of building a new CAP and of a reform post-2013. The new challenges CAP is facing will contribute to the "EU 2020 Strategy".

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SOME ASPECTS CONCERNING THE DIPLOMATIC PROTECTION OFFERED BY THE EUROPEAN UNION FOR THE CITIZENS IN THE PRESENT ECONOMIC SITUATION

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Based on the particular meaning that is specific to European citizenship and that is involved in the practice of citizenship, it causes modern concepts of citizenship which are derived from the universal norms of citizenship.

It's important to underline that the European citizenship is a concept which does not replace the National citizenship, but it is a new modern concept which has a real connection with the national citizenship and why not connected with the Romanian citizenship.

From this point of view, emphasize in this paper that the diplomatic and consular authorities from member states of the Union have to guarantee the protection of the European citizens in third countries in which their state is not represented.

The cooperation of the diplomatic representatives is an important point for the Foreign Politic of the European Union.

Keywords: citizenship, European citizenship, diplomatic/consular protection, European Union

Cod JEL:K33

I. Introduction

The introduction of citizenship of the Union constitutes one of the best-known innovations made by the Treaty signed at Maastricht on 17 February 1992¹. Significantly, Part two of the EC Treaty, which is expressly devoted to (and entitled) “Citizenship of the Union”, is located immediately after “Principles”² and before “Community policies”³, which marks out its general importance within the system of the Treaty. Whereas the most direct and immediate precedent for the provisions at present set out in Arts 17-22 EC may be found in a proposal put forward by the Spanish Government during the Intergovernmental Conference which resulted in the adoption of the Maastricht Treaty⁴, the idea of identifying a status for individuals benefiting from the process of European integration and its correlative label of “citizen” of the Community or of the Union goes back to the early 1970s. Following an initial initiative at the Paris Summit in 1972, the subsequent summit in 1974 gave rise to a plan for a standard passport for all nationals of the Member States, which was to be followed by a passport union and a core of special rights characterizing the position of the Community citizen. In pursuance of the mandate conferred upon it by the summit, the relevant working party presented in 1975 the so-called Tindemans Report, which contained a chapter on the creation of a “Citizen’s Europe”.

Those initiatives of the national governments were followed by initiatives from the Commission⁵ and the European Parliament. The latter adopted a resolution on 12 December 1977⁶ and most significantly the *Draft Treaty establishing the European Union* of February 1984, Art. 3 proposed introducing citizenship of the Union⁷. The Single European Act of 17-18 February 1986 (“SEA”), which entered into force on 1 July 1987, did not make any contribution towards translating the numerous projects for Community citizenship into law, with the result that the expression itself did not appear in the Treaty despite the preparatory papers which had given rise to the presentation of the report of the Adonnino Committee on a people’s Europe. Nevertheless, as a result of the Maastricht Treaty, the progress made by European integration and the

diminished importance of economic factors as the determinant for Community legislation, together with the emergence of a higher level of democracy in the Community's institutional life, led to formal recognition of the notion of citizenship of the Union⁸ identifying a special status governed by Community rules for Community citizens.

European citizenship is often regarded by skeptics as a threat to national citizenship which has always been considered „the fortress of state sovereignty and of the national identity. According to Deloye, these fears are well grounded as the „European citizenship is the cause of the reorganization of identities.”¹⁰ Despite its complementary and dispersed nature, European citizenship is a challenge to the structure of the European identity or identities established by the nation-states¹¹. This is because most people assume that the acquisition of European citizenship involves creating a new European identity. The most appropriate example of this fact is Denmark's rejection of the Maastricht Treaty, because of concerns expressed in this regard. Denmark's negative response to the concept of European citizenship was followed by a statement of the Council of Europe underlining the fact that none of the provisions of the Maastricht Treaty would replace national citizenship¹². But not even the founding Treaties of the Communities - which stated that this should be “based on the substantiation of a union, as close as possible among the peoples of Europe”¹³ and not to create a new nation¹⁴ – represented satisfactory guarantees in this respect. As Deloye pointed out, any attempt to impose a new configuration of norms and identities by means of European citizenship will come up against the opposition of many social actors¹⁵.

The possibility of combining various levels of identity is confirmed in great part by the results of the Eurobarometer survey on European and national identity of 2002. Thus, 59% of the Europeans, unlike in 1999¹⁶ - when the figure was 52% - admit certain European components in their national identity¹⁷. In early 2004, after including the 10 candidate states, the figure fell by 3%¹⁸.

In the studies dedicated to this subject, an author considered that the appreciation of European citizenship is determined from the angle of the pre-existing factors of the social nature that creates identity¹⁹. According to another point of view expressed in these studies, European citizenship can be structured by law, and the continual progress - influenced by the gradual enhancement in the legal status - can provide the essential condition for an active European citizenship²⁰.

Therefore, several questions come up:

What is the right to consular protection for EU citizens?

Every citizen of the European Union who is in a country outside the EU, in which the Member State of which he/she is a national is not represented, is entitled to protection by the diplomatic or consular authorities of any Member State represented there. EU citizens are entitled to protection on the same conditions as the nationals of that State.

In 1995, Decision 95/553/EC was adopted by the representatives of the governments of the Member States to implement this entitlement.

What kind of assistance is provided?

When an EU citizen seeks such help, he or she must produce a passport or identity card as ***proof of nationality***. If these documents have been stolen or lost, the embassy may accept any other proof.

Diplomatic and consular representations giving protection have to treat a person seeking help as if he/she were a national of the Member State they represent.

The protection offered by embassies/consulates of other EU States comprises:

- Assistance in cases of *death*,
- Assistance in cases of serious *accident* or *illness*,
- Assistance in cases of *arrest* or *detention*,
- Assistance to victims of violent *crime*,
- The relief and *repatriation* of distressed Union citizens.

What is the European Commission doing in this area?

In November 2006, the Commission adopted a *Green Paper* on diplomatic and consular protection of EU citizens in third countries (COM(2006)712), which set out ideas to be considered for strengthening this right of EU citizens.

Following a public consultation, in December 2007 the Commission presented an **Action Plan** (COM(2007)767) entailing the proposed measures for 2007-2009. The plan focuses on enhancing consular protection and increasing awareness of this right among citizens. The Action Plan will be evaluated in the context of a Commission's Communication in March 2011²¹.

II. Definition of concept.

The history of the transformation of the individual in the community legal order begins with the artificial creation of the „market citizen“²², i.e. the person having economic freedoms, quality which confers him the judicial enforcement to play his role in the process of creating the single European Union market. The Economic European Community (EEC) Treaty contains provisions to that effect, and in 1962, even before the Court of Justice of the European Communities had acknowledged the direct effect of fundamental freedoms, the Commission adopted the point of view according to which the individuals in the Community legal order did not exercise their fundamental rights as simple factors of production, but as holders of civil rights. Illustrative in this respect is the Stauder case (1969) which dealt with the personal right of the petitioner who wished to purchase products subsidized by the European Community at a reduced price without having to reveal his identity.

We remind you that the European citizen is a person who has the nationality of a state included in the European Union, but, by contrast, holders of fundamental freedoms are all those upon whom the Community legal order has conferred such rights.

III. Analyses concerning the exercise of diplomatic protection by the Community for the benefit of citizens of the Union

According to the art. 20 EC the citizens of the Union, in the territory of a third country in which the Member State of which he or she is a national is not represented, have the right to “protection by the diplomatic or consular authorities” of any Member State on the same conditions as the nationals of that State.

This article calls to mind the classic institution of the diplomatic protection of citizens, by virtue of which, provided that certain conditions are satisfied, there is a right to protection from the State for its own nationals who have been harmed by the conduct of another State in breach of international law²³.

Among the requirements which a State must satisfy in order lawfully to exercise diplomatic protection is that the individual in whose interest the State intervenes must be a national, although there are exceptional cases in which a State may exercise diplomatic protection in respect of non-nationals²⁴. The exercise of diplomatic protection by an international organization is, in contrast, somewhat controversial, it being accepted instead in the form of the so-called functional protection of the organization, where, as a result of the internationally unlawful conduct of a State to the detriment of one of the organization's officials, the international organization suffers damage to its own institutional interests²⁵.

It is considered that the Community may act by way of diplomatic protection to safeguard its own interests, as, for instance, in the case of conduct of third countries resulting in injury to Community officials²⁶.

However, it cannot be inferred from the present state of development of general international law that the Community has the right to act to afford diplomatic protection *vis-à-vis* third countries which have damaged the interests of Member State nationals not connected with the Community

by a relationship of service, but in a broad sense. The approach taken in the Community case-law does not appear at all consistent with the aforementioned rule of customary law.

In *Adams*²⁷ the Court of Justice did not deny that the Commission was under a duty to act to defend the applicant (who was not a national of a Member State) before the Swiss courts, where he had had criminal proceedings brought against him for having unlawfully disclosed to the Commission practices of a Swiss company which constituted an abuse of a dominant position; it merely rejected the accusation that the Commission had not so acted because it did not square with the facts. In a more recent judgment, the Court of First Instance dismissed a claim for damages for non-contractual liability based, *inter alia*, on an alleged infringement by the Commission of its duty to intervene actively with the authorities of Guinea-Bissau to obtain the immediate revocation of an unlawful seizure of a vessel flying the Greek flag and its immediate release. In rejecting this plea, the Court of First Instance observed that, from the purely factual point of view, there was no reason to doubt that the Commission Delegation in Guinea-Bissau had “fulfilled ... its duty to provide diplomatic protection to the master [of the seized vessel] and the applicant”²⁸. The Court of First Instance therefore seemed to presuppose that there was a power/duty on the part of the Commission to act to afford diplomatic protection in the face of internationally unlawful conduct on the part of a third country *vis-à-vis* a citizen of the Union, which consisted in the case in question of violation of an international treaty concluded with the Community.

The judgment, which lacks any reasoning with regard to the legal presupposition underlying it, was welcomed by those who accept that the possibility to act to provide diplomatic protection stems from the fact that the Community has international legal personality under Art. 281 EC²⁹.

The introduction of citizenship of the Union, with the resulting strengthening of the legal/political link between the citizen and the Union – even though it is not yet sufficiently capable of evaluation in terms of its content – could afford arguments in support of the case-law which has just been discussed, which, as has been pointed out, seems to go beyond the rules which may be identified in the present state of development of general international law.

Thus, we may ask ourselves whether the European citizenship is a merely legal construction or whether it also exists in social reality. Different scientific disciplines answer differently to this question, varying with methodology. This is why it is possible to distinguish two main positions: the “multi-national” view and the “universal” view³⁰.

A multinational picture of Europe – which a traditional perspective, based on public international law – is drawn by an overview of the Union member states. The constitutional role of citizenship can be developed from the reserve of multi-leveled identities alone. Three results are worth to be mentioned:

- The view of the necessarily exclusive nature of the position of the individual in terms of citizenship does not do justice to the empirical facts; normative conclusions based thereon are problematic.
- One cannot presume that Union citizenship is lacking any kind of social basis.
- Such studies have shown that identities are particularly influenced by political discourses expressed in the media³¹.

In the last twelve years no other bindings acts have been adopted on Consular protection and only recently, after 2006, under the pressure of the European Council and of the Commission the member states have agreed on some complementary and non-binding Guidelines on consular protection of EU citizens in third countries as well as on non-binding measures to counter crisis outside the territory of the EU (such as the notion of the “Lead State Concept” according to which a member state will on voluntary basis coordinate the consular protection in a specific third country and prepare if needed evacuation plans in case of disasters or of terrorists attacks)³². What about Lisbon Treaty, here is another good question looking for an answer. Well, member states remain jealously attached to the former functions and even after the Lisbon Treaty they avoided a legislative role of the EU institutions by stating that “*Member States shall establish the*

necessary rules among themselves and start the international negotiations required to secure this protection". Moreover, a positive evolution could come out from the strengthened cooperation between the MS diplomatic missions with the new European Union External Action Service as defined by the Article 35 TEU (ex Article 20 TEU) which states that : *"The diplomatic and consular missions of the Member States and the Union delegations in third countries and international conferences, and their representations to international organizations, shall cooperate in ensuring that decisions defining Union positions and actions adopted pursuant to this Chapter are complied with and implemented. They shall step up cooperation by exchanging information and carrying out joint assessments. They shall contribute to the implementation of the right of citizens of the Union to protection in the territory of third countries as referred to in Article 20(2)(c) of the Treaty on the Functioning of the European Union and of the measures adopted pursuant to Article 23 of that Treaty"*³³.

IV. Conclusion

Latest developments in this area show that The Commission published on 23 March 2011 a Communication on consular protection which takes stock of the Action Plan 2007-2009 and presents the future measures for the next years. The Commission also launched a *website on consular protection* for the citizen which will contain, among other useful information, the contact details of Member States consulates/embassies in all countries outside the EU.

Following the entry into force of the Lisbon Treaty, this protection is conferred directly on every EU citizen by Article 23 Treaty on the Functioning of the European Union. This right is also enshrined in Article 46 of the Charter of Fundamental Rights of the European Union.

These fragmentations of the rights of citizens along the national borders and the European policy have created a new understanding of citizenship, which challenges the modern concept of it. Based on the particular meaning that is specific to European citizenship and that is involved in the practice of citizenship, it causes modern concepts of citizenship which are derived from the universal norms of citizenship.

V. Note

1)The Maastricht Treaty gave rise to the European Union. It entered into force on 1 November 1993 (OJ C 191, 29/7/1992;

2)Part one, Arts 1-16;

3)Part three, Arts 23-181a;

4) *Agence Europe*, 2 October 1990, No 1653;

5) Report in COM(75) 321 final of June 1975;

6)OJ C 299, 12/12/1977;

7) F. Capotorti, *Article 3 – Citoyenneté de l'Union*, in F. Capotorti, M. Hilf, F.Jacobs, J.-P. Jacqué, *Le traité d'Union européenne* (Éditions de l'Université de Bruxelles, Bruxelles, 1985) 33 ff;

8)For the *travaux préparatoires* leading up to the Maastricht Treaty as regards the introduction of citizenship of the European Union, see C. Closa, *The Concept of Citizenship in the Treaty on European Union*, *C.M.L. Rev.* (1992) 1137;

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10) Deloye, Y., 'Exploring the Concept of European Citizenship', in Harmsen, R.,Wilson, T.M.(ed), *Europeanisation: Institution, Identities and Citizenship*, (Rodopi, 2000), p. 211;

11) Deloye, Y., op. cit. p. 211-215;

12) Shaw, J., 'Citizenship of the Union - Towards Post National Membership?' Harvard Jean Monnet Working Paper 6/97, (accesat în 2 februarie 2009) <http://www.jeanmonnetprogram.org/papers/97/97-06-.html>;

13) Idem;

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**SUB – SECTION: EU SUSTAINABLE ECONOMIC
DEVELOPMENT AND COMPETITIVENESS**

LOCAL ACTION GROUPS - THE EUROPEAN INTEGRATION CATALYST FOR THE ROMANIAN RURAL AREA

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Romania has the highest share of European Union rural areas (44.9% in 2009), which generates and maintains a long series of regional disparities. Because of these disparities, the economy faces a number of elements that undermine the quality of human and social capital and reduces the potential for growth: precarious social and economic infrastructure, reduced access to markets and thus to goods, a low level of both economic cohesion and living standards, and a difficult access to education and training (leading to the underutilization of labor in rural areas, while major shortages in the labor market and increased migration phenomenon manifests).

In these circumstances the European Union LEADER initiative is an important chance for the development and tightening of the rural - urban continuum in Romania. A fundamental element of this initiative are the local action groups. These local action groups are conceived rather as an ad hoc framework for exchanging ideas, for debate on matters of local interest, on initiatives to boost economic activities. Thus, these local partnership structures can be self-organized by very real problems and directions: to promote a brand of product made in a certain area, the image of a tourist attraction, of traditional occupations, crafts of products, etc.

In this paper, the authors aim to highlight the difficulties of European integration for rural areas in the new Member States, considering that the LEADER initiative would be a good opportunity to accelerate this process. To emphasize this, a review of the progress in implementing the LAGs program in Central and Eastern Europe was undertaken. Also, we identified the success factors of this program based on the experience of the European Union developed countries. Finally, we provide arguments in favor of local action groups as the solution to the rural problem of Romania.

Keywords: local action groups, regional disparities, regional development policies.

JEL Codes: O18, R11, R58.

1. European integration of the rural area in the New Member States

After the "Purgatory" transition to a market economy of former Central and Eastern Europe communist countries, their process of modernization continued through the EU accession. But the integration into a developed European economic and social space is difficult and fragmented. Beyond the various measures and assessment of the convergence process, the peripheral area fragmentation of the EU due to centripetal and centrifugal forces of the integrating process is more than obvious. These differences are evident both on the national and regional dimensions, but also on other dimensions of the EU: institutional, economic, social, political, cultural, etc.. From this perspective, the authors consider that the most serious fracturing of space in the Central and Eastern EU is the one concerning the rural - urban areas. Disparities between urban and rural areas are by far the most conspicuous in the heterogenic landscape of the Central and Eastern EU both in synchronic and diachronic terms. Without insisting on the spatial distribution causality of economic activities, even under an optimistic attitude about the present (which would consider

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disparities as ephemeral), we are, however, concerned about the significant differences in the time horizon perception of the economic development. Often, Eurobarometers show net discrepancies in the assessment of economic development opportunities, degree of optimism, confidence in progress, etc. between residents in urban areas and those in rural areas. As shown in some studies (Cristescu A., Andreica. M.E., 2011) there are considerable differences even in the inflationary expectations in relation to the residential environment of individuals.

In these circumstances the European integration of Central and Eastern Europe former communist countries has an additional problem - the rural area.

Supported financially and institutionally through pre-accession funds (ISPA and SAPARD in particular), these countries have made great efforts to modernize their rural area. After the EU accession the new member states from Central and Eastern Europe have benefited from additional financial resources made available by the European Agricultural Guidance and Guarantee Fund. However, opportunities in the new Member States to improve the quality of European integration of the rural areas increased dramatically with the adoption of the European Agricultural Fund for Rural Development² (EAFRD). In accordance with EAFRD, Member States should develop and implement the National Rural Development Programs. An important component of these programs is the LEADER axis, which underlies the local action group (LAG) initiative in the new EU Member States.

LEADER is a European initiative for rural development that started in 1991 with LEADER I. It continued with LEADER II (1994 – 1999) and LEADER+ (2000 – 2006). Today it is the forth thematic axis of the Rural Development Policy (2007-2013).

The aim of LEADER is to introduce a new approach to territorial rural development from bottom to top, integrated, that builds on identifying local needs and support local development strategies that combine one or more priority objectives - competitiveness (axis one) and life quality/diversification (axis three). LEADER target areas are geographically, socially and physically, homogeneous small territories that are often characterized by common traditions, local identity, common needs and expectations. The main aim of LEADER is to improve local governance in order to boost economic and social development and the main vehicle is given by LAGs. This is a local partnership made up of organizations from different socio-economic sectors.

Between 1991-2006 1143 LAGs were created in 25 EU Member States. Thus:

- 52 LAGs had the "Use of new know-how and new technologies" theme;
- 187 LAGs had the "Improving the Quality of Life in Rural Areas" theme;
- 114 LAGs had the "Adding value to local products" theme;
- 235 LAGs had the "Best Use of Natural and Cultural Resources" theme.

Of course, the differences in institutional culture and in the temporal moments of accession were significantly reflected in the LEADER initiative implementing (Table no 1).

² Council Regulation (EC) 1698/2005

Table no 1: LEADER implementation in the New Member States

| Country | Implementation | Rural area (%)* | No of LAGs | Budget (mil. €) | LAGs surface | | LAGs population | |
|----------------|----------------|-----------------|------------|-----------------|-----------------|------------------------|-----------------|---------------------------|
| | | | | | Km ² | % out of total surface | mil | % out of total population |
| Poland | 2006-2008 | 39 | 167/80 | 30,44 | 125 500 | 39 | 7 | 18 |
| Slovakia | 2007-2013 | 43 | 11 | - | - | | 0,1 | 2 |
| Hungary | 2006-2008 | 32 | 186/70 | 25 | 29 141 | 31 | 1,52 | 15,2 |
| Slovenia | 2004-2006 | 52 | - | - | - | | - | |
| Czech Republic | 2004-2007 | 26 | 133/70 | 6,53 | 4 748 | 6 | 0,32 | 3,1 |
| Lithuania | 2004-2006 | 33 | 49/39 | 2,715 | - | - | - | - |
| Latvia | 2004-2006 | 32 | 32/17 | 3 | - | - | 0,74 | 33 |
| Estonia | 2004-2006 | 31 | /24 | 1,84 | 40 000 | 88 | 0,4 | 30 |
| Bulgaria | 2007-2009 | 29 | 11/11 | - | - | - | 0,22 | 2,9 |
| Romania | 2007-2013 | 46 | 120/0 | 14,5 | 90800 | 38 | 11,7 | 54,4 |

Source: http://ec.europa.eu/agriculture/rur/leaderplus/lagdb_ro.htm, *World Bank

As seen, the best results in implementing the LEADER are registered by Poland. According to European Commission reports, Poland has already completed the action for financial support of about 80 LAGs, covering 39% of the country and 18% of the population. In terms of eligible LAGs, Hungary has more than Poland (186 vs. 167, but the first has established only 70 LAGs and has a lower allocated budget). Hungary covers 31% of the country with the financed LAGs and 15,2% of the population.

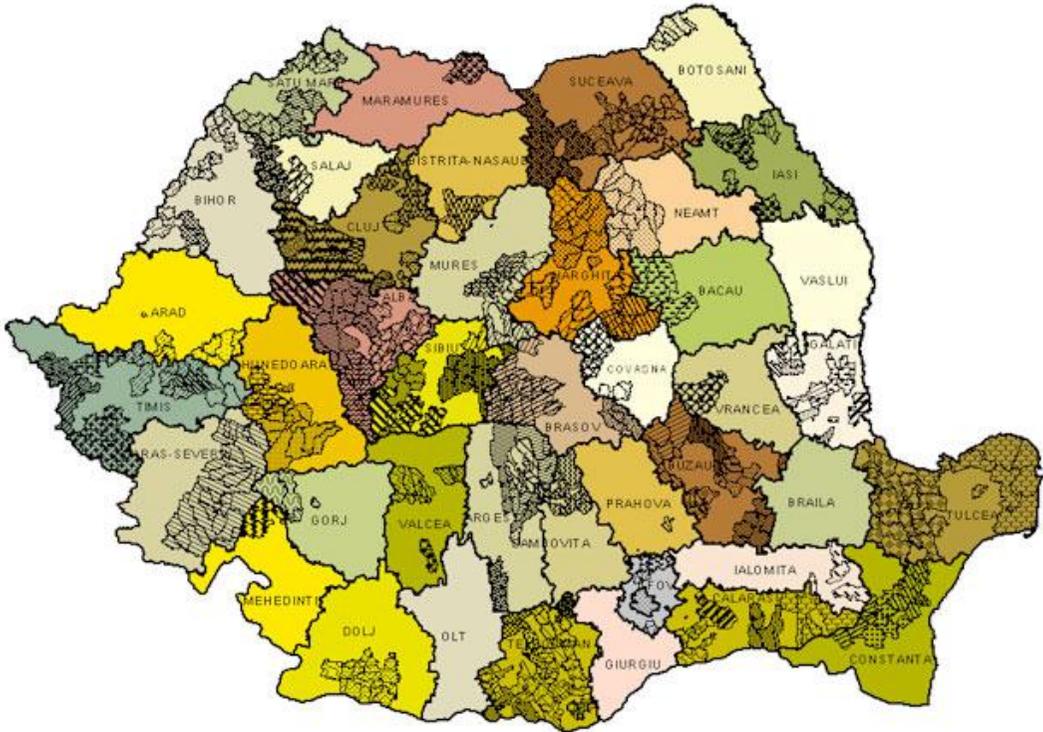
Czech Republic select the same number of LAGs as Hungary (70 out of 133 eligible), but their activity is financed by almost a quarter of the budget allocated for Hungary. As a result, both Czech LAGs area and population are smaller compared to those of Hungary (6% out of total area and 3,1% out of total population).

Slovakia has 11 local partnerships that are ready to become LAGs (covering 2% of the country population), while Slovenia has a very consistent budget allocated to preparatory actions for LEADER implementation (about €19 millions).

Although they have smaller budgets allocated for the LEADER implementation, the Baltic countries have already made significant advances in implementing this program. Thus, all three countries selected and funded LAGs, which comprise between 30% and 33% of their total population. Most funded LAGs are in Lithuania (29), followed by Estonia (24) and Latvia (17). With a later EU accession, Bulgaria and Romania planned to implement the LEADER initiative between 2007-2013. At the program beginning, Bulgaria recorded 11 LAGs, while Romania has selected 120 sub-regions that were eligible to be funded as LAGs.

After analyzing³ the social, economic and geographical context, the territorial cohesion and its homogeneity, reported to the residents number and to the eligible area, considering the financial allocation for the LEADER axis and the interest of local actors, it has been estimated that following the selection procedures an approximate number of 80 LAGs can result in Romania.

Thus, the area eligible for LEADER comprises a population of approximately 11,7 million, of which about 2 million are from small cities with up to 20000 inhabitants. Therefore, 17% of LEADER eligible population may come from small towns and about 9% of the eligible area will be owned by cities.



Source: www.madr.ro

Fig. no 1: Map of potential Local Action Groups in Romania

³ <http://www.madr.ro/leader.php?prezentare=9>

2. The experience of EU more developed countries

Taking into account the experience of EU developed countries it seems that a good practice⁴ in implementing a LAG depends on the following factors:

-*Area-based approach*. This entails defining a development policy on the basis of an area's own particular situation, in terms of its strengths and weaknesses.

-*Bottom-up approach*. This aims to encourage participatory decision-making at the local level for all development policy aspects.

-*Partnership approach and the Local Action Group*. All the partners are invited to provide ideas about how to develop the project concept.

-*Innovation*. Three fields of innovation are important:

a.specialization: to learn about *quality instead of quantity* as a principle for agricultural development;

b.quality: the preparation of a project is based on a broad consultation about a clear innovation in the region;

c.marketing: learning about the importance of marketing innovative products and the necessity of marketing for goods produced by LAGs.

-*Integrated approach*. The actions and projects contained in the local action plan are linked and coordinated as a coherent whole. The idea originated in the LAG, which aimed to find a widespread bottom-up support for it.

-*Local financing and management*. This means delegating to the LAG a proportion of the decision-making responsibilities for funding and management.

-*Transferability*. The action/project is transferable to other rural areas with similar geographical and economic characteristics.

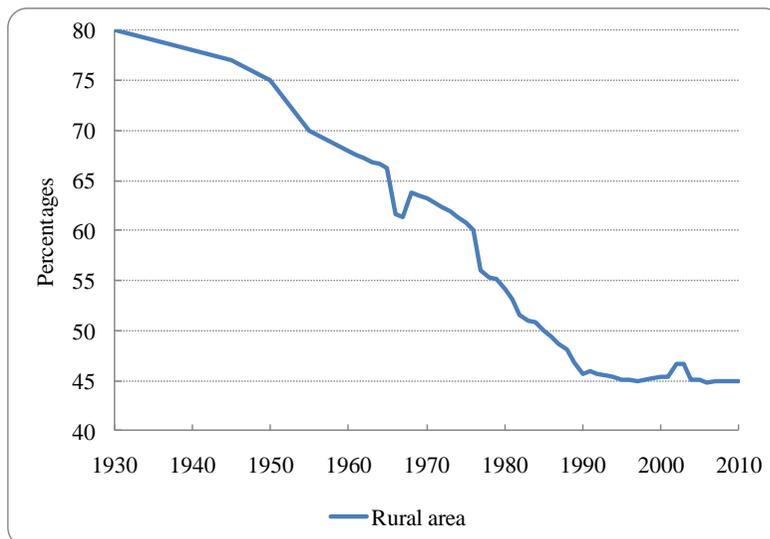
-*Sustainability*. Projects developed by LAGs are conceived that in the long run will contribute a lot to the economic development of the agricultural sector in the region.

3. LAGs a possible solution for the Romanian rural problem

In Romania rural areas (87.1% of territory and 45.1% of population) are typified by a scattered population and very low quality infrastructure (only 33% of rural residents are connected to a water supply network, only 10% to a sewerage system and only 10% of rural roads are of adequate standard). Basic social infrastructure (health and education systems, finance and credit provision etc.) is also much less developed than in urban areas. These factors affect the quality of life in rural areas, hamper economic development, increase outmigration, and exacerbate health and environmental problems. The rural economy is highly dependent on agriculture and forestry, with low development of alternative activities, and lower incomes than urban areas. Moreover, the structure of gross domestic product creation is much different than that of the EU developed countries. We still have a large share of agriculture and even industry, while the share of services is significantly below the European average. The same with the structure and use of labor, which differs even more than that of EU developed countries, especially on account of population employed in agriculture. If we consider other factors such as access to education, quality of life, the differences between rural and urban economic and social infrastructure, than the factors that slows down economic development in Romania are even more obvious.

However, the problem of "rural burden" in development of Romania has historical traditions, which seem to contradict some legends such as "Bucharest - Little Paris" or "eternity was born in the village" and shows a significant structural gap between western economies and societies and ours (Fig. no 2).

⁴ http://ec.europa.eu/agriculture/rur/leaderplus/lagdb_en.htm

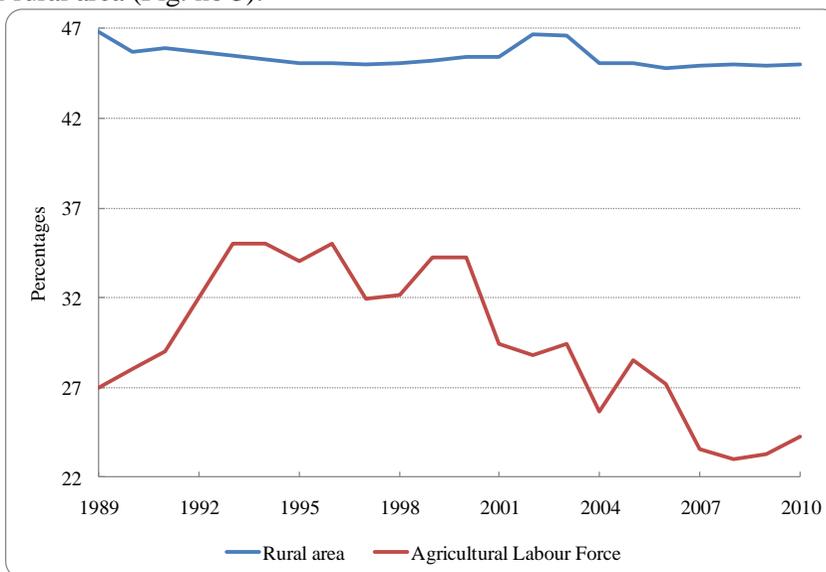


Source: made by the authors

Fig. no 2: Dynamics of rural population in Romania between 1930 - 2010

In the communist era the reduction of rural area was forced by different means, most often destructive (systematization planning program in the Ceausescu period). Even the transition to a market economy has failed to improve the situation given that urban-rural migration flows have exceeded the rural-urban flows in the last years, making the large share of the rural area a problem that blocks absolutely necessary structural economic mutations needed for modernization and European integration.

The agricultural sector is more important than in most other Member States, with 28,7% of the civilian population employed in agriculture and forestry, contributing 6,37% to GDP in 2009 (7,08% to total Gross Value Added), this being largely responsible for maintaining the high percentage of rural area (Fig. no 3).



Source: made by the authors

Fig. no 3: Trends of the population employed in agriculture and of the rural area between 1989 - 2010

The authors consider that given the urban deficit of Romania, the organization and development of LAGs could be a constructive solution to reduce the rural share and to revitalize the development of urban centers. But solving the rural problem exceeds the National Rural Development Plan (2013) horizon and tends to a medium or long run, considering that the rural share settled at a rate of 44-45% in the last decades. Therefore, for Romania, the LAGs initiative will remain current even after the completion of LEADER. By developing activities in rural networks around smaller towns, LAGs can economically and socially revive these centers accordingly to the theoretical model of Lösch (1940). In turn, these small towns can boost the development of urban centers. This can generate an economic growth effect having LAGs as growth poles.

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EUROPE AND ITS GREEN FUTURE. ELECTRIFICATION AND DECARBONIZATION

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This paper aims to present a great challenge which humanity faces, and which is climate change. Together with food and water shortages which will hit more and more humanity in the years ahead, climate change (which will only amplify these negative facts) will bring negative consequences on economy and society, and in international relations area, too. In this context, the importance of the subject speaks for itself. The research is focused on EU objectives in climate area and in sustainable development, indicating that renewable energy could be a solution for energy independence, and for reducing CO₂ concentration level, too.

The subject is very important one nowadays being subject of intense debates and negotiations, having a high degree of visibility in international forums and in international press.

The paper wants to show what EU aims in the future related to its development through fossil fuels consumption reduction and as a base for starting research are researched realized under the aegis of Group Futuribles from Paris, of the National Centre for Sustainable Development from Bucharest, from American Academy of Arts and Science, and International Energy Agency from Paris.

We take from IEA data and present them in the tables in order to have a synthetic view upon energy in EU countries, and of course, there are presented trends in energy consumption in renewable at European level. The development of the subject with the involvements in transport area only brings a fresh air in the debates regarding reducing energy vulnerability together with fighting climate changes.

There are presented some peculiarities of CO₂ pollution and their implications, and consequences; and of course, solutions for fighting climate change is part of this presentation. Reducing oil consumption and expanding renewable resources (wind, solar, and hydro) and nuclear energy coupled with the electrification of the economy and transportation sectors, and rising energy efficiency are of outmost importance in fighting climate change. Becoming leader in this area, EU aims not only to promote sustainable development, but to influence in a significant manner the future negotiations in climate area, gaining through this strategy a better position on the world scene.

The added value of our endeavor is in the superposed areas of EU energy independence, freeing transportation sector from the place of being hostage to potential oil crisis in the future, and all of these in the context of fighting climate change. The paper presents how energy independence could be obtained through renewable expansion, while fighting climate change, too.

Keywords: climate change, de-carbonization, electrification, transportation, energy efficiency

JEL Classification: O0, O3, Q4, Q5

Climate change – even if some of us don't think it is real – had already produced some visible effects, and the future, if the appropriate measures wouldn't be taken, reserve very different framework in comparison with which we are accustomed. The burning of fossil fuels (coal, oil and gas) is responsible for green house gas emissions, which bring the temperature's increasing, due to its concentration level's rising in the atmosphere. Nowadays at global level over 4/5 of

energy is produced using fossil fuels (Malița 2009: 296). The industrialization process in last two centuries has put pressure upon Earth's resources and upon environment, nowadays humanity being menaced both by scarcity of resources, and global warming. Between 1900 and 2000 the temperature rose with 0,3-0,6 Celsius degree (Malița 1998: 213). Climate change experts concluded that the worst scenario which climate change brings could be avoided if CO₂ concentration level would be kept below 550 ppm (parts per million), which means twice the level specific to preindustrial times (Lester and Rosner 2009: 22).

The present CO₂ concentration level is 380 ppm, which, together with another 70 ppm CO₂ equivalent (resulted from nitrates oxides, and methane) gives a concentration of CO₂ equivalent of 450 ppm. The stabilization of CO₂ concentration at 450 ppm would bring in the long run a rising temperature by 2 degrees Celsius at global level. The stabilization of CO₂ concentration in the 450-550 ppm interval is the main focus of recent political debates, although it is noteworthy to be mentioned that at this level of concentration there would be *significant* economic and ecologic damages (Lester and Rosner 2009: 22).

In this context, EU wants to be a world leader in promoting a de-carbonization of economy and transportation, and rising of energy efficiency. The crisis which become so visible in the summer of 2008 could be regarded as a bell which rang and brought attention that the past and present trend would bring a slow, but a dangerous decline. In a world that rapidly may be nearing its ecological carrying capacity because of growth imperative – which in the past was the main reason for economic and military policies of developed states – there is nearing the day when the national interest will require a different articulation of well-being (Wendt 2007: 236). The role which state is asked to play is greater than in the past decades; the reduced degree of interventionism specific to this period when the neo-liberalism was the main economic doctrine will definitively be replaced by a rising role of the state, (Malița 2010: 29) which will regulate economic activity taking account of sustainable development, providing that kind of development which will bring well-being.

European Commission proposed in 2010 five targets to be reached until 2020, all of them defining the process at EU level and with the obligation of being transposed in national policies, one of them being directly related to *climate change and energy* (Gheorghiu 2010: 118). In 2007 EU adopted a new communal strategy for energy, the objective regarding security of supply being integrated with those related to consolidation of competition on the market and those related to climate changes. Even if after the Kyoto Protocol will expire without a new international accord being implemented, EU assumed *unilateral* measures to be taken: the targets 20-20-20 (Gheorghiu 2010: 121-122). These are: reducing greenhouse gas emissions with 20% in 2020 in comparison with 1990, increasing the share of renewable energy in energetic mix from 7% (2006) to 20% in 2020 in total energy consumption, and rising energy efficiency in order to save 20% of primary energy in EU. It could be noted the role which state is ask to play in order to direct and coordinate national policies for these objective's achievement, its role being felt even in relation with third countries, which don't implement policies which would constrain their economic through pollution taxation. The strategies for achieving this are (Abbas 2009: 53-67): trade liberalization as stimulus for combating climate changes; renegotiating of new accords, taking account of reducing competition in EU countries due to taxes imposed on pollution; derogation from the multilateral norms; and putting in place a mixed governance World Trade Organization – The Climate Change Framework Convention.

What is a focal point regarding energy is the fact that energy security and climate change could push both of them to promote energy efficiency, and de-carbonization of economy. They are expected to encourage the development of renewable energy for electricity in many parts of the world, and as EU wants to be a leader in fighting climate change (being in the same time very vulnerable in energy field), she have to rethink its strategy related to nuclear power. Even with a significant increase of wind and hydro capacities (where there is potential) in EU countries, if nuclear option is not on the decision table, then fighting climate change could be very costly,

even without expected results. Renewable energy sources are quite important for electricity generation worldwide; it amounted to 3470 TWh (2006), or 18% of total output (IEA 2008: 149). In Reference Scenario, it rises to 4970 TWh (2015), and over 7700 TWh (2030), 23% of total electricity production, respectively (IEA 2008: 149).

The most important renewable are wind and hydro power, global output of wind expecting to rise eleven-fold, becoming the second-largest source of renewable electricity after hydro in 2010 (IEA 2008: 159). The *largest increase* is in the EU countries which in 2030 could have a share of wind power in its energy mix of 14%.

In 2006, seven of the top ten wind-power markets in the world are EU members.

Table no. 1. Wind-power in EU countries

| Country | Installed capacity (GW) | Wind power production (TWh) | Share of total generation (%) |
|----------------|-------------------------|-----------------------------|-------------------------------|
| Germany | 20,6 | 30,7 | 4,9 |
| Spain | 11,6 | 23 | 7,7 |
| Denmark | 3,1 | 6,1 | 13,4 |
| Italy | 2,1 | 3 | 1 |
| United Kingdom | 2 | 4,2 | 1,1 |
| Portugal | 1,7 | 2,9 | 6 |
| France | 1,6 | 2,2 | 0,4 |

World Energy Outlook 2008, IEA

There is potential for expanding this kind of energy in EU countries, especially in UK (which has the greatest potential), and France (which has the second potential in EU) (Florian et Temime 2008: 27). And this could be reached following a policy of encouragement from *states*; indeed, this is the case: the price of wind electricity is sustained in numerous countries through a tariff policy aimed at the development of renewable energies (Florian et Temime 2008: 31).

Hydropower is the world's largest renewable source of electricity, generating 3035 TWh (2006), around 16% of total electricity (IEA 2008: 402).

But there must be understood that the force of atoms could help generate energy in a clean manner, and together with renewable energy, to promote the increase of energy security through the development of alternative sources of energy, and decrease the concentration of CO₂ due to energy production.

In the nuclear field, EU countries are important players, one of them implementing the most successful nuclear program in the world – France. The potential of nuclear expansion in EU countries is quite large, but its expansion could head the opposition coming from different groups and institutions.

It is noteworthy to be mentioned that European countries depend nowadays in great part (some of them almost totally) on energy imported from other countries; the shift to nuclear, and other renewable resources could help them in mitigating climate change, in rising their energy security, and in promoting a better position in global negotiations regarding climate change. The European countries dependence on imported Russian gas is a hindrance in promoting a cohesive energy policy in EU at large, situation which is exploited with great success by Moscow through its giant arm – Gazprom. The dependence of European countries on Russian gas is presented in the following table (Table no. 2):

Table no. 2. European countries dependence on Russian gas

| Country | Energy which is based on imported natural gas (%) |
|-----------------|---|
| Bulgaria | 100% |
| Slovakia | 100% |
| Finland | 100% |
| Estonia | 100% |
| Letonia | 100% |
| Lithuania | 100% |
| Greece | 84% |
| Austria | 78% |
| Hungary | 77% |
| Czech Republic | 75% |
| Poland | 63% |
| Romania | 63% |
| Slovenia | 51% |
| Germany | 32% |
| Italy | 32% |
| France | 23% |
| The Netherlands | 17% |
| Switzerland | 13% |

Eni S.p.A., World Oil and Gas Review, 2006

Anyway, the review made in *Germany* (and in other EU countries which after 1979 started to view nuclear energy with skepticism) regarding nuclear energy field in last years (but before March 2011) can be regarded as a positive mark related to nuclear energy renaissance in EU countries.

The present state of nuclear energy in EU countries is presented in the following table (Table no. 3).

Table no. 3. Situation of nuclear generating capacity and reactors in EU member countries

| Country | Number of reactors | Installed nuclear capacity (MW) | Share of nuclear capacity installed in total at global level (%) |
|-----------------|--------------------|---------------------------------|--|
| France | 58 | 63130 | 17,05 |
| Germany | 17 | 20480 | 5,53 |
| Sweden | 10 | 8992 | 2,43 |
| Spain | 8 | 7450 | 2,01 |
| Belgium | 7 | 5863 | 1,58 |
| Czech Republic | 6 | 3678 | 0,99 |
| Finland | 4 | 2696 | 0,72 |
| Hungary | 4 | 1889 | 0,51 |
| Slovakia | 4 | 1762 | 0,47 |
| Bulgaria | 2 | 1906 | 0,52 |
| Romania | 2 | 1300 | 0,35 |
| The Netherlands | 1 | 482 | 0,13 |
| Slovenia | 1 | 666 | 0,18 |

IAEA, *Nuclear Power Plants Information (Number of Reactors in Operation Worldwide)* <http://www.iaea.org/cgi-bin/db.page.pl/pris.oprconst.htm>, (visited February 7, 2010);

IAEA, *Power Reactor Information System* <http://www.iaea.or.at/programmes/a2/>, (visited February 7, 2010)

Furthermore, there are in diverse construction phase six nuclear reactors in EU four member countries, the situation being detailed in (Table no. 4).

Table No. 4. Situation of nuclear power plants under construction in EU member countries

| Country | Number of reactors | Nuclear capacity under construction (MW) |
|----------|--------------------|--|
| Bulgaria | 2 | 1906 |
| Finland | 1 | 1600 |
| France | 1 | 1600 |
| Slovakia | 2 | 810 |

IAEA, *Nuclear Power Plants Information (Under Construction Reactors by Country)*, <http://www.iaea.or.at/programmes/a2/>, (visited February 7, 2010)

But as we can easily note, all these measures mean economy's de-carbonization, and electrification, too. This action will have a profound impact at economic, social, political, and environmental level. In all these fields, the implications are many: reducing energy vulnerability in a historical context in which the hungry for resources will be more and more acute (especially due to the rise of China and India, and due to population's number rising at global level); EU economy's de-carbonization and electrification means a greater energy independence, a vital aspect for national power, with ramifications in the currency area (for a country to have a strong currency, it needs energy independence).

Another area with high impact at economic, social, and political levels is transportation. Transportation's de-carbonization means not only the reduction of consumption of oil, improving energy independence of EU economies, but reducing the CO₂ emissions from transportation sector. The climate change accuses the pollution resulted from fuel consumption in transportation as a factor which hurts a lot the environment; in fact, at EU level, over 50% of oil consumption is due to private cars, while some 30% of CO₂ emissions in Europe is due to transportation, 84% of which is due to road transport. The de-carbonization of transportation sector means first and foremost that there must be developed new types of transport, while the internal combustion engine losing its primacy. This means a coherent policy at EU level in both areas: in *energy*, and *transportation*.

But these two elements are of outmost importance on each state's agenda in the modern and post-modern worlds. Energy independence means a greater flexibility in foreign policy, and reducing transportation's dependence on fossil fuels only amplifies this aspect: in case of international crises which involves interruption of energy flow, the movements of people and goods is provided by means of transport which aren't based on oil consumption; and in this way there is present a greater independence in mobility, element with strategic implication.

There are three major directions of action in the fields of energy and transportation. As energy production will become cleaner, the electrification of transportation sector is a natural and direct consequence of this. In this way, new investments in clean energy sector can provide a stimulus for overcome present financial crises, these being simultaneously solutions for solving energy, and environmental crises. Raising the part of energy produced in a clean manner (solar, wind, hydro, and nuclear) while reducing fossil fuel consumption in nothing else than heading to sustainable development. Now, at EU level, the directions for transport de-carbonization are:

- in order to create mobility on medium and long distances the development of railways fitted for *high speed trains* is the best solution for decongestion of already crowded European highways, skies, and airports, saving simultaneously time, energy, and lowering pollution level;
- in order to create mobility on shorter distances the development of electric engines for cars is a solution which involves only reduction of oil consumption in transport, but if this is coupled with;
- the development of clean public means of transport such as tramways, bicycles, and metros (these especially in great urban concentration) coupled with reducing the number of autos, this will contribute to transport fluidization in urban areas, reducing noise, and pollution.

All these three directions have chances of success (there are already numerous examples in Western Europe cities, regions and countries), and this direction will make EU a good example of society which embraces sustainable development. It will be solved simultaneously the problem of crowded highways and airports without affecting mobility, there will be reduced pollution, noise, and the number of car accidents (already cars since they were invented had killed more people than both world wars combined (Giddens 2009: 161)), and oil dependence will be attenuated, rising foreign policy independence, and the importance of EU on world stage, due to this reason, and in the climate change negotiations, too.

In this way, EU will obtain benefits internally through sustainable development, and externally, becoming the global leader in sustainable development and in climate negotiations, gaining for it a better position on world stage.

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ROMANIA'S ANSWER TO THE NEW DIRECTIONS OF THE REGIONAL DEVELOPMENT POLICY OF EUROPEAN UNION

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The regional development policy of European Union deals with spatial localisation of production and affects the daily life of more than half of the 500 million persons living in the European Union. Conceived at European level as a solidarity policy, it bases especially on financial solidarity through the distribution of a part of the European budget obtained through the contribution of Member States to the less prosper social categories and regions. Regional development policy of European Union for the programming period 2007- 2013 is based on the diversity, opportunities and challenges offered by the regions in Europe. It puts into practice the solidarity between European nations and focuses on a fundamental objective: strengthening the economic, social and territorial cohesion through diminishing the development discrepancies between its regions. The present paper identifies the new directions of the European regional development policy and aims to highlight the importance of this policy for the economic growth and development of Romania. In this difficult period, when Romania felt the effects of the crisis at high level and met a severe economic congestion, the European sources of financing through the regional development policy must not be neglected. We also formulate recommendations in order to increase Romania's structural funds absorption rate.

Key words: regional development policy, European Union, Romania, sustainable development, absorption rate

JEL Codes: R10, R11, R58

Introduction

The regional development policy is one of the most important and complex politics of European Union, position that comes from the fact that through its objective to reduce social and economic disparities existing between different regions of the European Union acts over significant development fields, such as economic development, transports, SME's sector, agriculture, urban development, environment protection, employment and professional training, education, etc. Conceived at European level as a solidarity policy, it bases especially on financial solidarity, through the distribution of a part of the European budget obtained through the contribution of Member States to the less prosper social categories and regions (for the period 2007-2013, the amount for the regional policy represents over a third from the EU budget). In fact, we can say that the regional development policy has a pronounced instrumental character and through its solidarity funds (Cohesion Fund, Structural Fund and Solidarity Fund) contribute to the financing of other politics – such as agriculture policy, social policy and environment protection policy. The present paper identifies the new directions of the European regional development policy and aims to highlight the importance of this policy for the economic growth and development of Romania. In this difficult period, when Romania felt the effects of the crisis at high level and met a severe economic congestion, the European sources of financing through the regional development policy must not be neglected. We also formulate recommendations in order to increase Romania's structural funds absorption rate.

1. Concept and definition

The regional policy of European Union deals with spatial localisation of production and affects the daily life of more than half of the 500 million persons living in the European Union. The regional development policy implies different subsidies and development projects including infrastructure, education and training and SME's support in order to diminish the regional disparities. The main objective is to strengthen and raise the under-privileged areas potential as well as to strengthen and rebuild the unity between cohesion and diversity within the European Union (Capello et al. 2009: 568).

The regional policy of European Union has its roots in the desire to influence the economic adjustments in four types of regions. The first type of regions is characterised through the fact that the output is obtained mainly from the agriculture sector and in the same time the biggest part of population is occupied in the field of agriculture. These areas are usually underdeveloped country-side areas with low level of income per capita, high levels of unemployment and underdeveloped infrastructure. The second type of regions is those whose prosperity has been based on the industries that now lost importance, such as the steel, coal or textile industry. These are regions that could not keep up with technological changes and therefore could not face external competition (in some cases because of the excessive previous protection). In the case of those regions work force is the first affected when occurs a recession period. The third category of regions is formed of regions with a bigger percentage of the processing industry confronting with congestion and pollution problems. These regions benefit from high utilisation of goods and services. Regional policy will try to reduce the congestion and pollution problems from these areas and to prevent them from worsening. The last category of regions is the border ones, regions that are far from the powerful economic activity areas of a state or union (Capello et al. 2009: 633).

The regional development policy of the European Union has always been a controversial policy. The main reason for the polemic about it is the fact that it has an interventionist character. Those who do not trust the ability of governments are afraid that regional policy fines successful businesses from the prosper regions and encourages unprofitable businesses from the poor areas. Those who share this point of view consider that regional disparities are the inevitable result of the market system – a phenomenon that is tolerable up to a point in which the market evolution determines the migration of work force and of capital investment as well as expansion of commerce which automatically contributes to higher incomes. On the other hand, those who support regional policy and admit its importance are more sceptical regarding markets self-regulation ability and do not believe in the power of the market to solve traditional problems (El Agra, 2007: 421).

2. Short retrospective of the regional development policy and its importance

The history of the European Union begins in **1957**, when the Treaty of Rome introduced the idea that the European Community should create a harmonious development through reducing discrepancies between regions and the economic differences between the member countries. It is well known the Great Britain case which had to take some measures to decrease the big unemployment rate in industrial areas.

In **1958** were introduced two funds: European Social Fund (ESF) and European Agricultural Guidance and Guarantee Fund (EAGGF). At the beginning, the regional development policy had a strong redistributive character.

The year **1975** brought the founding of the European Regional Development Fund (ERDF) to support the development projects launched by the national governments. The year 1975 is considered the birth year of the regional development policy, because it is the year that has a double significance: on one side, it is a component of the financial common help, meant to augment national efforts in order to reduce discrepancies existing in the European regions; on the

other side, it was a mechanism of financial transfer from some Member states, such as Germany, towards other states (Dodescu and Giurgiu, 2008).

The adoption of the European Single Act in **1986** founds a real development policy meant to compensate constrains of a single market that was felt by Southern states and other regions less favoured. At this point was recognised the authority and necessity of a regional development policy, a policy whose main objective to be the reduction of disparities between different European regions, a diversity that was strengthened by the accession of the 6 new Member States.

In February 1988 the regional development policy was given specific objectives and the way of solidarity funds functioning. The content of the structural funds, as they were called now, suffered modifications in 1993 and 1995, and they were allocated 68 billion ECU (at the 1997 level of prices).

When the biggest enlargement of the European Union took place in 2004 and 2007, changes took place at the level of regional development policy as well. Only two of the twelve new accessed states had incomes per capita higher than Greece, EU15's poorest Member State. In this situation, on 2 February 2005, the European Commission took position and introduced the so called Integrated Strategic Lines for Growing and Occupation, where it is stated that the European Union must create an economy orientated towards sustainable growth and raising the work force employment rate.

3. New directions in the regional development policy of the European Union

After the enlargement in 2004 and 2007 the regional development policy of European Union entered into a new phase. The budgetary programming period 2007-2013 is the first one in which the new economic challenges are dealt by the regional development policy of EU (Stierle-Von Schutz et al. 2008: x).

Regional development policy of European Union for the programming period **2007- 2013** is based on the diversity, opportunities and challenges offered by the regions in Europe. It puts into practice the solidarity between European nations and focuses on a fundamental objective: strengthening *the economic, social and territorial cohesion through diminishing the development discrepancies between its regions*. Even though it focuses on poor regions in order to assist them in the process of fast retrieving the discrepancies, the investments from the new regional policy of European Union for the period 2007- 2013 aim, as a novelty, to have a significant *impact over the competitiveness of all regions and over the life status of their inhabitants (European Commission)*.

The priorities of the new Finance frame are different by those of the 2000 Agenda that focused on preparing the EU enlargement from May 2004. According to the Strategic Integrated Lines for Growing and Occupation, there were established for the regional development policy of the European Union for the period 2007-2013 3 priorities:

- Europe – a more attractive place for investments and work;
- The amendment of knowledge and innovation for growing;
- More and better work places.

The fifth report regarding economic, social and territorial cohesion shows that the regional development policy created workplaces, helped at building critical infrastructure and improved environment protection, especially in less developed areas. There is no doubt that without a regional development policy the disparities would be bigger. Even so, the social effects of the economic crisis, the innovation demand determined by global challenges and the necessity to utilise efficiently every Euro for public expenditures send a signal that there is still the need to do an ambitious reform of the policy. With the occasion of presenting the report, the EU commissioner for regional policy, Johannes Hahn, declared: *“how cohesion policy has had a major impact on the European economy, reducing economic differences and promoting environmental and social development. To ensure more value for money, we need to make the policy even more effective, in delivering concrete and measurable result. We need to spend more*

intelligently, focus on the EU's top priorities and add visible value to what national and regional authorities are already doing. The findings from this report and the consultation to follow will help us prepare a cohesion policy that is better adapted to the economic situation of today" (European Commission a).

More recently, in order to accomplish its objectives the European Commission adopted Europe 2020, a very ambitious strategy for the coming decade. Its main target is to make Europe's economy become smart, sustainable and inclusive. The Lisbon strategy was first adopted in 2000, but during the 2005 mid-term review, the Lisbon Strategy has been reconsidered and established new targets on economic growth and employment. This change integrated the Cohesion policy into Lisbon Strategy's implementation. So at the moment we cannot speak about regional development policy without Europe 2020 strategy, because they are in a direct link. At European level, the Commission has chosen 5 headline targets in order to acquire the changes needed.

The targets set through the Europe 2020 strategy to be met at the end of 2020, consist of five indicators that are in direct relation to the citizens welfare. One of the targets refers to the percentage of the employed population and says that 75 % of the population aged 20-64 should be employed. Another target refers to the percentage of investment in research and development (R&D) and aims up to 3% of the EU's GDP should be invested in R&D. The third target is represented "20/20/20" and consists of a trinomial regarding climate/energy targets that should be met (including an increase to 30% of emissions reduction if the conditions are right). The fourth target refers to the share of early school leavers that should be under 10% and at least 40% of the younger generation should have a tertiary degree. The fifth indicator stipulates that the number of people living at the risk of poverty should decrease with 20 million.

4. Romania's answer

Romania joined the European Union in 2007, and became a direct beneficiary of the regional development policy. As at that moment the new Lisbon Strategy had just entered into force Romania was determined to accomplish the targets set at national level. A knowledge-based economy represented for Romania the great chance to bring added value to its products and services and increase their competitiveness (Dăianu, 2004). Romania adopted in 2007 the National Reform Programme for the period 2007-2010, whose main objective was to create a stronger economy and an attractive business environment in order to offer the welfare that every citizen wishes for himself and for his family. The targets set at national level were in accordance to the Lisbon targets but they proved to be unachievable.

For the programming period 2007-2013, Romania has been allocated, through the Structural instruments an amount of **19.7 billion Euros**, implemented through seven **regional and sectoral operational programmes**, to which there are added eight territorial cooperation programmes with other states. In order to be able to implement the regional development policy Romania had to set up development regions. These regions are created through the will of neighbour counties, on the basis of the common European system, the system known as The Classification System of Territorial Units. According to this system, the 8 Romanian regions are level two units, which mean that their population is up to 2.8 million people.

It is estimated that structural instruments will stimulate economic growth in new Member states, including Romania; with an average of 6 % and that they will create about 2 million workplaces. Out of the 19.7 billion Euros allocated to Romania for the programming period 2007-2013, 19.2 billion are allocated for convergence and 455 million Euros for European territorial cooperation. The purpose of these programmes, defined through the regional policy of EU for Romania, it is the development of basic infrastructure according to the European standards, growing long-term competitiveness, developing and efficient using the human capital, development of the administrative capacity, promoting balanced territorial development. Concretely, it is aimed the GDP increase by 15-20 % up to 2015, growing the employment rate from 57.4% up to 64 % and investing in 1 400 km of new or rehabilitated highroads.

The objectives set are ambitious and in the same time welcomed for Romania, but they depend on the absorption rate of the structural funds, which, unfortunately for Romania, is very low. According to the Romanian Agency for Monitoring Structural Instruments, at the end of 2010 the absorption rate in Romania was 8.6%. This value is much under the average absorption rate of structural funds in neighbour countries, which is 17%, according to the last Report of the Financing Committee from 07.04.2011. The low absorption rate transforms Romania from a country that is a net recipient (receives more money from the European Union that gives as percentage of GDP) into a contributor to the European budget (Table 1).

Table 1: European funds allocated to Romania and Romania's contribution to the European budget for the period 2007-2011

| | 2007 | | 2008 | | 2009 | | 2010 | | 2011 | |
|-------------------------------------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|
| | mld.EUR | % din PIB |
| Total European funds allocated | 2.0 | 1.7 | 2.9 | 2.2 | 3.9 | 2.5 | 4.3 | 2.5 | 4.5 | 2.4 |
| Romania's contribution to EU budget | 1.2 | 1.0 | 1.4 | 1.0 | 1.2 | 0.8 | 1.3 | 0.8 | 1.3 | 0.7 |

Source: Economy and Finances Minister, National Statistics Institute, National Prognosis Commission and The National Bank of Romania, www.bnr.ro, accessed on 10.04.2011

On the other hand, in the autumn of 2010, Member States, in close co-operation with the Commission, established national targets and developed strategies for their implementation. As the Annual growth survey shows, "they were invited to present by mid November, in a draft version, their National Reform Programme ("NRPs"), indicating their national targets and the necessary reforms to reach these targets and remove long-standing barriers to growth". The fact that each Member State sets its own level of ambitions as regards the overall Europe 2020 targets is an important element of this strategy, ensuring that national targets are "politically owned" (European Commission b). So, in order to accomplish the Europe 2020 targets Romania has to adopt national targets to help us to keep on the track. The Romanian government has formulated provisional targets, but without an important change regarding structural funds approach it is almost impossible to meet these targets and get out of the economic crisis.

Conclusions

Romania severely needs to focus on structural instruments and raising structural funds absorption rate as it is a sure and free source of financing. Because of the world economic crisis that was felt in Romania in the last trimester of the year 2008, at the beginning of 2009 Romanian authorities had to contract a loan from the International Monetary Fund. The Romanian government obtained a loan of 19.5 billion Euros. Through this loan, the government financed the extern and intern deficit. On the other side, the International Monetary Fund imposed measures to guarantee the loan reimbursement and to obtain a transparent fiscal policy. This loan has to be reimbursed and this is for sure not good news for Romania.

Romania must pay attention to the great opportunity that regional policy offers through the structural funds, funds that are created in accordance to the Europe 2020 targets and that therefore have the great purpose of raising living standards in Romania. Unfortunately, regarding the living standard, our country is at the end of the top, fact that shows that we have many chapters where we have a deficit.

The main issues that detain Romania from European funds absorption are the different interpretation given to the Public Procurement Law and the routed custom to contest the results of the assignment procedure; also the coordination and control procedures in the Romanian

legislation are sometimes less efficient than the EU Financing Regulations regarding the Structural Instruments, and the list can continue. We suggest a couple of solutions in order to help Romania increase its performance regarding the absorption rate of structural funds and have a better perspective regarding the importance of aligning its national priorities with those of the European Union. We consider that the legislation regarding public procurement and the implementing frame must be revised in order to raise the transparency level and simplify the procedures. We also recommend strengthening the coherence between the strategies regarding the Structural Instruments on one side, and the politics, programmes and national actions taken to encourage the economic and social development on the other side. To resume, we conclude that there is a stringent need to lower bureaucracy of the monitoring structures of Structural Instruments taking into consideration the European criteria.

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COMPARATIVE ANALYSIS OF THE RECENT EVOLUTIONS OF ROMANIAN AND EUROPEAN UNION'S COMPETITIVENESS

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The main subject of this paper refers to an analysis of the recent trends and evolution of Romanian competitiveness compared to the European Union competitiveness and it is structured in four main parts. The first section of the paper regards an introduction of the competitiveness evolution process, recalling the three actual evaluation models of the competitiveness level. In the second part of the paper there can be found the competitiveness indexes practiced and published by the World Economic Forum, indicators that are structured on three main levels as following: the Global Competitiveness Index and its aggregate indicators that are developed on three categories of factors that are essential for the competitiveness process (Basic requirements, Efficiency Enhancers, Innovation and sophistication factors) and the indexes associated to the twelve pillars of competitiveness: Institutions, Infrastructure, Macroeconomic stability, Health and primary education, Higher education and training, Goods market efficiency, Labor market efficiency, Financial market sophistication Technological readiness, Market size, Business sophistication, Innovation. Based on the values obtained after consulting the World Economic Forum Reports and regarding the competitiveness from a global perspective, the third part of the paper presents a comparative analysis of the evolution of the Romanian competitiveness process and the one of the EU25. In the last part of the paper there can be found the conclusions of this analysis, with respect to the values found

Key word: competitiveness, indicators, analysis, differences, evolution

The article's JEL code: O10, O11, O52, O57

Introduction

At the beginning of the XXI century, the world economy is governed by two strong forces: technology and globalization, both of them having an important impact on the companies, economies and countries. Nowadays, when the globalization process is happening significantly, the main objective of any country and nation remains the competitiveness.

After a 235 years long evolution, from Adam Smith [1] to present, the concept of competitiveness is considered by the economists, the governing law of the capitalist economies. Economic literature [2,3,4] presents the important personalities, starting with the year 1776, that have contributed to the development of competitiveness concept.

In 1990, Michael Porter published his work entitled „The Competitive Advantage of Nations”[5], paper in which he mainly resumes all competitiveness related ideas developed ever since. Michael Porter presents them in a universal model, entitled “competitiveness diamante” basically devoted to the companies competitiveness analysis, that is based on the following factors:

- Production factors (4)
- Local / National demand (2)
- External environment of the company (2)
- Related and complementary industries (2)

Nowadays, the competitiveness concept has different approaches, both at company level and at national level, and the recent written economic literature shows that concept is also raising a regional dimension.

The practical importance of competitiveness is designed by a large number of international institutions that manage the research in this field.

- International Institute for Management Development, World Competitiveness Yearbook
- World Economic Forum, Global Competitiveness Report
- World Bank, Doing Business, KAM
- Organization for Economic Co-operation and Development, New Economy Report
- European Commission, European Competitiveness Report

IMD World Competitiveness Centre director, Prof. Stephane Grelli, is the author of certain competitiveness related theories [6]. In this context, one nation's competitiveness factors are distributed by Prof Stephane Garelli in the so called "competitiveness cube", in which every two of the eight facets are connected to the fundamental or essential drivers:

- Economic performance: Attractiveness vs. Aggressiveness
- Governmental efficiency: Proximity vs. Globalization;
- Business efficiency: Stock vs. Processes
- Infrastructure: Cohesion vs Assumed Risk

At the beginning of the XXI century, the world economy is governed by two strong forces: technology and globalization, both of them having an important impact on the companies, economies and countries. Nowadays, when the globalization process is happening significantly, the main objective of any country and nation remains the competitiveness.

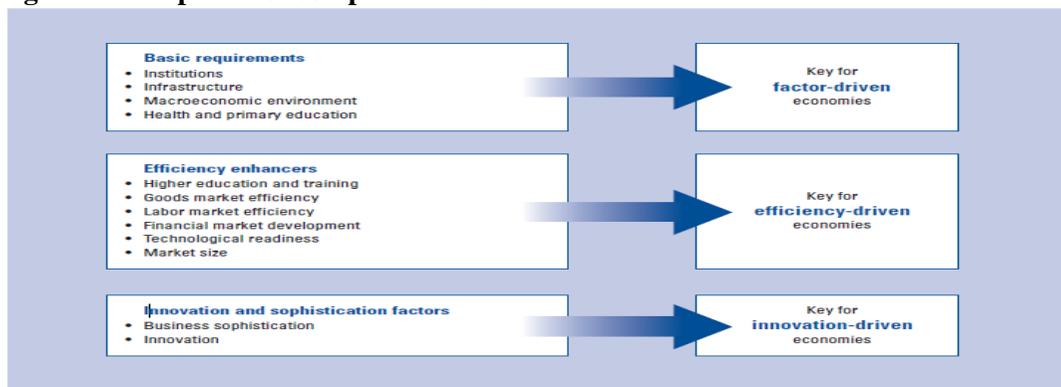
World Economic Forum (WEF) competitiveness index

World Economic Forum is an independent international organization committed to improving the state of the world by engaging business, political, academic and other leaders of society to shape global, regional and industry agendas. Over the past 30 years this institutions has published annual reports regarding the world economy status, has also analyzed policies and economic indicators.

Starting with the year 2005, the World Economic Forum underlies its competitiveness analysis, defined as being an ensemble of political factors plus the Global Competitiveness Index (GCI). This aggregate index has been developed by Prof. Xavier Sala – i – Martin and it is meant to quantify the national performances, by including certain complex aspects, appropriate to the multidimensional phenomenon that this index is modeling [7]: diversity and the numerous competitiveness factors, their evolution through time, positive impact of some key factors (for example Education and continuous formation) and the negative impact of some other factors.

The Global Competitiveness Index evaluation starts from quantifying the competitiveness main factors, that are grouped in 12 pillars [7], presented in Figure 1, where there are also resumed the key directions for competitiveness growth and pillars split in certain specific directions:

Fig. 1: The 12 pillars of competitiveness



Source: Global Competitiveness Report (GCR) 2010 - 2011

Every year the World Economic Forum publishes the Global Competitiveness Report, that presents the evaluation methodology of the GCI and the obtained values, for the countries that

provided the data needed for the index assessment. The Global Competitiveness Report (GCR) represents an essential document at international level, that is usually consulted by the economic and political actors, with the purpose of identifying the best solutions for improving the competitiveness.

Since 2005 the Global Competitiveness Report evolution refers to its content and inward and outward data accuracy [7,11]. The Reports issued starting with the year 2006 – 2007, are extremely important for Romania, as they are based on the information provided by the Applied Economy Group and are also assumed by certain international institutions, in the context of preparing our country's EU accession.

The main purpose of this paper is to present the Romanian competitiveness level, based on the Global Competitiveness Index values registered in the period 2006 / 2007 until 2010 / 2011.

The following table presents the development stages of different economies, depending on GDP per capita values.

Table 1: Income values for development stages

| Stage of development | GDP per capita (in US\$) |
|------------------------------------|--------------------------|
| Stage 1: Factor driven | < 2,000 |
| Transition from stage 1 to stage 2 | 2,000–3,000 |
| Stage 2: Efficiency driven | 3,000–9,000 |
| Transition from stage 2 to stage 3 | 9,000–17,000 |
| Stage 3: Innovation driven | > 17,000 |

Source: Global Competitiveness Report 2010 - 2011

Comparative analysis of Romanian competitiveness evolution

The Global Competitiveness Report provides the values for the following indexes:

- Global Competitiveness Index; (GCI)
- The Aggregate Indexes organized in three factor categories that influence the competitiveness (Figure 1 IAC)
- Indexes associated to the 12 pillars of competitiveness (IPC)

The research methodology used in this paper implies following the next steps:

Step 1 – The evaluation of the following measures taken for every type of indexes

The medium value for EU25:

$$I = \frac{\sum_{i=1}^n I_{ji}}{n}, (1)$$

where $I = \{GCI, IAC, IPC\}$; $i = 1, 25$ for UE 25 $j = 1$, for GCI ; $j = 1, 3$ for IAC; $j = 1, 12$ for IPC

Romanian competitiveness indexes values deviation, compared to the EU25 average

$$\Delta I_j = I_j - I_{rj} (2),$$

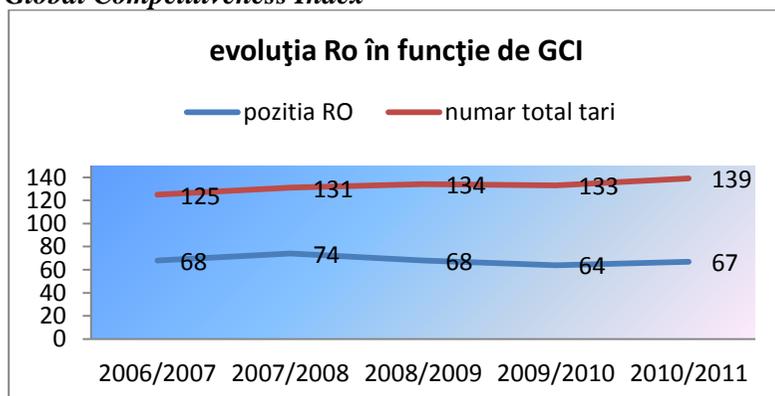
where I_{rj} is the *type i and j category* Index for Romania

Step 2 – The graphic representation of the time evolution in the period of deviation analysis: $\Delta I_j = f(t)$

Step 3 – Identifying the Romanian competitiveness strengths and weaknesses, based on the previous characteristics; outlining the possible solutions for increasing the competitiveness. Besides the evaluations and graphic representations, the next figure, Figure 2 presents the

evolution of our country's position, considering the value registered by the Global Competitiveness Index compared with the countries listed in the Global Competitiveness Report

Figure 2: The evolution of our country's position, considering the value registered by the Global Competitiveness Index



Source: Author's calculations

It is very important to mention that under the development stage (in Table 1), during the analyzed period of time, Romania is listed in "Group 2", except 2009 / 2010 when our country is listed in transition from stage 2 to stage 3 countries group

In the following table, Table 2 there are presented the average values of competitiveness index at the EU 25 level and at our country's level, during the period of time analyzed.

Table 2: Average values of EU (Ij) and Romanian (I_{rj}) competitiveness indexes

| Anul | | 2006/2007 [1] | 2007/2008 [2] | 2008/2009 [3] | 2009/2010 [4] | 2010/2011 [5] | |
|--------------------------|-------|------------------|------------------|------------------|------------------|------------------|--------|
| Nivelul indicatorului | UE 25 | GCI | 4,9672 | 4,8048 | 4,804 | 4,7456 | 4,7432 |
| | IAC | 1 | 5,3144 | 5,2636 | 5,2868 | 5,1772 | 5,2664 |
| | | 2 | 4,866 | 4,7244 | 4,7708 | 4,746 | 4,6924 |
| | | 3 | 4,6216 | 4,4972 | 4,4636 | 4,4284 | 4,3868 |
| România | GCI | 4,02 | 3,97 | 4,10 | 4,11 | 4,16 | |
| | IAC | 1 | 4,19 | 4,07 | 4,15 | 4,10 | 4,36 |
| | | 2 | 3,99 | 3,98 | 4,18 | 4,25 | 4,18 |
| | | 3 | 3,52 | 3,54 | 3,53 | 3,44 | 3,24 |

Source: Author's calculations

The following figures, Figures 3, 4, 5 and 6 present the evolution of GCI, IAC and the 12 pillars of competitiveness deviations.

Figure 3: Deviations associated to GCI and IAC

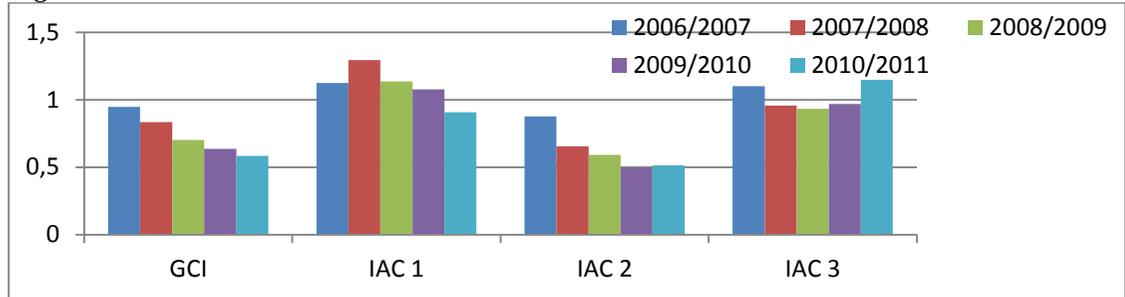
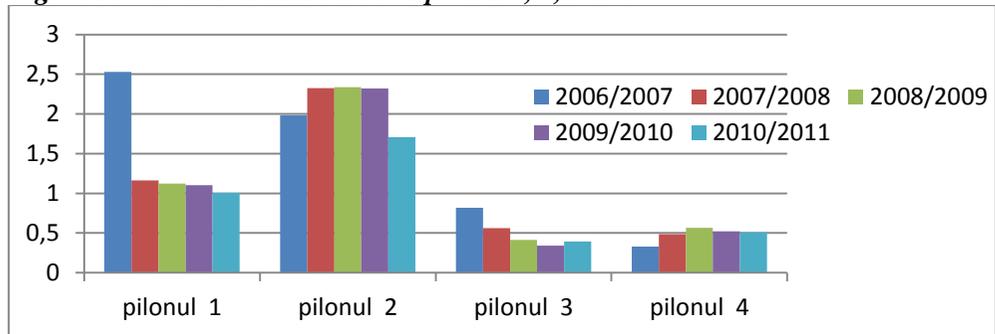
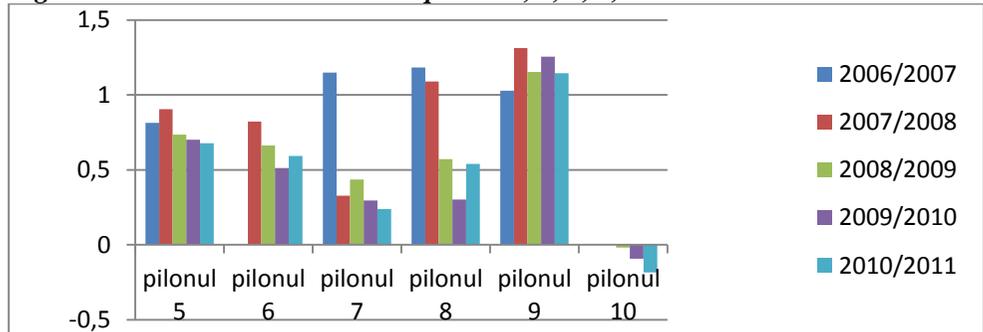


Figure 3: Deviations associated to pillars 1, 2, 3 and 4



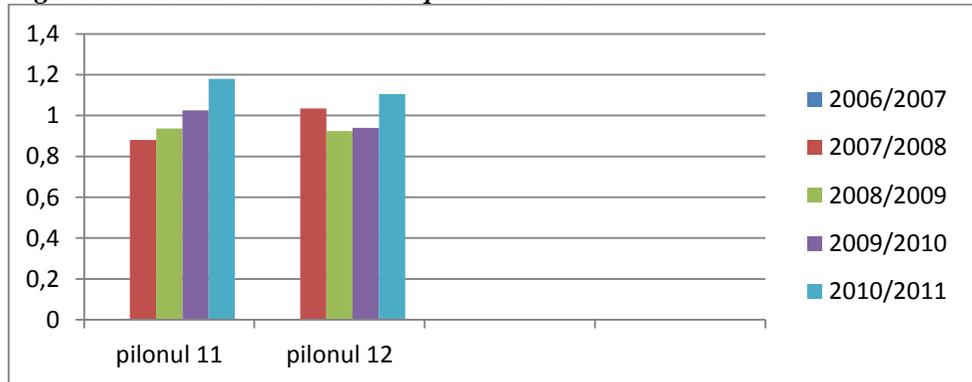
Source: Author's calculations

Figure 4: Deviations associated to pillars 5, 6, 7, 8, 9 and 10



Source: Author's calculations

Figure 5: Deviations associated to pillars 11 and 12



Source: Author's calculations

Conclusions

The Global Competitiveness Report issued by the World Economic Forum is actually a reference document at international level, due to its method of outlining each nation's competitiveness stage.

According to the Global Competitiveness Report for the period of time analyzed 2006 / 2007 until 2010 / 2011:

- Romania tends to occupy the 68th position in the total of 132 (average) countries analyzed;
- Romania is placed under the second group "stage 2 – Efficiency driven" with an average GDP per capita of 3000 and 9000 USD

The evaluations made with reference to the evolution of deviation values of indexes for Romania compared with the EU 25 are the following:

- The obvious tendency of recovering the gap between Romania and EU 25, under the aspect of Global Competitiveness Index
- Recovering the gap between Romania and EU 25 is made with the aggregate index IAC1 and IAC 2
- The aggregate index IAC 3 follows a contradictory evolution in the period analyzed and that leads to a decrease in the competitiveness gap recovery between Romania and EU25.
- Throughout the 12 pillars of competitiveness associated indexes we can note that IPC10 values are over the value of EU25, this being the most powerful gap recovery instrument for the period analyzed. For IPC1, IPC3, IPC5, IPC6, IPC7 and IPC8 the main tendency is to reduce the gap. The indexes IPC11 and IPC12 need to be carefully monitored because they contribute to the increase of the gap between EU25 and Romanian competitiveness, and the indexes IPC2, IPC4 and IPC9 tend to have the same effect, during the period of time analyzed.

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ROMANIAN INVESTMENT POLICY ANALYSIS

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Starting with the year 2009, the European Union, as well as the rest of the world, was affected by the economic and financial crisis, and one of the effects reflected in the decrease of foreign direct investment (FDI) projects and also in the reduction of their host locations. Creating a healthy economic environment, that should be efficient for any form of international investment, represents the nowadays challenge of all market economies. This paper concentrates on analyzing our country's attractiveness from the international investor's perspective, it also focuses on the Romanian investment policy, its investment climate, as well as on identifying or valuating the strengths and opportunities offered by Romania. The advantages of the foreign direct investments are universally recognized and they basically include the expansion of the production capacity and income, job creation, technological diffusion and economic development. Creating an appropriate economic environment, that is efficient for any form of international investments represents the nowadays challenge of all market economies. OECD member states experience, for example, outlines the advantages of a functional legal and normative climate, based on the principles of transparency and non discrimination, that are essential for attracting foreign investments. In the actual competition for attracting FDI, every state tries to offer as many incentives to the future foreign investors. The Romanian investment policy sets out incentives in a non-discriminatory and transparent way offering the investors the specific criteria. The Romanian business environment has improved significantly in recent years, driven in particular by EU accession. Major progress has been recorded in areas such as the fiscal environment, rule of law, the fight against corruption and property registration. When considering our country a possible location for the development of their businesses, the foreign investors are driven by the advantages offered for encouraging the FDI attraction, and so, they closely analyze the following aspects and advantages: geographic and market related advantages, the Romanian resources (natural, material, human resources), economic, politic and social drivers and also international status, regarding the diplomatic bilateral agreements.

Key words: Foreign direct investment (FDI), investment policy, incentives, attracting FDI, economic development, economic growth, investment climate

The article's JEL code: F21, F23, F55

Introduction

The advantages of foreign direct investments (FDI) are universally recognized and they basically include the expansion of the production capacity and income, job creation, technological diffusion and economic development. Creating an appropriate economic environment, that is efficient for any form of international investments represents the nowadays challenge of all market economies. OECD member states experience, for example, outlines the advantages of a functional legal and normative climate, based on the principles of transparency and non discrimination, that are essential for attracting foreign investments.

In my opinion, FDI can be easily attracted when the investors understand very well the environment in which they will operate, that is why for an investment policy to be efficient, it is necessary to be focused on the transparent legal environment based on the principle of stability and predictability, and also on actions and services concentrated on promoting the investments.

The principle of national treatment refers to the fact that the governments of FDI host countries' must treat the foreign investors as well as the national investors. Practically, the majority of

countries still maintain some restrictions regarding the foreign investments, in order to protect some industries considered strategic.

Lately, Romania registered an important progress in including the national treatment in its investment policy, eliminating a great part of its restrictions. In Romania, the forms of national treatment restrictions are the following:

- a 49% foreign ownership limitation in industries and sectors related to arms manufacturing, trading and production
- a limitation on foreign ownership of agricultural land
- restrictions on the purchase of real estate in areas deemed sensitive, e.g. forests, border zones, national parks and historical areas

The Romanian business environment has improved significantly in recent years, driven in particular by EU accession. Major progress has been recorded in areas such as the fiscal environment, rule of law, the fight against corruption and property registration. Harmonisation of the fiscal system with EU legislation and norms has brought about a modern and predictable tax system. Moreover, lower corporate and personal tax rates have contributed to improving the fiscal environment. Strengthening the rule of law has also been a priority. New legislation was passed in 2006 to improve transparency, and a National Integrity Agency was established in 2007. Public awareness campaigns to fight corruption in public administration and the judiciary have been carried out over the past two years (FIC, 2009). Romania is also member of WTO and applies the rules of TRIMS and GATS and it is the only country in the South Eastern Europe that signed OECD Declaration on International Investments and Transnational Corporations.

The transfer of capital, the repatriations of profits and liquidities is an essential determinant of FDI, contributing to any state's capacity of attraction and absorption of FDI. In Romania, the capital inflow from FDI is free and without delays.

In the actual competition for attracting FDI, every state tries to offer as many incentives to the future foreign investors. OECD defines the FDI incentives as "measures ment to influence the size, location and industry of a FDI project, by modifying its cost or its associated risks, throughout several conditions that are not available for the national investors".

The incentives offered to the foreign investors may take the form of fiscal, financial and normative incentives. Romania offers the following incentives to the international investors:

- Tax exemptions: total or partial reductions on the earnings tax for a certain period of time;
- Grants: based on the number of jobs created;
- Special zones: access to industrial parks;
- Free trade areas

The Romanian investment policy sets out incentives in a non-discriminatory and transparent way offering the investors the specific criteria.

The performance requirements represent certain conditions imposed by the host countries to foreign investors. According to an OECD study released in 2010, Romania meets all this requirements, due to its WTO membership and its status of TRIMS Agreement signatory.

Secure and transferrable rights to rural, urban and other types of land and forms of property are a prerequisite for a healthy investment environment. Well defined property rights represent determinants that attract and maintain FDI.

After our country's accession to the EU, foreign investors are allowed to own residential, industrial and agricultural land.

Intellectual property rights give investors an incentive to locate their businesses in Romania, when referring to the development of new products and services. It also gives investors the needed confidence to expand their production throughout Joint Ventures and licensing agreements. Due to its EU and WTO membership, Romania made an important progress in its efforts of defining the intellectual property framework.

The compensation of expropriation is another important incentive in the process of attracting FDI, but in certain situations the governments may legitimately need to enter in possession of certain private property, like in some cases of transport and energy infrastructure development projects. In Romania, the compensation of expropriation or the nationalization process takes place under constitutional provisions, that are different from Romanian FDI legislation.

Economic and investment climate in Romania

According to the Europe's Investment Attractiveness Report issued in 2010 by Ernst&Young, the foreign investors interest for Europe and also Romania reduced significantly. Compared to the year 2008, in 2009 Europe registered a 11% decrease in the number of FDI projects and a 16% decrease in the number of jobs created, also being confronted to serious difficulties due to investors lack of capital and the tightening of financing conditions.

In 2009, the number of FDI projects almost halved and the number of jobs created reduced with almost 44%. According to the same Ernst&Young study, Romania registered a 48% decrease of the number of FDI projects and a 44% in the number of jobs created, compared with the previous year.

In 2009, Romania attracted 75 FDI projects, this number representing 2% of the total number of projects attracted in Europe, generating 6.384 new jobs or 5% of the total number of jobs created. In 2009, Romania classified the seventh in Europe according to the number of jobs created, and eleventh according to the FDI share in the total FDI.

Despite the difficult period that challenges our country from this point of view, Romania is still considered an attractive destination for industrial FDI projects, representing 7% of the total number of FDI projects in Europe.

Our country's accession to the EU, materialized in a period of economic growth, occupying the second position in South Eastern Europe, considering the value of GDP per capita of 12600 USD. According to the information presented by the IMF (in 2009), Romania recorded a medium annual GDP growth of 6% in the period 2003 – 2007, increasing in 2008 at 7.1%. This increase was due to the strong internal demand and investments. In 2009, our country's economic growth slowed down considerably, and according to the European Commissions' forecasts, it decreased significantly with 8%. Romanian government negotiated a 12.3 billion USD Stand By Agreement with the IMF and the crisis generated by the measures taken strongly affected the financial sector, most of the banks canceling their development plans and restricting their regulatory framework.

Our country was considered an attractive location for the foreign investors due to its low labor costs and taxes, also to its developing market and its accession to the EU. In 2008, the FDI inflows represented 9.1 billion USD, in other words 6.7% of GDP (UNCTAD 2009). The main sectors that benefited from FDI were constructions, real estate, industrial sector, financial services and insurance (FIC 2009).

Romanian business environment improved considerably with our country's EU accession, occupying the 55th position in the top published by the World Bank in 2010, being the second in the South Eastern Europe economies.

The fields the improved the most were the financial sector, the rule of law, the fight against the corruption

and the intellectual property. The fiscal system harmonization with the EU legislation and norms materialized with a new, modern and predictable taxation system. But a slow - down in the reform process could also be noticed after Romania joined the EU in January 2007, some fields still needing important changes, like the corporate governance for example.

As regarding the investments promotion, Romania is in process of revising the Foreign Investments Promotion Agency. Romania should also increase the quality of the services offered to the foreign investors in the pre and post – entrance phase, regarding: the consultancy offered in order to business registration, licenses and work permits. It could also consider the

implementation of a certain program that should facilitate the commercial connections between the foreign investors and the local companies.

When considering Romania a possible location for their business development, the foreign investors look closely to the advantages offered by our country. In this context, according to the Romanian Agency for Foreign Investments there were identified certain advantages offered in order to attract FDI.

From a *geographical and market perspective* Romania is one of the largest markets in Central and Eastern Europe (ranking 7th, with over 21 million inhabitants); EU unique market gateway (access to approximately 500 million consumers) and is also an attractive location: situated at the turning point between EU, the Balkans and CIS countries, our country is crossed by three important pan-European transportation corridors: corridor no. IV linking Western and Eastern Europe, corridor no. IX connecting Northern and Southern Europe and no. VII – Danube River, facilitating inland water transportation, at the same time connecting the Romanian Port of Constanta (the biggest Port to the Black Sea) to Northern Europe, through the Rhine.

From the *resources perspective* Romania owns highly skilled labor force at competitive prices (solid knowledge in foreign languages, technology, IT, engineering, etc); rich natural resources, including surface and underground waters, fertile agricultural land, oil and gas; high potential for tourism.

From the *international perspective*, foreign investors have the following advantages: EU, WTO and NATO membership, member of the UN and other international organizations, like: OSCE, Council of Europe and International Organization of La Francophonie.

From the *economic perspective*, Romania offers the following incentives: Tax exemption of the reinvested profit; state aid schemes for encouraging investors to take upon Romania; increasing interest on behalf of Foreign Investors – leader destination for FDI in the region (2010 A.T. Kearney Foreign Direct Investment Confidence index) and also sound fiscal policy (16% flat tax).

From the *legal perspective*, the foreign investors have similar legal provisions as in the EU (Acquis Communautaire implementation); fiscal policy regulated by the Fiscal Code.

Other advantages are the continuously improving infrastructure (commitment to improve the highway infrastructure to EU standards); well-developed networks of mobile telecommunications in GSM systems; developed industrial infrastructure, including oil and petrochemicals; extensive maritime and river navigation facilities.

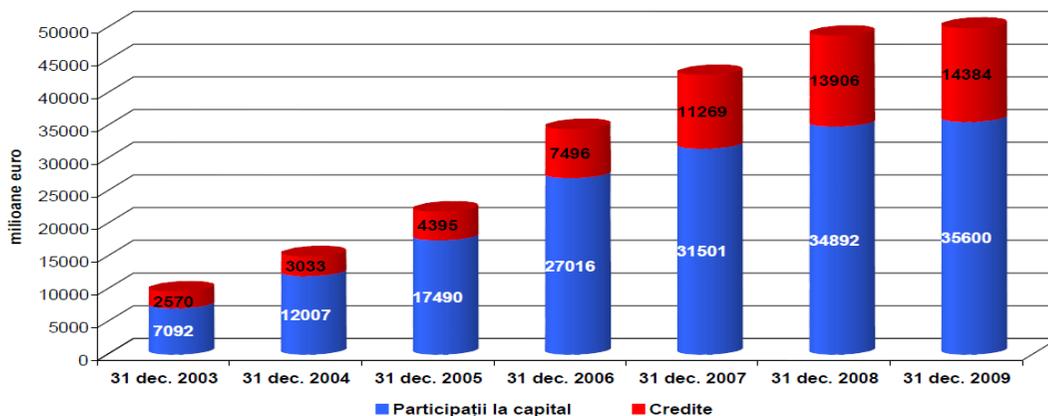
FDI in Romania

The net FDI inflows in Romania in 2009 reached 3488 million euro and their structure is the following: *foreign investors net participations* to the FDI social capital registered 1729 million euro (49.6% of the net FDI flow) and the *net credit of Joint Ventures* coming from the foreign investors summed 1759 million euro (50.4% of the net FDI flow).

In 2009, the *FDI stocks* summed up 49984 million euro, 2.4% more than in 2008.

The social capital participations (including the reinvested profit) of FDI registered 35600 million euro (71.2% of the final stock of FDI), 2% more than in the previous year and the *total net credit* of FDI registered reached 14384 million euro, representing 28,8% of the total FDI stock and also presenting a 3.4% increase compared with the previous year.

Figure 1: FDI flows analysis in Romania during 2003 – 2009

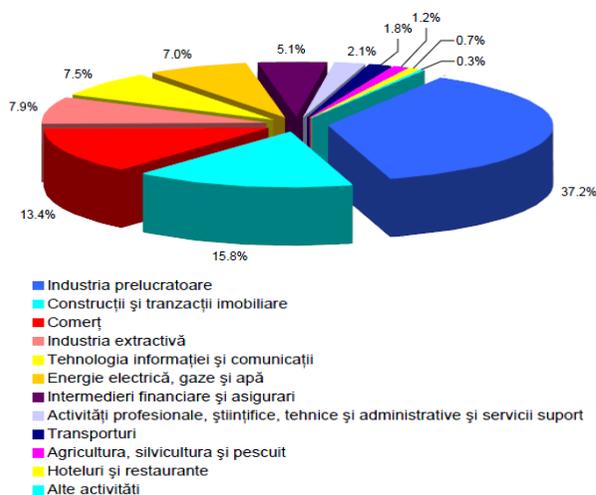


Source: Information published in the NBR FDI Report, 2009, available at link <http://www.bnr.ro/Investitiile-straine-directe-%28ISD%29-in-Romania-3174.aspx>

From the investors orientation perspective, FDI were located in the *manufacturing industry* (31.1% of the total) and the best represented sectors being petrol, chemicals, plastic masses (6.3% of the total), metallurgy (5.2%), transport industry (4.7%), food, beverages and tabaco industry (4.1%) and cement, glass and ceramics (3.3%). The textile and confection field (1.4%) registered value is less than expected.

Expect the industry field, other sectors that attracted important FDI are *financial services and insurance* representing 19% of the total FDI inflows, *constructions and real estate transactions* (12.9%), *trade and retail* (12.3%) *ITC* (6.5%)

Figure 2: FDI stock structure in Romania - 2009

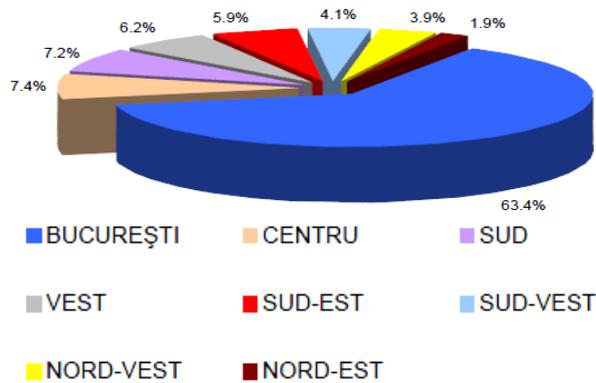


Source: published in the NBR FDI Report, 2009, available at link <http://www.bnr.ro/Investitiile-straine-directe-%28ISD%29-in-Romania-3174.aspx>

From a territorial perspective the orientation of FDI is clearly heading to Bucharest – Ilfov development region (63,4%), but other FDI host regions are: the Centre Region (7,4%), South Region (7,2%), West Region (6,2%) and South – East Region (5,9%).

The North East Region is the least attractive one for the foreign investors, registering only 1.9% of the total amount of FDI.

Figure 3: FDI structure on development regions - 2009



Source: published in the NBR FDI Report, 2009, available at link <http://www.bnr.ro/Investitiile-straine-directe-%28ISD%29-in-Romania-3174.aspx>

Romania's competitive advantage compared to the other countries in the region is not represented by the low cost labour force, in my opinion the market dimension is the driver that counts. After Poland, Romania has the most important consumption potential, hosting a bigger population than Hungary and Bulgaria together.

In conclusion, if Romania doesn't want to lose its few foreign investments attracted until now (less than Hungary and Poland in 2008) the national authorities should focus its actions on stimulating the consumption rather than the excessive fiscal system.

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INNOVATION VERSUS INCOME CONVERGENCE IN CENTRAL AND EASTERN EUROPE. IS THERE A CORRELATION?*

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The heterogeneity of response of the different economies facing the world economic crisis has brought into attention once again the issue of convergence inside the European Union. The high growth rates experienced by CEEC during the last decade created an optimistic view of rapid convergence towards Western Europe. But the crisis showed that the sources of economic growth in the region were not appropriate for a long run growth. Innovation is a key source of competitiveness and a contributor to a sustainable growth path. Even though CEEC lag behind other European countries in terms of R&D investment, a certain progress can be observed. The objective of the present paper is to establish if there is a correlation between the convergence in terms of GDP and the convergence in terms of innovation for the CEEC. Based on yearly Eurostat data for the period 1998-2008, we quantify the progress of each of the 10 CEEC both in closing the income gap and the innovation gap. We then rank the countries according to their speed of convergence and perform a Spearman rank correlation analysis. The results show that, on average, convergence in R&D is not correlated with convergence in GDP. The Czech Republic is the only country with a positive correlation between R&D intensity and GDP growth. Bulgaria, Hungary and Slovakia show a negative relationship between investment in R&D and economic growth. This implies that for most of the countries in Central and Eastern Europe, economic growth during the period 1998-2008 was mostly driven by non-innovation factors.

Key words: convergence, growth, innovation, R&D

JEL codes: F43, O33, O47

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1. Introduction

All central and eastern European countries have faced a recession period after the fall of the socialist regime, followed by a return to positive growth rates in the mid and late nineties. Some countries have found the growth path relatively fast, during the early nineties, while others (like Romania, Bulgaria) have experienced long recession periods and reached a dynamic growth only starting from 1997-1998.

Economic growth during the transition period had a particular pattern in CEEC. Capital has provided a certain positive contribution to growth, while labor had a small or even negative contribution (IMF, 2006). In this respect, CEEC stand out among other emerging countries, where labor input has typically contributed substantially to growth. Most of the growth during the transition period was actually accounted by the increase in total factor productivity (TFP). Even though the classical source of TFP growth is technical progress and innovation, growth during transition was mostly explained by efficiency improvements in the use of capital and labor (Havrylyshyn, 2001).

Starting in the late nineties, CEEC experienced a return to the classical factors determining growth, with an increase importance for innovation and technical progress. Once the transition period completed, the growth process in CEEC should be sustained by factors like capital intensity, innovation, human capital and competition (OECD, 2003). Since the main source of productivity growth during transition was actually the decrease in employment and only to a

small extend the faster increase in output (Van Ark and Piatkowski, 2004), the post-transition period calls for new and sustainable sources of long term productivity increase.

In this context, investment in research and development (R&D) becomes an important component of the competitiveness of CEEC, not only in terms of creation of new technology, but mostly as a determinant of the absorptive capacity. Local innovation and creation of new technologies becomes complementary to the transfer of innovation created abroad (Mitra, 2008). Since CEEC are rather technology using rather than technology generating (Radosevic 2005, Arnold et al. 2000), this second aspect may become the most important feature of the role of R&D as a factor of economic growth in Central and Eastern Europe.

The inclusion of innovation and research and development as determinants for economic growth is supported both by theoretical growth models and empirical research. Neoclassical theory Solow (1957) puts technical progress in the heart of long term growth, but states its exogenous nature. Endogenous growth models like Romer (1990), Grossman and Helpman (1991) are searching for the sources of technical progress and find innovation to be a solution to diminishing returns of classical factors. The “new growth theory” argues that R&D investment can foster long run economic growth. The interest of policy makers in the role of R&D is all the more important when considering the social rate of return, which surpasses the private rate of return of companies undergoing innovation activities (Griliches 1992).

The objective of this paper is establish if there is a correlation between the convergence process of CEEC towards the knowledge based economy and the income convergence of GDP/capita. We would normally expect a positive relationship between the two evolutions, since R&D investment is considered to be a determinant factor of economic growth. We first construct two rankings and compute a rank correlation coefficient, which turns out to be statistically insignificant, due to the heterogeneity of the countries in the sample. We then proceed with an individual analysis, which confirms the different patterns exhibited by the CEEC in the R&D-economic growth relationship. The Czech Republic is the only country where R&D intensity is correlated with economic growth, while most of the countries show in inconclusive relationship.

The structure of the paper is as follows. Section 2 presents a descriptive analysis of the convergence process in CEEC, with emphasis on research and development. This allows us to identify specific patterns in the relationship R&D – economic growth. Section 3 presents the methodology and the data being used, as well as the results obtained. Section 4 outlines the policy implications and the main conclusions of the paper.

2. GDP and R&D convergence in CEEC

There has been little research on the determinants of growth for the Central and Eastern European countries in the post-transition period, even less including research and development or human capital. One important reason for little research at macroeconomic level is poor data quality and availability for these countries, which makes econometric applications very sensitive and often leads to inconclusive results. Another reason might be the fact that the low volume of R&D investment seemed insufficient to generate a significant effect on economic growth. Indeed, during the nineties, the increase in productivity was actually accompanied by a decrease in R&D investment, so growth was generated by non-R&D factors (Radosevic, 2005).

The process of income convergence between CEEC and the European Union is clearly taking place, but with various speeds and different enhancing factors (Daianu, 2002). On average, CEEC reduced their income gap from 52% to 36% during the period 1998-2008 (see Table 1). The evolutions seem to follow a β convergence pattern, meaning that countries that were the least developed experienced a rapid growth (the Baltic states), while more advanced countries like Slovenia or the Czech Republic were progressing more slower (Veugelers and Mrak 2009).

It is well known that CEEC do not yet produce fundamental innovation, but rather adapt existing technologies transferred from abroad (Verspagen, 2001). Both human capital and effort in R&D

can substantially facilitate the effectiveness of this transfer and the capacity of the receiving economy to implement such innovation created abroad (Griffith *et al.*, 2004; Aghion and Howitt, 2005). At a first glance, CEEC seem to have an advantage in this matter, having inherited solid R&D and education systems from their socialist past. Unfortunately, R&D is still oriented towards fundamental rather than applied research, making cooperation between universities and enterprises rather rare. Therefore, the R&D process has a relatively low efficiency due to the difficulty in transposing the R&D effort into an increase in productivity (Radosevic, 2005). If convergence of CEEC towards EU27 in terms of GDP/capita is progressively taking place, catching-up in terms of knowledge economy is much more slow (Aralica et al. 2009). There are even opinions stating that a convergence towards a given target, as it was the case with the Lisbon agenda, is not suitable for all member states (van Pottelsberghe de la Potterie 2008). Even though a certain increase in R&D intensity can be observed, the differences compared to the European average remain significant. Table 1 presents these differences in R&D intensity and calculates the gap between CEEC and EU27, both in terms of R&D and GDP/capita.

Table 1. R&D intensity in CEEC and the catching up process, 1998-2008

| | | 1998 | 2000 | 2004 | 2005 | 2006 | 2007 | 2008 |
|----------------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| EU27 | R&D intensity | 1.79 | 1.86 | 1.83 | 1.82 | 1.85 | 1.85 | 1.92 |
| | St. dev. | 60% | 63% | 67% | 65% | 63% | 62% | 61% |
| | | | | | | | | |
| CEE C | R&D intensity | 0.72 | 0.72 | 0.75 | 0.80 | 0.87 | 0.85 | 0.89 |
| | St dev. | 42% | 46% | 47% | 47% | 49% | 48% | 49% |
| | | | | | | | | |
| Gap in R&D intensity | | 60% | 61% | 59% | 56% | 53% | 54% | 53% |
| Gap in GDP/capita | | 52% | 52% | 45% | 43% | 41% | 38% | 36% |

Source: Own calculations based on Eurostat data. The gap represents the difference in R&D intensity, as a percentage of EU27. We define R&D intensity as the share of total R&D expenditure in GDP.

With an average share of R&D expenditures in GDP well below 1%, CEEC obviously lag behind the other members of the EU, having an R&D intensity below what might be expected given their income level (Radosevic, 2005). The gap in R&D intensity is decreasing over time, but the speed of convergence is fairly small. From a gap of 60% in 1998, CEEC have only managed to reduce the gap to 53% by 2008, so the difference remains remarkably high.

Both the level of R&D intensity and its dynamics present considerable variation between EU countries, and this variation seems to have increased over time. Table 2 presents the convergence status of R&D intensity for each of the 10 CEEC, depicting a heterogeneous behavior among these economies.

Table 2. The gap in R&D intensity between CEEC and EU27

| | 1998 | 2008 | Average yearly evolution of R&D gap | Convergence status towards EU27 |
|----------------|------|------|-------------------------------------|---------------------------------|
| Bulgaria | 68% | 76% | 0.7% | No convergence |
| Czech Republic | 36% | 23% | -1.2% | Convergence |
| Estonia | 68% | 33% | -3.5% | High convergence |
| Latvia | 78% | 68% | -0.9% | Low Convergence |
| Lithuania | 70% | 58% | -1.1% | Convergence |
| Hungary | 63% | 48% | -1.5% | Convergence |
| Poland | 63% | 69% | 0.6% | No convergence |
| Romania | 73% | 70% | -0.3% | Low convergence |
| Slovenia | 25% | 14% | -1.1% | Convergence |

| | 1998 | 2008 | Average yearly evolution of R&D gap | Convergence status towards EU27 |
|----------|------|------|-------------------------------------|---------------------------------|
| Slovakia | 56% | 76% | 1.9% | No convergence |

Note: The gap represents the difference in R&D intensity between each of the countries and EU27, as a percentage of EU27.

Inside the CEE group, several patterns emerge. A sub-group of countries present no-convergence in terms of R&D during the period 1998-2008: (Bulgaria, Poland and Slovakia), with a clear divergence in the case of Slovakia. The second sub-group presents a decrease of their gap towards EU average (Estonia, Czech Republic, the Baltic States, Hungary, Romania and Slovenia). Romania and Slovenia present a low, but positive, speed of convergence. The difficulty in R&D intensity convergence could be explained by the fact that for countries with high rates of GDP growth, as CEEC, R&D expenditure as % of GDP needs to grow at very high rates in order to close the gap (Veugelers and Mrak 2009).

3. Research methodology, data and results

We have established in the previous section that both income and R&D convergence is taking place in CEEC, but at fairly different speeds. The research question we address is the existence of a correlation between the two convergence processes. If such a correlation is to exist, then R&D can be considered an enhancing factor for economic growth.

We construct two ranking of the 10 CEEC according to their speed in closing the GDP gap and the R&D intensity gap. We then test the correlation between the two rankings by using the Spearman rank correlation coefficient. The formula used to compute the coefficient is the following:

$$\rho = 1 - \frac{6 \sum_{i=1}^n (x_i - y_i)^2}{n(n^2 - 1)}$$

Where:

- x_i and y_i are the ranks occupied by country i in GDP convergence ranking and R&D convergence ranking respectively.

- n represents the total number of countries, in our case 10.

The Spearman correlation coefficient is a non-parametric measure similar to a Pearson correlation coefficient between ranked variables, without making the assumption that the variables are extracted from a normal distribution. The advantage over the Pearson coefficient is that it does not require a linear relationship between the two variables. A coefficient equal to zero shows no correlation between the two rankings. A coefficient equal to 1 implies that an increase in R&D intensity is always accompanied by an increase in GDP. A positive, but less than 1, coefficient would imply that GDP tends to increase when R&D intensity increases. Equally as important as the value of the coefficient is its significance level. Since the Spearman coefficient does not assume a specific distribution, the significance value is obtained based on a table of critical values, provided by Best and Roberts (1975). After running an overall analysis based on the sample of 10 CEEC, we proceed by depicting individual correlation analysis between growth and R&D intensity for each of the countries.

The data we used comes from Eurostat, has a yearly frequency and is available for the period 1998-2008. For the construction of the rankings, we used GDP/capita expressed in purchasing power standards and R&D intensity computed as the share of total R&D expenditures in GDP. We then calculated the gaps in GDP/capita and R&D intensity as a percentage of EU27. The same series were used to compute the individual correlation coefficients.

Based on the analysis presented in section 2, we constructed a ranking of the countries according to their speed in reducing the R&D intensity gap. Data is presented in column (1) of Table 3.

Estonia, Hungary and the Czech Republic present the fastest convergence of R&D intensity towards European average. Poland, Bulgaria and Slovakia occupy the last ranks, presenting, as described above, a divergence process in R&D investment.

We added a raking in terms of income convergence in order to see whether there is a correlation between the two rankings (column 2 of Table 3). In terms of increase in GDP/capita, the Baltic countries are the top runners. They have started with relatively high income gap, but manage to reduce it by more than 20 percentage points in 10 years. Countries that occupy the last ranks are actually those who had a smaller gap from the beginning (i.e. Slovenia and the Czech Republic had only 20-30% gap in 1998). So this is a confirmation of the hypothesis of β convergence, according to which countries with larger gaps converge faster than countries with smaller gaps.

Table 3. Correlation analysis between GDP/capita and R&D convergence

| Countries | Ranking by R&D convergence | Ranking by GDP convergence | Individual correlation between GDP growth and R&D intensity |
|---------------------------|----------------------------|----------------------------|---|
| | (1) | (2) | (3) |
| Estonia | 1 | 1 | -0.34 (0.2989) |
| Hungary | 2 | 9 | -0.56** (0.0722) |
| Czech Republic | 3 | 8 | 0.77*** (0.0059) |
| Lithuania | 4 | 2 | 0.50 (0.1209) |
| Slovenia | 5 | 7 | 0.18 (0.6016) |
| Latvia | 6 | 3 | 0.15 (0.6521) |
| Romania | 7 | 4 | 0.12 (0.7356) |
| Poland | 8 | 10 | -0.03 (0.9338) |
| Bulgaria | 9 | 6 | -0.61** (0.0476) |
| Slovakia | 10 | 5 | -0.70** (0.0174) |
| Spearman rank correlation | | 0.163 | |
| Significance (p-value) | | 0.65 | |

Source : Authors' calculations based on Eurostat data, using the STATA software. The first two columns contain rankings of the 10 CEEC according to the reduction in their income and R&D gap, for the period 1998-2008. Column (3) presents the individual correlation coefficients between GDP growth and R&D intensity, with the corresponding p-values in brackets. The symbols *, ** and *** indicate significance levels of 10%, 5% and 1% respectively.

The Spearman rank coefficient has a value of 0.163, showing a low positive correlation, which in turn is not statistically significant (p-value = 0.65). We cannot therefore establish a significant correlation between the two rankings, meaning that an increase in R&D intensity is not systematically accompanied by an increase in GDP. Even though on the long run both convergence processes are taking place, GDP convergence does not seem to be correlated with R&D convergence. This lack of correlation is due to other factors determining growth, which generate the observed differences in the speed of convergence. The result does not imply that

R&D does not have a positive contribution to growth, but it states that, on average, investment in R&D does not speed up the process of income convergence. The present levels of R&D intensity are not sufficient to generate a visible increase in GDP, so its relative importance seems to be much lower than for other determinants of growth.

We proceeded with an individual analysis of economic growth versus R&D intensity for the 10 countries, during the period 1998-2008. We performed an individual correlation analysis, in order to identify if the countries follow a similar path. Results are presented in column (3) of Table 3. We found that the average evolution depicted earlier hides heterogeneous patterns.

Hungary, Bulgaria and Slovakia show a negative correlation between economic growth and R&D intensity. While they were progressing in economic growth, they allocated less of their income to R&D expenditure. So growth seems to have been decoupled from R&D expenditure in these countries. One possible explanation resides in the sources of innovation. Some countries might create it locally by investment in R&D, while others might import it by foreign trade or foreign direct investment (Perugini et al. 2008, Narula 2009). Slovakia actually experienced a severe drop in all R&D components during this period and is a particular case of growth without R&D investment.

The Czech Republic is the only one of the ten countries presenting a highly significant positive correlation. Being one of the more advanced CEEC, the Czech economy has settled on the more classical factors of long term economic growth, like innovation and human capital investment. (Perugini et al., 2008). Its constant increase in R&D expenditure was accompanied by sustained GDP growth.

The other six countries show a rather insignificant correlation between GDP growth and R&D intensity, given by high p-values associated with their coefficients. Though the R&D intensity in these countries has continuously increased during this period, they have not yet reached the point of transforming this effort into an increase of output. They still suffer from weak R&D systems, which make cooperation between academia and industry sectors difficult (Radosevic 2004, 2005). Estonia stands out being on the first position in both rankings and showing a considerable progress along the convergence path. Slovenia also visibly increased its R&D expenditure, so a positive and significant contribution to growth is expected in the future. The Baltic States, although not presenting yet a significant correlation, have a high potential in innovation driven growth, because of their constant increase in R&D expenditure.

Our research has several limitations. First, the Pearson correlation coefficient assumes a linear relationship between the two variables. The lack of linear correlation does not exclude non-linear forms of correlation, like an exponential one, which may account for continuous R&D investment with a later effect on growth. Second, a correlation between two variables does not mean a causality relationship, even though theory suggests that R&D should act as a cause in economic growth. For the case of CEEC, a hypothesis that higher income levels lead to an increase of R&D investment may very well be plausible. These limitations open the field for future research: including R&D in a cross-country growth regression and testing the nature of the causal relationship.

4. Conclusion

As a general conclusion, CEEC present a heterogeneous pattern in the path towards the knowledge based economy, though a small but positive trend in R&D intensity can be identified. Bulgaria, Poland and Slovakia seem to make an exception to the rule, reducing their share of R&D and therefore magnifying their gap with the European Union. On the other hand, Estonia shows a remarkable progress both in innovation and income levels, being the top runner among CEEC.

In the post-transition period, CEEC are in search of sustainable factors to increase productivity and foster long-term growth. The crisis has particularly affected these catching-up economies, and the recovery path is likely to be more knowledge-based. Innovation and research and

development could be important contributors to sustain the competitiveness of these countries and the re-adjustment of the catching-up process. The aim of this paper was to test whether the income convergence in Central and Eastern Europe was correlated with the increase in R&D intensity. We constructed two rankings of the 10 countries according to the status of convergence (income and innovation) and computed a Spearman rank correlation coefficient. The result shows a slightly positive, but insignificant correlation between the two evolutions. Suspecting high heterogeneity among the sample, we proceed with an individual analysis. The Czech Republic is the only country where the two evolutions are positively and significantly related. Hungary, Bulgaria and Slovakia show a negative relationship between economic growth and R&D intensity, which is consistent with the view that growth was mostly generated by non-R&D factors. The other six countries in the sample do not present a significant correlation between the two variables. The results indicate that for the majority of the new member states, the income convergence is not supported by innovation-convergence.

These differences in the innovation capacity point out to two different factors: differences in the stocks of capital, labour and knowledge, but mostly different efficiency of the innovation systems. This means that besides the effort put into R&D, the economies should also have the capacity to transform knowledge into growth. This is thought to be one of the weak points of CEEC. The structure of their research systems in favor of government and education sectors renders business applications difficult. R&D activities also need a certain maturation time to generate an increase in productivity, which CEEC have probably not reached yet.

As policy recommendations, countries with large gaps in terms of innovation (Bulgaria, Slovakia, Romania, Latvia, Poland, Lithuania) should focus on improving their absorptive capacity rather than investing high shares in fundamental research through government and academic systems. The challenge they are facing is to create an innovation demand from private companies, who do not find profitable opportunities for innovative activities. They should also improve their educational systems, which struggle with low efficiency. Despite high enrollment rates, there is a lack of correlation with the needs of the private sector.

Countries with smaller gaps, like the Czech Republic, Slovenia and Estonia, should concentrate on local innovations to sustain productivity growth and stimulate applied business research. Even though they are investing in R&D, they have difficulties in leveraging this effort into an increase of output. Government policies should facilitate cooperation between academia and private sector and increased government R&D spending should have a stimulating role on business innovation activities.

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REGULATORY BENCHMARKING IN CENTRAL EUROPE: CURRENT PRACTICE AND POSSIBILITIES OF DEVELOPMENT FOR THE ENERGY SECTOR

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Benchmarking is a technique of performance evaluation in which comparisons are made to benchmarks that represent external performance standards. In the field of regulation of public utilities, benchmarking can be used as an element of performance-based regulation or as a pure regulatory method, called yardstick competition. In the absence of competition, benchmarking can be used to simulate competitive pressures by comparing a regulated firm's performance against an efficient standard.

The aim of this paper is to examine the Central European regulatory benchmarking practices in the energy sector, namely the electricity and natural gas distribution industries, and to analyse the possibilities of further development of regulatory benchmarking in this region. The countries onto which we focus are Czech Republic, Slovakia, Hungary, Poland, Germany, Austria and Switzerland. In the region of Central Europe there are still significant differences between countries, especially in terms of experiences in modern regulation, regulatory methods and practices, level of economic development etc. Differences are considerable especially between Western countries (Germany, Austria and Switzerland) and the countries of former Eastern Bloc (Czech Republic, Slovakia, Hungary and Poland). As a result, the degree of the use of regulatory benchmarking is also very diverse within this region.

In the first part of the paper, we develop basic theoretic concepts of economic regulation. Then we describe the most frequently used regulatory methods – cost-of-service regulation, incentive regulation and yardstick competition – and we deal with common regulatory benchmarking techniques, describe their principles and main challenges. Subsequently, we provide an overview of regulatory methods and benchmarking practices for each country in the region of interest. In the final part of the paper, we analyse the challenges and possibilities for further development of regulatory benchmarking in the Central Europe.

We have found that except for Switzerland, all Central European regulatory regimes are based on some form of incentive regulation. The most sophisticated methods of benchmarking are used in Germany and Austria. In these countries, benchmarking is used in both electricity and natural gas industries. The Polish regulator is using a benchmarking method in cost efficiency analysis in electricity distribution. In Hungary, a specific method of benchmarking is used. In Switzerland, no benchmarking is used at present. In Czech Republic and Slovakia, some principles of benchmarking are adopted, but not directly to the revenue requirements setting. We summarize that the possibilities for development of regulatory benchmarking in the Central Europe could be extended by reducing market concentration, unbundling large vertically integrated companies, establishing a closer cooperation with the private sector and closer harmonization of regulatory frameworks.

Keywords: regulatory benchmarking, public utilities benchmarking, Central European utilities, public utilities regulation, regulatory framework

JEL Codes: L43, L51, L9

1. Introduction

Energy sector, which traditionally includes electricity, gas and heat industry, has some inherent characteristics which result in state regulation of energy utilities. Contemporary trends, such as privatisation, mergers, legal unbundling, separation of competitive and non-competitive segments produce new challenges for regulation in Europe. The main purpose of economic regulation is to achieve competitive results in an environment where competition is (for various reasons) not feasible.

An efficient competition puts a company under pressures, sometimes referred to as „carrot and stick“. The carrot means that if a firm produces at lower costs than its competitors, then its profits will be higher. The stick means that an inability to keep costs below its competitors will make the firm go out of business in long term. Regulatory commissions, willing to achieve maximum efficiency, therefore face the challenge to simulate competitive pressures, which should induce a company to behave as if it were exposed to real competition. However, traditional methods of regulation do not provide sufficient incentives for utilities to increase productivity in a quest for lower costs.

Regulatory benchmarking is an element of incentive regulation that can be used to set efficiency requirements based on a relative efficiency assessment. This paper examines the actual practice in central Europe (ie Czech Republic, Slovakia, Hungary, Poland, Germany, Austria and Switzerland) and possibilities of improvement in the field of regulatory benchmarking within this region.

2. Basic concepts of economic regulation

Regulation usually takes place when (Phillips, 1993)

- competition is feasible but does not last long, so a competitive output is not achievable;
- competition is feasible but a competitive output is not achievable due to market imperfections;
- competition is feasible and a competitive output is achievable, but with regard to the social welfare this output is not sufficient.

Usually, regulated companies have characteristics of natural monopolies, although not all of them (eg trucking in the United States). Market conditions are constantly changing – new technologies are being developed, market size is changing – so a demise of natural monopoly is almost never excluded.

Public utilities often have the following properties (Bonbright, 1961):

- inherent economies of scale and scope;
- essential product with a low price and cross elasticity of demand;
- capital-intensive production, the product represents an essential input for other industries of the entire economy;
- non-storable and non-transferable product, synchronous production and consumption, excess capacity, fixed connection with customers;
- variable and seasonal character of demand;
- obligation to serve all customers who are able and willing to pay for the service (public service obligation).

Following the concepts of natural monopoly or destructive competition (Kahn, 1988) or for social reasons, government may decide to regulate price level, quality-of-service, market entry and exit conditions and impose public service obligations.

This paper focuses on price (tariff) regulation. The main task of regulatory agencies is to set a price level that mimics the competitive price level. However, when competition is not feasible, this is a formidable task. The situation of natural monopoly tariff setting is illustrated below.

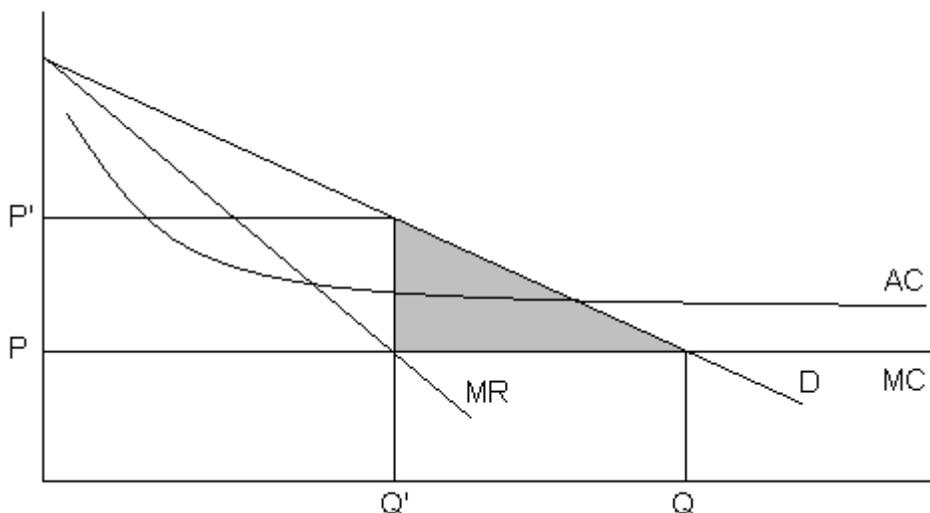


Figure 1: The concept of natural monopoly

Source: Lesser, A., Giacchino, L. *Fundamentals of Energy Regulation*. Vienna, Public Utility Reports, 2009.

In conditions of natural monopoly, the curve of average costs (AC) is decreasing due to the economies of scale. Monopoly power causes that the marginal revenues curve (MR) has a lower slope than the demand curve (D). The competitive output (Q) and price (P) is achieved at the intersect of demand (D) and marginal costs (MC). However, if the price was set at P, total revenues ($P \times Q$) would not cover total costs ($AC \times Q$) and the company would eventually go out of business. The task of regulators is to achieve competitive output and to allow the regulated company to cover its costs and achieve a reasonable rate of return on its capital.

3. Basic methods of tariff regulation

Traditional tariff setting is based on revenue requirements (RR) that should allow a company to cover its expenses and have a reasonable rate of return on its invested capital. Eligible expenses must be „prudent“, „known and measurable“ and „used and useful“ (Lesser, 2009). All other expenses are excluded from revenue requirements.

Usually, revenue requirements for a regulatory period (typically 5 years) are calculated using the following formula (Lesser, 2009):

$$RR = O\&M + A\&G + T + D + (WACC \times RB), \quad (1)$$

where *RR* denotes revenue requirements, *O&M* denotes operation and maintenance costs, *A&G* denotes administration and general costs, *T* denotes taxes, *D* denotes depreciation and amortization, *WACC* is the weighted average cost of capital (after taxes) and *RB* denotes regulatory asset base (sum of assets book value and working capital).

A classical **cost-of-service regulation** (COS regulation) is based on summing eligible expenses and calculating a required rate of return. This approach has several disadvantages – information asymmetries between regulator and regulated companies, incentive to overinvest (A-J-W effect) or to invest imprudently (gold plating) – and does not simulate competition pressures, especially the above-mentioned „stick“.

The aim of **incentive regulation** (performance-based regulation, PBR regulation) is to reduce the impact of information asymmetries and to provide a stronger incentive for a company to reduce its costs. Usually, it is based on a price cap or a revenue cap. For each year, the regulatory agency limits the price level or revenues. The regulated company is motivated to reduce its costs in order to increase profits. The revenues are capped according to the inflation rate (RPI-factor) and

efficiency factor (X-factor), that's why this method is also called RPI-X regulation. However, if the cap is set also according to a company's own costs, then the negative effects of COS regulation (overinvestment, gold plating etc.) are not fully eliminated.

In a competitive environment, a firm's earnings are related to the industry average and to the firm's relative market position. A firm has to reduce its costs below its competitors in order to survive. Setting the cap with respect to the performance of other companies is the main principle of the third regulatory method, **yardstick competition**, which is based entirely on regulatory benchmarking.

4. Regulatory benchmarking

The idea of regulatory benchmarking is that a firm's revenue requirements should not be based on its own costs, but rather on a relative efficiency measurement (Schleifer, 1985). The objective of benchmarking is to establish a system that determines a firm's efficient revenue requirements based on measuring a firm's efficiency against a reference performance. If correctly applied, this approach eliminates the negative consequences of information asymmetries. Regulatory benchmarking can be used to determine both price and quality efficient levels.

However, some issues arise when applying this approach. Firstly, regulatory agencies have to choose an adequate sample of firms, but firms and their environment tend to be heterogeneous. Difficulties also arise in gathering and comparing data. Thirdly, modelling can become more and more costly and marginal benefits of more accurate price setting can be overwhelmed by marginal costs of doing so. Fourthly, regulated firms could agree to act in some collusive fashion and to manipulate with data together. Fifthly, a threat of going out of business has to be credible, but governments usually tend to protect utilities from bankruptcy (Lesser, 2009). Sixthly, adequate methods have to be chosen.

A utility's performance can be measured in three basic areas: quality, efficiency and productivity. Productivity is measured as a ratio of output and input. These indices can be based on partial indicators (labour, costs etc) or total factor productivity (TFP), but issues resulting from heterogeneity prevail.

In regulatory practice, frontier methods for estimating efficiency are the most widely used. Cost frontiers define minimum cost level of producing a given output with a given input. Inefficiency is then represented as the distance of a company from this frontier.

Deterministic methods (OLS, COLS, MOLS) assume that all data can be observed. OLS (ordinary least squares) is a classical technique of estimating cost frontiers: it is an estimate of an average cost function of a sample of firms based on the relationship between total costs and other variables (market conditions, area, grid length etc). Statistical analysis can be used to isolate the impact of specific conditions. This method can be used in the case of companies with relatively similar cost structure and requires large data sets to obtain reliable results. COLS (corrected OLS) is a modification of OLS, with a shift of the frontier towards the best performing company. MOLS (modified OLS) is less restrictive than COLS with a slighter shift of the cost frontier.

Stochastic methods (stochastic frontier analysis, SFA) take into account possible measurement errors and chance factors. An estimate of noise distribution has to be made for each observed firm. Typically, higher efficiency scores are achieved than when using deterministic methods.

Data envelopment analysis (DEA) is a method in operations research. It is based on comparison of multiple variables (costs per customer, costs per km of grid etc), searching for points with the lowest unit costs and connecting these points to form an efficiency frontier. Companies not on the frontier are considered inefficient. As with above-mentioned methods, inefficiency is represented by the distance of a company from the frontier.

5. Benchmarking in the Central Europe: an overview

In this paper, we focus on regulatory benchmarking practices in following countries: Czech Republic, Slovakia, Hungary, Poland, Austria, Germany and Switzerland.

Czech republic

The Czech energy regulatory agency (Energetický regulační úřad, ERÚ) is using a revenue-cap incentive regulation. To determine revenue requirements, an ordinary RPI-X regulatory formula has been used, where certain parameters (WACC, D/E ratio, beta coefficient) and X-factor were determined using simple benchmarking methods. As the Czech energy market is relatively small, foreign experiences have been used. For example, the beta coefficient was set as an average of comparable European firm's beta from abroad. However, revenue requirements are being set based on a firm's own costs, which causes that issues of traditional regulatory methods are not eliminated. No true regulatory benchmarking was used (ERÚ, 2009). The number of firms operating on regulated markets is relatively low.

Slovakia

The Slovak energy market is regulated by the Agency for regulation of network industries (Úrad pre reguláciu sieťových odvetví, ÚRSO). Price regulation is based on a traditional price-cap incentive regulation. Prices are set individually according to regulatory formula which takes into account price inflation and X-factor (ÚRSO, 2008). The formula and its parameter setting are very similar to the Czech ones. No true regulatory benchmarking was used. The regulated markets are very concentrated, for instance, only one pipeline (Slovenský plynárenský priemysel) is operating in natural gas regional distribution. The price caps in gas transportation and gas storage are based on comparing Slovak tariffs with EU tariffs (ÚRSO, 2009). The analysis has to take into account only similar European firms, with regard to geological, technical and other (working capacity, injection rate and production capacity) characteristics.

Hungary

Similarly to the Slovak ÚRSO agency, the Hungarian energy regulatory agency (Magyar Energia Hivatal, MEH) is using a price-cap RPI-X incentive regulation for the electricity sector. Unlike ERÚ and ÚRSO, MEH calculates regulatory formula parameters (beta, WACC etc) based on Hungarian local conditions, such as BUX stock exchange index and companies stocks (MEH, 2009). D/E ratio is determined using domestic benchmarking. In the field of natural gas and electricity transportation and distribution, a relatively complicated but promising non-frontier benchmarking system has been used to determine allowed operational costs. Before benchmarking, costs were corrected in order to mitigate regional differences (wages, consumer structure) and geographical and technical differences. Average (benchmark) operational costs were then incorporated into revenue requirements. Both international and domestic data have been used (Haney, 2009). A simple frontier technique has been used in setting quality requirements, where desired quality performance has been calculated from average values over a short period. Failure to comply with these standards was penalized, although there was a 5% tolerance in order to mitigate chance factors (Tersztzyanszky, 2005).

Poland

The Polish energy market is regulated by the agency Urząd Regulacji Energetyki (URE), but rules of tariff setting are determined by the Ministry of Economy (Ministerstwo Gospodarki). A price-cap RPI-X incentive regulation has been used. As the Polish energy market is relatively large, benchmarking methods are more easily applicable. However, there are only a relatively few companies operating on the market, with regard to the total country area and population. Benchmarking has been used only in the field of electricity distribution. Electricity transmission and gas transportation and distribution are not regulated using benchmarking techniques.

As benchmarking technique, a Bayesian random effect model (a SFA method) in cost efficiency analysis was used. A DEA or COLS methods are in consideration for the next regulatory period (Haney, 2009).

Germany

The German energy market is significantly larger (in terms of system operators) than the above-mentioned markets. It is regulated by Bundesnetz-agentur (BNetzA). A revenue-cap RPI-X regulation has been used since 2009. BNetzA uses a regulatory formula which contains a general and an individual X-factor. The individual X-factor is determined using benchmarking DEA and SFA methods for both electricity and gas industries. The two methods are applied to two cost bases and a „best-of-four“ scheme is then applied: out of four results, the efficiency score that is the most favourable to a company is taken to calculate its individual X-factor. A total controllable expenditures (totex) benchmarking has been used, in contrast with UK, where operational costs (opex) and capital costs (capex) are treated separately.

After benchmarking, an intransparency has remained, so legal steps by many operators have been undertaken.

Austria

The Austrian regulatory agency Energie-Control (E-Control) is using benchmarking methods for both electricity and gas industries. As in Germany, the Austrian energy markets is much less concentrated than in other previously mentioned countries and there is a large number of system operators in the market. Domestic and international data have been used for regulatory benchmarking. As in Germany, total expenditures (totex) are taken into consideration. The regulator has been using DEA and MOLS methods. DEA and MOLS give different results, which are then weighted using a „weak-of-method“: the better results gets weighted by 60%, the worse result by 40%. Contrarily to Germany, benchmarking results were widely accepted by regulated companies.

Switzerland

Having only a short history of regulation, the Swiss energy regulatory framework is carried out by multiple institutions – for example the ElCom regulatory agency, the association of companies operation in the electricity sector - Verband Schweizerischer Elektrizitätsunternehmen (VSE), Bundesamt für Energie (BFE) and more.

As natural gas plays only a minor role in the Swiss energy industry, tariffs in the gas sector are not specifically regulated, but they must comply to the national antitrust law. Tariffs for electricity distribution have been regulated based on a rate-of-return (COS) method. The methodology has been co-prepared by the VSE association, so regulated firms have been directly involved into the regulatory process. Due to a large number of companies involved in distribution sector, possibilities for benchmarking are considerable, but still it is not used.

6. Conclusion

Regulatory methods differ across the region of Central Europe, but except for Switzerland all of them are based on some form of incentive regulation. Regulatory benchmarking can be used as an element of incentive regulation or as a pure regulatory method (yardstick competition).

The most sophisticated methods of benchmarking are used in Germany and Austria, where energy markets are developed and a large number of firms are operating on the market. In these countries, benchmarking is used in both electricity and natural gas industries. The Polish regulator is using a SFA method in cost efficiency analysis in electricity distribution. However, the Polish energy market is still very concentrated, which limits the possibilities of further development of domestic benchmarking. In Hungary, a non-frontier method of benchmarking is used. The Hungarian energy market is relatively small, causing the need for data from foreign

companies. In Switzerland, no benchmarking is used at present. In Czech Republic and Slovakia, some principles of benchmarking are adopted, but not directly to the revenue requirements setting. These markets are small and relatively concentrated.

The possibilities for development of regulatory benchmarking in the Central Europe could be extended by reducing market concentration in order to obtain a larger sample of firms. Domestic benchmarking is more accurate due to more similar environment (including political and economic conditions, legislation, regulatory framework etc). However, long time series are not obtainable, due to only a short history of modern regulation in most countries (notably those from the former Eastern Bloc). In addition, large vertically integrated companies are still present in the markets, which complicates the separation of regulated and non-regulated activities. An unbundling of these companies would facilitate data collection and comparability. A cooperation with the private sector is needed in order to establish an acceptance of the benchmarking results, which would reduce court costs due to companies undertaking legal steps. A closer harmonization of regulatory frameworks would slightly reduce the disparity of companies and data gathered. Although regulatory agencies are members of pan-european organisations such as ACER or CEER, regulatory policies remain still in the hands of individual countries.

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INTEGRATION OF SEMI-SUBSISTENCE AGRICULTURAL FARMS

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Intensive agriculture, industrial type, contributed to environmental degradation and pollution. Thus, on the one hand, makes intensive use of chemicals has led to neglect of duty to maintain the natural fertility of the soil organic matter through proper fattening. On the other hand, organizing specialized industrial environments, high animal breeders, considered the only marketable livestock production, neglecting the production of manure, thus representing a break with the brutal nature of biological circuits

Following the experience accumulated over two centuries, mankind has drawn valuable education obligation to safeguard the habitat of nature as a collaborator. In this respect, the main task of our times is to develop appropriate technologies humanist ideal, so that man can become a being as fully integrated into the social and cosmic environment.

In the present period as a peasant household current form, is typical of developing countries. It is generated by the result of families who received income from farming and increase farm animalelor. Gospodăria organizational structure is the basic economic and agricultural economy. On the basis of the idea that organic production is the main cause of degradation of the biological quality of products is inadequate human intervention at various structural levels of the biosphere, and the most severe effects on humans resulting from the cumulation of errors relating to soil, plants and animals. Organic farming places emphasis on quality natural products, the quantity and productivity issues as a peripheral level.

A balanced rural development policy for the future is not an option but a necessity, especially considering the fact that the issue of agriculture and rural development has important national connotations and is a very complex and timely in Romania

Regional development is a concept that aims at stimulating and diversifying economic activities, encouraging private sector investment, helping to reduce unemployment and ultimately lead to improved living standards, according to the regions of the country's development.

Keywords: Peasant household, sustainable development, farms, subsistence, european agriculture

Codes JEL : Q0 , Q1



Introduction

Agriculture is important not only for what they produce, but also the function of society by large agricultural population and its role in environmental protection, preservation of rural life and landscapes. Because of the importance of agriculture in the economy is imperative to be among the priorities for short and medium term development in the restructuring and modernization, and long term to remain a chance for sustainable development of European rural.

1. Typology of farms

Diversification of products and services produced in the rural economy of our country, shows a heterogeneous structure of the activities of farms area, which makes it difficult to define their typology, according to uniform criteria. The activities to be carried out as a peasant grow, the more it requires the establishment of multiple and different criteria. From within the unitary system of criteria: two needed to define the specific nature and peasant: the size of production capacity, the structure of income and use of working time

1.1. Classification according to production capacity

Peasant household can produce goods and services directly correlated with wealth and resources available at household work. Distinguish two types of households:

- *Subsistence peasant farm is a closed household, whose dominant feature is the self-consumption*, combining self-sufficient nature of marketing the production of varying amounts, small products. Priority is self-consumption production in many changing situations is not fully insured to the real needs of rural families ensure their living from agriculture. Living standard of such a farm is different and varies from region to region. Principal factors that determine such differentiation are: wealth of the farm, inherited mentality and traditional culture, education, access to services, the local development, local market for specialty products and public services, incentives and facilities for the small producer, etc..

Subsistence family farms, in most can not qualify to become a strong farm type, they produce primarily for their own consumption. As economic modernization and expansion of market mechanisms, reduces the number of such households is manifested more pronounced tendency of associative forms of organization, leading to the formation of viable farms, run by professionals who produce for market conditions efficiency. Associative forms are now operating type lease agricultural associations and that the economic results achieved so far inconclusive, failed to convince landowners of their viability. This phenomenon is influenced by the current state of the owners having no other alternative, are placed in a position to call the organizers or entrepreneurs associative forms to be received in such an association.

The combination of the developed countries to build on small property fund, which by association, finds support both in production and circulation in the area by providing necessary inputs and value by selling their products in terms of economic return.

Small farms (up to 5 ha) can be considered subsistence family farms. Such a holding is generally devoid of means of production and financial resources which, without state support, have little chance of survival. It produces small quantities of products and varied, depending commercializându need them acoperirii expenses.

- *The peasant type, whose dominant feature is the production for market*, for profit. From this typological group are households that have an adequate financial situation and investment and specialization of activities are likely to become a modern farm. The commercial farms, have all chances to become family farms like those operating in developed countries.

As development and increased investment process, the peasant household is increasingly linked to the market. This is a springboard for Western-style farms, the entrepreneurs who take on lease land from owners who can not work the land, and entrepreneurs to develop viable farms, the optimum size.

1.2. Classification by income structure and use of working time

Although the two components seem different, they essentially are the same. According to this criterion we distinguish:

- *Agricultural farms derive income solely from agriculture*, the whole working time is allocated only to agricultural activity. This does not mean that the active workforce is employed within the household. Peasant families who have small areas, generally produced for own closed circuit.

Depending on their placement from the market, there are small holdings of about 0.5 ha arranged greenhouses for cultivating vegetables and flowers in culture alternatives to get much higher revenue than grain growing areas of 5-10 ha. Moreover, grain producers have an occupancy rate of time much less than those who practice the culture reduced in protected areas. Due to the low level of technical equipment, a dominant feature of these groups of outer type production extensively.

- *Pluriactive peasant households* who derive income from agriculture and at least another activity such as employment, practicing some crafts or providing services, after the occupation of working time allocated to agricultural activities. Peasant households are deriving income households practice mixed pluriactivitatea generated by objective factors such as: have a surplus of labor, time allocated to domestic and agricultural work are not utilized, farm size does not ensure the existence and the revenue needed development; traditionalism of households to practice agricultural activities during the off season friendly farming: different trades, crafts or provide services to farmers and rural population.

The frequency of these households is higher in hill and mountain areas where the average farm size is small, and in areas where local resources are varied and rich.

2. National Rural Development Programme Objectives

National Rural Development Programme (NRDP) 2007-2013 will be implemented in a period of significant change for agriculture and rural areas of Romania as the country takes its first steps on the EU market and the full effect of the reforms of the Common Agricultural Policy (CAP) will be felt during this period. The first effects are felt in those years, when significant changes occur. Also, growth of the economy in general has a significant impact on the sectors of agriculture and rural economy in terms of opportunities and threats.

National Rural Development Programme in Romania will focus on issues such as competitiveness, environment, quality of rural life, with the overall objectives:

- increasing the competitiveness of agriculture and forestry;
- improving the rural environment;
- improve quality of life and diversification of rural economy;
- initiation and operation of local development initiatives.

Measures under Axis 1 aim, first, improving the efficiency of agriculture and forestry sector to succeed to face the competition resulting in an open environment of foreign trade. The results should be a workforce better trained in agriculture, with an improved age structure, a better structure of land resources, the subsistence farms entering the market, modernized commercial agriculture, higher added value and quality improved products which will further enhance productivity and competitiveness of agriculture and forestry.

3. Support for semi-subsistence farms

Supporting the overall objective of the measure of semi-subsistence farms (141) is to increase the competitiveness of agricultural holdings undergoing restructuring to help ease problems of transition, given that the agricultural sector and rural economy are exposed to competitive pressures of the single market .

Beneficiaries of the measure are individuals engaged in economic activities, mainly farming, the farm which has an economic dimension between 2 and 8 ESU is located within the country, is registered in the register of farms and farm register, sell a part of produced agricultural production and establish a business plan.

Support under this measure is necessary to ensure income during the restructuring and transformation of semi-subsistence-oriented farm market through sustainable use of factors of production, diversification of agricultural production through improved management and introduction of technologies adapted to local conditions.

The first session for submission of projects was held between December 3, 2008 to February 27, 2009, session benefiting from an allocation of 47,607,740 euros, or 10% of the established government financial allocation for 2007-2013.

During this session for submission were submitted 6442 projects with a total amount requested by eligible 48315.000 thousand euros. Of the 6442 submitted projects were selected following the 6262 Selection Committee meeting, out of which 6148 were contracted projects with a value of 46110.000 thousand Euro grant eligible.

Regarding the distribution of approved projects according to farm size, the situation is as follows:

- Holds the largest share of category size <5 ha (74.69% of total projects approved for this measure) of 4592 eligible projects approved and a grant value of 34440.000 thousand Euro;
- 5 ha size \leq Dimension <10 ha has a weight of 15.11% of total projects approved for this measure, approved 929 projects with a value of 6967.500 thousand Euro grant eligible;
- Category "Size \geq 10 ha" has a weight of 10.20% of total projects approved for this measure, approved 627 projects with a value of 4702.500 thousand Euro grant eligible.

Table 1: Status of projects for each type of farm size

| Dimension of the farm | Number of project | Value € | Share (%) |
|-----------------------|-------------------|------------|-----------|
| <5 ha | 4.592 | 34.440.000 | 74.69 |
| 5-10 ha | 929 | 6.967.500 | 15.11 |
| >10 ha | 627 | 4.702.500 | 10.20 |

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The total number of semi-subsistence farms supported (6148):

- 786 farms are headed by women;
- 2012 farms are run by young people under 40 years;
- 2711 holdings are in disadvantaged areas;
- 803 apply for Agri-environment farms.

In terms of regional distribution, Constanta South East Region 2 has the largest share, ie 18.38% of total projects approved this measure, followed by North West Region 6 Satu Mare, accounting for approximately 18.33% of total projects approved and South-Muntenia Region 3 with a weight of 16.36%. The three regions have a share of approximately 53.07% of all projects approved under this measure.

Table .2: Regional distribution of approved projects

| Region | Number of approved projed | Eligible grant amount Euro |
|------------------------------|---------------------------|----------------------------|
| 1 North – East Iași | 977 | 7.327.500 |
| 2 Constanta South East | 1.130 | 8.475.000 |
| 3 South Muntenia Târgoviște | 1.006 | 7.545.000 |
| 4 South West Oltenia Craiova | 615 | 4.612.500 |
| 5 West Timișoara | 413 | 3.097.500 |
| 6 North West Satu Mare | 1.127 | 8.452.500 |
| 7 Centru Alba Iulia | 855 | 6.412.500 |
| 8 București Ilfov | 25 | 187.500 |
| Total General | 6.148 | 46.110.000 |

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By the end of 2009 have made payments of approximately 9207.196 thousand euros, representing EAFRD contribution 7365.757 thousand euros.

Payments situation in terms of farm size is as follows:

1. Size <5 acres - have made payments amounting to 6878.268 thousand euros, representing 74.69% of the public contribution paid to beneficiaries for the measure, the EAFRD contribution being 5502.614 thousand Euro;
2. 5 ha ≤size <10 acres - have made payments amounting to 1390.210 thousand euros, representing 15.11% of the public contribution paid to beneficiaries for the measure, the EAFRD contribution being 1112.168 thousand Euro;
3. Size ≥ 10 acres - have made payments amounting to Euro 938,718 thousand, representing 10.20% of the public contribution paid to beneficiaries for the measure, the contribution of the EAFRD is EUR 750,975 thousand.

Table .3 Value payments broken down by farm size

| Dimension of the farm | Amount paid € | Contribution FEADR € | Share (%) |
|-----------------------|------------------|-------------------------|-----------|
| <5 ha | 6.878.268 | 5.502.614 | 74.69 |
| 5-10 ha | 1.390.210 | 1.112.168 | 15.11 |
| >10 ha | 938.718 | 750.975 | 10.20 |

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Regarding the regional distribution of the value of contracted projects and payments, the situation is shown in the table below:

Table. 4 : The amount contracted and paid broken down by regions

| Region | Amount contracted Mil Euros | Amount paid Mil Euros |
|------------------------------|--------------------------------|--------------------------|
| 1 North – East Iași | 7,33 | 1,46 |
| 2 Constanta South East | 8,48 | 1,70 |
| 3 South Muntenia Târgoviște | 7,55 | 1,51 |
| 4 South West Oltenia Craiova | 4,61 | 0,92 |
| 5 West Timișoara | 3,10 | 0,62 |
| 6 North West Satu Mare | 8,45 | 1,69 |
| 7 Centru Alba Iulia | 6,41 | 1,28 |
| 8 București Ilfov | 0,19 | 0,04 |
| Total General | 46,12 | 9,22 |

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Conclusions

European agriculture has a key role in protecting biodiversity. It is important that action on these Community priorities are further strengthened rural development programs. Innovation can contribute particularly to the development of new technologies, products and processes and will therefore support efforts to tackle climate change, renewable energy, water and biodiversity management. Should be granted specific support for innovation with reference to these challenges, to increase the effectiveness of those operations.

With a total area of 238,000 km² and a population of over 21 million inhabitants, Romania is the largest, the second new EU member state. It represents 6% of the total EU and 4% of its population. Investment and competitiveness in Romania are still issues to be improved to be able to accelerate growth and ensure income convergence with the EU.

A balanced rural development policy for the future is not an option but a necessity, especially considering the fact that the issue of agriculture and rural development has important national connotations and is a very complex and present in Romania

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STUDY ON THE CAUSES OF REGIONAL ECONOMIC DISPARITIES IN ROMANIA

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Successive enlargements of the European Union have led to increasing heterogeneity of the development levels of the states and regions members. The Romanian development regions are among the most poorly economically developed European regions and are regarded as economies based on production factors where the development of economy is mainly triggered by the poorly qualified labour and the natural resources.

This paper aims to analyse and to identify the factors lying at the bottom of regional development and the causes of Romanian regional disparities, by comparative analyse and the break down the basic development indicators into their components.

The regional economic disparities from Romania tend to be more prominent due following causes: low level of development of most regions, structure of economy dominated by economic sectors with a low productivity; the low research-innovation potential; the low share of the population having a higher education, reduced capacity of the poorly developed regions to withhold the highly qualified labour, the weak development of infrastructure, particularly poor quality of infrastructure networks.

Romania stays anchored in a development model characterized by an anachronous economic structure, a poorly qualified labour, a slow accumulation of capital and a reduced sustainability of the development rate.

Keywords: disparities, economic development, region, factors, convergence

Clasificarea JEL: O11, O47, R11, R13

1. Introduction

Given the high heterogeneity of the development levels of the states and regions members of the European Union, the regionally policy occupies a central place within the European Union policies. According to the European Committee, in every fourth region of the widened Europe GDP/per capita is below 75% from the EU average, a fact determining the eligibility of regions for the Convergence of the European structural funds objective” (The European Committee, 2006). These “convergence regions” have several characteristics: low levels of GDP and occupancy, they share within the total GDP of the EU being only 12.5%, as compared to 35% for the total population of the EU (Béla Szörfi 2007: 101).

The main objective of the EU regional policy is the increase of the economic welfare and the bringing near of the development levels of regions, the obtaining of the economic and social cohesion meaning the reduction of the economic and social inequalities among the European regions. The economic cohesion is a desiderate followed by the European Community ever since its setting up, so it was mentioned in Article 130a of the Treaty of Rome for the setting up of the European Community. Article 3 of the European Union Treaty stipulates „European Union must work for a sustained development of Europe based on a balanced economic increase and.. promote the economic, social and territorial cohesion and solidarity within the member states” (European Union 2006: 118).

The important themes of the European Union cohesion policy are the following:

1. Competitiveness which is the central theme of the regional and economic and social cohesion policy. Otherwise, in a report of the European Committee (2002), the EU experts wonder whether the policy of industrial agglomerations itself may be the “landmark” of the EU’s reference

objective, namely to become the most competitive region in the world until 2010. In concordance with the mutations produced in the evolution of theories and models for economic increase and development, the Lisbon Agenda put in the centre of attention the economic growth based on the technologic progress and employment.

2. The active policies related to the labour market focus on the encouragement of employment, the consolidation of the social cohesion and reduction of the poverty risk and incidence.

3. The sustainable development means the orientation of the regional policies towards the attaining of the objectives established by Goteborg agenda (2001).

2. Literature review – Economic development and regional disparities

According to the large economic thinking currents that lay at the bottom of formulation of increase/development theories and models, the support of the regions left behind so as to recover the gap separating them from the developed regions may be achieved in two ways: regional development policies and measures (Keynesian and post-Keynesian approaches) and promotion of the economic liberalism (neoclassical approaches) leading to the general economic progress.

A controversial issue related to the regional growth disparities refers to the medium-long term vision on the consequences of regional growth. Based on Solow's model (1956), the neoclassical economists underlying the role of demand within the regional growth came up with the idea that the regional disparities diminish once with growth.

On the other hand, Myrdal (1957) and other post – Keynesians sustain that the regional growth process is a spatial cumulative one leading to the increase of regional inequalities.

Williamson (1965) shows that in the initial stages of development, when investments in the physical capital are the main engine of economic growth, inequality stimulates growth through the orientation of resources towards those who save money and invest more. Conversely, in developed economies, the accumulation of the human capital replaces the accumulation of physical capital as the main engine of growth. Williamson sustains that in the initial stages of a country's development, there are increases of regional disparities whereas in more advanced stages, development may lead to regional convergence.

The issue of disparities in the regional economic development gives rise to intense discussions among the development theorists since the goal of regional development is not just the one of identifying methods for the promotion of economic growth and structural changes in economy, but also of improving certain social aspects such as health, education, the work conditions etc. An important problem is to find an adequate manner for the analysis of the regional growth and development processes, to identify the factors contributing to accentuation or diminution of disparities. Depending on the purpose for which they make the measurement of the economic growth and disparity analysis, we may use the following indicators: increase of total output, increase of output per employed person, increase of output per capita.

The identification of causes of regional disparities supposes the identification of the causes leading to the interregional gap of GDP/inhabitant. Thus, we may identify four factors tightly connected to the interregional differences of GDP/inhabitant: structure of the economic activity, the size and potential of the research/innovation activity, region's infrastructure and accessibility, education and labour qualification (Ciupagea C et al. 2004: 115).

The studies carried out show that between the abovementioned factors influencing the regional GDP and the economic growth potential, there is a relatively strong connection (Ciupagea C. 2004). Thus, the developed regions are characterized by high employment rates in high productivity sectors (industry, constructions and services, mainly productive/producers' services) whereas the poorly developed regions are characterized by large shares of employment in agriculture, a fact that hampers the economic growth. At the same time, a high level of education as well as the existence and development of an adequate infrastructure favours economic growth. The framework for the analysis of regional development and the accentuation/reduction of the interregional disparities should be extended on other factors related to the mutations and

evolutions occurred within the EU economic policies at world level. Thus, knowing that the engine of capitalist economy is represented by the free initiative and competition among entrepreneurs, it is necessary to include in the regional analysis the residential population's capacity to take the risks and responsibilities afferent to the private initiative, to generate the technical progress and innovating activities that might propel them in leading positions of the market, to benefit from competitive advantages created by the property rights.

Regardless of the economic theory or theories shaping the regional development policies at a certain time, a decisive role in the general progress of the region might be played by the social innovations. They refer to the capacity and will of individuals, enterprises and public entities (central or local) to collaborate in order to adapt and permanently improve the economic policies so as to ensure the balance between the capitalization of the factors lying at the bottom of the economic progress and the changes occurring in the economic realities.

3. Research methodology

The different approaches of economic theories and policies related to development must identify and take into account the factors that may lead to the economic convergence or non-convergence among regions and countries. (Ray Debraj 2008). In order to analyse the traditional indicator of the development level – GDP per capita – and to study the causes of its evolution at regional level, it is useful to break it down and study the influence of six factors on the economic development level. These factors mainly refer to the structural characteristics of regions such as: structure of economy, demographic structure, relative competitiveness of factors, efficiency of operation of the local market and labour, productivity differences – given the regional structure of the industrial mixture, the differences in the occupancy rate – given the regional demographic structure (Bruno Bracalente and Cristiano Perugini 2008: 2). This paper aims to analyse and to identify the factors lying at the bottom of regional development and the causes of Romanian regional disparities, by comparative analyse and the break down the basic development indicators into their components: structure of the economic activity, the size and potential of the research/innovation activity, education and labour qualification, region's infrastructure.

4. Research results - Causes of regional economic disparities in Romania

The comparative regional analyses of our country indicate that there are no developing regions where the economic progress and the development level are uniform in all the composing counties and areas/spaces. In most regions, despite their diversity, we must consolidate and capitalize the factors lying at the bottom of development from the free market perspective (Ciupagea C et al.2004: p117). Thus, besides the activity domains of social interest we must stimulate the economic activities making the object of private initiatives from all fields.

Table 1 Indicators of regional economic disparities 2007

| Indicator\ region | GDP/inhab. PPS/inhab. | GDP/inhab. % in EU average | GDP/employee EUR (2006) | Income of private household (PPS/inhab) |
|-------------------|-----------------------|----------------------------|-------------------------|---|
| North East | 6600 | 27 | 6583,8 | 4064,4 |
| South East | 8400 | 34 | 9219,1 | 4669,7 |
| South | 8500 | 34 | 8741,8 | 4478,5 |
| South West | 8100 | 33 | 7918,2 | 4705,5 |
| West | 12000 | 48 | 12476,1 | 5757 |
| North | 10000 | 40 | 10109,2 | 5000,8 |

| Indicator\ region | GDP/inhab. PPS/inhab. | GDP/inhab. % in EU average | GDP/employee EUR (2006) | Income of private household (PPS/inhab) |
|-------------------|-----------------------|----------------------------|-------------------------|---|
| West | | | | |
| Central | 10500 | 42 | 11225,7 | 5015,4 |
| Bucharest | 23000 | 92 | 21505,4 | 9296,3 |
| Romania | 10400 | 42 | 10496,2 | 7053 |
| EU27 | 25000 | 100 | 53074,6 | 18976 |

Source: Achieved by author based on data Eurostat, Regional statistics, Regions and Cities

The Romanian development regions are among the most poorly economically developed European regions and this fact is shown by Eurostat statistics and documents that characterize the economies of the regions from our country as having a medium development level and so they are regarded as economies based on production factors where the development of economy is mainly triggered by the poorly qualified labour and the natural resources. The only region making an exception and falling into the category of intermediate regions is Bucharest-Ilfov region that registered in 2007 a GDP/inhabitant of 92.2% from UE27 average (Paola Annoni and Kornelia Kozovska, 2010).

The heterogeneity of levels of regional economic development in Romania is very high (table 1). Thus, the North-East region is by far the most poorly developed of the regions of our country characterized by a GDP per inhabitant 3.48 times lower than that of Bucharest-Ilfov region and 3.8 times lower than the average GDP of UE27. PIB/inhabitant of the North-East region established as a share from the average GDP/inhabitant of UE27 is 27%, one of the lowest of all the EU development regions. At the same time, the available income of the private households is about 2.3 times lower than that of Bucharest region and 4.7 times lower than the average income of UE27.

An explanation of these gaps in terms of the GDP per inhabitant is the low work productivity from the development regions of our country as compared to the average productivity of UE27. Thus, the work productivity of the North-East region, expressed as a ratio between the regional GDP and the employed population, is 1.6 times lower than the national average, about 3.3 times lower than the Bucharest region and 8.1 times lower than the average productivity of UE27 regions. The low level of regional work productivity may be attributed to the structure of regional occupancy by activity fields (table 2).

Table 2 Regional economy structure - Employed population by sector 2006

| Sector\region | N-E | S-E | S | S-V | V | N-V | C | B |
|---------------|------|------|------|------|------|------|------|------|
| Agriculture | 47,7 | 32,5 | 35,4 | 46,4 | 18,7 | 29,4 | 16,8 | 2,1 |
| Industry | 23,1 | 27,9 | 32,4 | 24,1 | 41,3 | 32,6 | 41,7 | 28,2 |
| Services | 29,2 | 39,6 | 32,2 | 29,5 | 40,0 | 38,0 | 41,5 | 69,7 |

Sursa: Achieved by author based on data Eurostat INSSE, Statistici regionale

In 2006 the structure of the activity fields was dominated by agricultural activities in the most poorly developed Romanian regions, 47.7% in the NE region and 46.4% in the SW region. The more developed regions (Bucharest-Ilfov, Central area, the Western area) are characterized by a better employment in the industrial and service providing sectors with a work productivity superior to the one in agriculture. We also may notice in all regions a shifting of the labour from agriculture towards the non-agricultural branches, the share of employment in agriculture

registering a descending trend. However, the transfer rate of labour from agriculture to industry and services was faster in the more developed regions (central area, western area) than in the more poorly developed regions (NE, SW, NW). The inadequate structure of economy and the high importance of the sectors characterized by a low work productivity in employment and GDP explain why the Romanian economy has known a larger GDP contraction: -7.1% in 2009 and -1.3 % in 2010, as compared to the UE27 average: -4.2% and 1.8% (Eurostat). Accentuation in time of the interregional disparities from Romania is highlighted by increase of dispersion of the regional GDP/inhabitant from 12.8 in 1995 to 35.3 in 2007, whereas for the entire UE27 the regional GDP/inhabitant has a slightly decreasing trend from 35.4% in 2001 to 32.7% in 2007. An important role in the process of development of regional economies is played by the access of residential population to education and professional training. EU regional statistics shows that the share of the population aged between 20 and 24 years included in the tertiary education is higher in the regions with economy more developed: Bucharest 248.9%, the Western area 66.3%, the central area 55.5%; and lower in the in the less developed regions: North East 34.2%, South Muntenia 19,7 %, South West Oltenia 36,4 % South East 32.7% (data from 2008). These weights have seen an upward trend during 2002-2008 in all regions, but this was more pronounced in developed regions. The share held by the development region of Bucharest (248.9 %) shows that the academic education institutions from the country's capital city attract students from other development regions. The highly qualified human resources are attracted towards the developed regions offering a better access to the labour market and remuneration.

Table 3 The extent and potential of research / innovation activities **2008**

| Specification | Human res. In science and tech. (% ec. act. pop.) | Researchers, all sect. (% total empl.) | Employment in high-tech sect. (% of total empl) | Total intramural R&D expend. (eur/inhab.) | Total intramural R&D expend. (% GDP) |
|---------------|---|--|---|--|--------------------------------------|
| North East | 17 | 0,12 | 1,31 | 15,7 | 0,39 |
| South East | 18,5 | 0,06 | 1,21 | 9,5 | 0,18 |
| South | 16 | 0,13 | 1,23 | 18,9 | 0,35 |
| South West | 18,5 | 0,09 | 0,95 | 10,5 | 0,21 |
| West | 21,8 | 0,11 | 4,16 | 21,6 | 0,31 |
| North West | 22,4 | 0,16 | 2,03 | 25,8 | 0,45 |
| Central | 22,2 | 0,1 | 1,71 | 8,6 | 0,14 |
| Bucharest | 42,2 | 0,97 | 6,55 | 224,9 | 1,42 |
| Romania | - | 0,31 | 5,6 | 37,6 | 0,58 |
| EU27 | - | 1,04 | 6,59 | 481,6 | 1,92 |

Source: Achieved by author based on data Eurostat Eurostat, Regional statistics, Regions and Cities

Current models of development in advanced countries and regions, focus on promoting a knowledge-based economy, technological progress, research and innovation (Romer 1986, Lucas 1998, Aghion și Hewitt 2009), but Eurostat data show that the most regions in Romania are not yet able to implement such a model (table 3). The shares of human resources involved in the research and high tech activities are higher in the developed regions than in the less developed ones. Thus, the north-east region which is the weakest of all the Romanian development regions was characterized in 2008 by 0.12% population employed in scientific research as compared to 0.97% for Bucharest region and 1.04% the UE27 average. At the same time, employment in the high-tech sectors was in 2008 of only 1.2 % in the North-East region as against 5.45% in Bucharest-Ilfov region and 6.59% the EU average. In 2008 the research-development expenses per inhabitant from the north-east region were 14.3 times lower than the ones from Bucharest-Ilfov region and 30.7 times lower than the average of UE27 regions. However, these expenses

have registered an ascending trend for all regions and the gaps tend to slightly diminish. In 2008, the Romanian development regions allocated for the research-development expenses shares between 0.14 (the central region) and 0.45% from the GDP (north-west region) as compared to 1.42% from the GDP in Bucharest-Ilfov region and 1.92% which is UE27 average. The involvement of the private sector in the research-development activities in the Romanian regions is extremely reduced as compared to the UE27 average. Thus, the share of the private sector within the average research-development expenses per Romanian inhabitant was 30% whereas the regional average of UE27 was 63.2%.

The data presented above show that the development model of the Romanian regional economies comes into contrast with the current trends of the development models from the European developed countries and regions. Thus, if the main engine of development of the regional economies from the developed countries is the research-development-innovation activity and the development of the innovating sectors characterized by high technologies, the Romanian development model is characterized by an inadequate structure of economy where the agricultural sector absorbs a very large part of the active population.

5. Conclusions

The regional economic disparities from Romania tend to be more prominent due to the low level of development of most regions; thus Kuznetz's and Williamson's hypotheses, according to which in the initial stages of a country's development, there are increases of regional disparities whereas in more advanced stages, development may lead to regional convergence, are confirmed. At the same time, we may notice the existence of some regional growth poles (the country's capital city, Bucharest, and several more important towns of the country) where the factors favorable for development are concentrated: internal and foreign capital, highly qualified labour and the research-innovation activity.

Among the causes of accentuation of the regional economic disparities we can stand out:

- the structure of economy dominated by economic sectors with a low productivity of the production factors. In the most poorly developed region of the country the population is preponderantly employed in agriculture what explains the reduced regional productivities. Unfortunately, the transfer rate of labour from agriculture to the non-agricultural sectors is a very slow one, due to the slow development of the entrepreneurial initiatives of the residential population, mainly in the industrial domains and services having a high technological level.
- the low research-innovation potential due, on one hand, to the insufficiency of the financial resources allocated from the state budget and the poor implication of the private sector in funding the research-innovation activities and on the other hand, to the insufficient human resources weakly motivated and the migration of the highly qualified labour and the people having a higher education towards the developed regions offering better perspectives for employment in fields of competence, better jobs and remuneration. To stimulate the research-innovation activity, it is first of all necessary to develop the business environment and to promote social innovations, the collaboration among the research institutions, the private organisations and the public institutions.
- the low share of the population having a higher education as compared to the developed regions due to the reduced capacity of the poorly developed regions to withhold the highly qualified labour. Another drawback refers to the quality of the training activity and the capacity of education to offer the labour skills and competences required in the labour market. To a certain extent, this explains the weak collaboration or the lack of communication between the business environment and the educational institutions so as to highlight the deficiencies in the formation of labour and to identify the skills/abilities necessary to ensure the access of graduates to the labour market.

As a general conclusion, while the developed countries discuss the passing from the development models focused on the accumulation of production factors to models centered on innovation and

the human capital with high skills and competences, Romania stays anchored in a development model characterized by an anachronous economic structure, a poorly qualified labour, a slow accumulation of capital and a reduced sustainability of the development rate.

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THE IMPORTANCE OF IMPLEMENTING THE ICT NETWORK IN ACHIEVING KNOWLEDGE TRANSFER IN THE RURAL AREAS

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Currently in Romania, the information sources available to farmers are limited and belong mostly to the public sector. The knowledge provided is relevant but insufficient in order to meet the needs of the Romanian farmers, especially since they are not oriented towards the market, as the main segment of interest. This paper has the intention to emphasize the need to introduce ICT as the main tool in supporting the decision making process and in resolving the specific issues faced by this sector. In analyzing the current situation regarding this matter, in order to propose ways to resolve the problems encountered in achieving knowledge transfer, until now, were addressed issues such as: the evolution of the knowledge transfer concept, development milestones and actions that marked the RDI sector as the main producer of information, the main supporters of the farmers in their information actions (World Bank, IFAD), means, procedures and techniques used for transmitting knowledge (extension; consultancy). But what is most important is making all this resulted information available for the farmers, fact which can only be accomplished, in our opinion, by introducing and implementing ICT in the rural areas. The main method of research is the statistical data analysis of the data regarding the components involved in the knowledge transfer process and the current status of implementation of ICT in the rural areas. Among the expected results are included identifying the main restrictive factors in achieving knowledge transfer in rural and the main implications that implementing ICT would have on farmers' market position. Introducing ICT in the rural area is, in our opinion the best way to transform information, as a research result, into knowledge, becoming this way a real input for the farmer. In practice, this will lead to lower production costs, lower prices for inputs, increased revenues by increasing the production's prices and, not least, increased level of the European funding resources attracted for supporting investments.

Keywords: knowledge transfer, ICT, sustainable development, rural areas, knowledge society;

JEL Codes : Q01 , Q16

1. General context

The new emerging society based on knowledge, imposes a new approach in the development of rural areas, in which innovation, information and ICTs have become at least as important as the physical geography and infrastructure.

The rapid development of ICTs is transforming the world's economy and society. In the last years, ICT usage in EU has increased considerable to the level in which, according to statistics, more than 250 million people from the member states, are regularly using the internet. At the same time, the public sector has advanced in the use of ICT for delivering its services more

efficiently in sectors like education, health and public administration giving birth to the so called online public services. But this is not the case also for the micro-enterprises and SMEs from the rural areas, for which poor access to internet is a discouraging factor for businesses in their attempt to develop various activities and to enter different markets which are still controlled by large enterprises who continue to dominate the use of modern technologies. One reason for this is that existing entrepreneurs have insufficient skills to use modern technologies. Therefore ICT, due to its impact on individuals, businesses and on the socio-economic environment in general, has become one of the most significant factors determining productivity growth, which is reflected in the GDP growth registered by the EU member states.

But despite the progress made in recent years, significant differences still exist not only between Member States, but mainly at national level, between rural and urban areas. According to statistics, by 2007, only 70% of the EU rural population was able to subscribe to a broadband connection as opposed to 98% of the population in urban areas. This was the situation before the accession of Romania and Bulgaria which tipped the balance even more in favor of the urban areas.

In order to be able to identify the main factors of change and the competitive advantages that ICT usage would bring for the rural areas, requires a rigorous analysis of the current way in which services, that are highly impacted by ICT applications, are provided or businesses, as the main source of income for rural communities, are run. This is, a growing.

We also have to consider that the use of ICTs opens up new areas of economic, social and cultural activity, of considerable importance for rural and communities, and calls into question aspects like geographical and political orders, conventional approaches to employment, education etc. In practice this means a thorough rural restructuring that will significantly accelerate the development of the targeted areas, but only if the ICT services provided will be adapted to the specific needs of local population.

In this general context the European Commission has assigned a central role to the development of on-line services. The low level of socio-economic development of the rural areas and the fact that almost half of the EU population resides there, make them the best candidates in taking full advantage of the benefits offered by ICT usage. But introducing these services will be very difficult due to the action of several restrictive factors and will require further planning, provision and support for training, connectivity, equipment.

This is way EAFRD is supporting the development of ICT businesses, services and broadband in rural areas. The opportunity to invest in these areas and in the upgrading the rural population skills, has been strongly encouraged. Investments in hardware and software are eligible in all programmes and in all measures, where their use is relevant. For example investments in broadband infrastructure are concentrated in the measure for developing basic services for the rural population and economy under Axis 3 of rural development.

2. Restrictive factors in implementing ICT in rural areas

Analyzing the situation strictly from the geographical location we can see considerable differences in access and use of PCs and particularly of Internet. The rural areas find themselves in great disadvantage to the big cities for several reasons among which the fact that Internet requires network infrastructure and services and in rural areas, the cost of access tends to be higher and quality of service lower, despite some countries' efforts to ensure standardized pricing and quality. Also incomes tend to be lower in rural areas, and ICT costs are relatively higher for low income groups. Moreover, the members of households in urban areas are more likely to have jobs and different other economic or social occupations in which computers and the Internet are needed. But even if we manage to surpass the technological problematic aspects, the main problem will be to find adequate financial sources to introduce them in this areas.

At the moment only two data sources are available at EU level concerning ICT, namely the Idate data on broadband coverage and the Eurostat Community Survey on ICT usage in households

and by individuals. But the information provided is sufficient and relevant in order to describe the general current situation. After analyzing the available data the results confirm the situation outlined before namely that there are significant gaps between urban and rural areas, thinly and densely populated areas, and that these gaps cannot be ignored and need to be reduced.

In order to do that we need to identify and analyze the main restrictive factors from the rural areas that prevent ICT development. Among them we mention:

2.1. Infrastructural deficiencies

Great efforts are needed to create equal conditions in rural areas compared to urban areas in order to minimize the existing gaps, especially since, in some specific cases, there are not even the most elementary technical facilities in the rural areas for using broadband and having internet connection.

Like in the case of Lithuania, Poland, Slovakia broadband coverage in rural areas is particularly low because of local geographical specificities and the related high costs for maintaining the network infrastructure. This is the reason for which the telecommunications operators are oriented to the massive and commercial urban market. Finding a economically feasible solution for both service providers and end users that will satisfy both is imperative. Thus, one of the most important aspects that has to be taken in consideration in the process of designing and implementing new applications is the consumers capabilities. This is way in order to achieve their potential benefits it is necessary to focus on user-oriented and cost-effective services rather than on technology-driven applications.

2.2. High costs –low incomes for the farmers

Like in other parts of the EU, the high degree of dispersal of the population in the rural areas complicates and increases the price of the provision of infrastructures and basic services, constituting a significant deficiency, because, most of the time, ICT's prices become inaccessible for the Romanian rural population, which leads to situations like the fact that In broadband penetration is about 6 times higher in urban than in rural areas,. This is way the low incomes of the farmers (compared not only to the incomes of the urban population but also to the incomes of the farmers from other EU Member States) continue to be one of the most important factors holding down ICT usage, especially in countries which have to catch up economically like Romania.

2.3 Young people migration towards rural areas

Rural areas have been out-drained for knowledge mostly by the out-migration of young people to cities and urban areas. This characterizes especially the new Member States among which is Romania. As a result of this negative process, e-learning and the development of infrastructure for its diffusion such as training centers become important priorities for rural areas.

2.4 Low level of education of the local population especially in the field of ICT

The competitiveness of industrial sectors in rural regions depends on the quality of research and the ability of consumers to transform its results (that in the last years can be accessed mainly under electronic form) into knowledge, by consuming it properly. This is way upgrading e-skills through local educational courses and training on PC use as well as training on broadband network development, which will address not only the population involved in agricultural activities but also the ones that develop different activities, becomes a necessity for local rural communities.

The effects of such an action will be seen in the improvement of the decision making process of the farmer that not only has increased his access to more information but also has improved his capacity of understanding it, resulting in a better usage.

3. Main effects of implementing ICT in the rural areas

Implementing ICT can impact on the rural areas in various ways. The effects can be found both at individual level - farm businesses, but also at community level. Experience shows that even the most traditional activities can, or have the potential to, generate economic opportunities. ICT could provide access to new technologies, practices and production methods, markets current situation, information about different players in the field that would support the development of relationships of all types within certain agro-food chains, that would support the cultivation of these opportunities.

Basically ICT and access to the internet represent support tools on one hand for communication and relationships between the rural community members and, on the other hand, for establishing a permanent connection to the economic environment, national or international, especially with the markets and their evolution.

3.1.Improving education level of the local population

ICT and Internet usage requires a set of skills and competencies which are mandatory in order to benefit from their advantages. This is why one important aspect contributing to the development of the rural areas is the farmers' ability, as producers and managers, to take fast and correct decisions as well as to implement production practices and technological processes in a way that ensures their sustainable development.

Skills upgrading is a major factor in achieving these objectives. Developing IT competence among the farm community is an essential part of rural development policy and its outcomes can make a vital contribution, for example, to the adjustment of farmers to market situations and the use of new technologies.

Developing broadband without potential beneficiaries who have the skills to use it will not result in positive outcomes. Training can serve not only as a skills upgrading measure, but also as an instrument reducing unemployment, developing entrepreneurship and promoting knowledge.

So shortages of skills and qualified staff represent a major obstacle, and special attention should be given by the authorities in order to improve the situation.

3.2 Improving the local population access to information

The database currently existing in the rural areas is incomplete and inadequate for the farmers' current needs, and is still transmitted by oral means among the members of the community, not being able to guarantee the accuracy of the information and giving it a highly volatile feature. This puts Romanian farmers in a disadvantage compared to the other participants from the agro-food market. Introducing and promoting ICT has an important role in integrating the existing information in a wider database, making the data more reliable and accessible, for all the community members. The effects would be a shift in the market position of the Romanian farmers that will automatically become more competitive as a result of being better informed.

3.3Income diversification for the farmers delivering ICT services

Implicating the local population in implementing ICT and maintaining it will result in creating new jobs. By creating additional income opportunities, that will allow the farmers not only to support themselves and their families, but also to become less dependent on changes in climate conditions and market fluctuations, will prevent the migration towards the cities and could even attract part of the population towards the current rural depopulated areas and enrich the socio-economic development of rural areas by providing the local population with services.

3.4Modernization of agricultural holdings and adding value to products

The European Union, through the funds for sustaining new member states gave Romanian farmers the possibility to modernize their businesses. Substantial support for agricultural holdings,

including for the purchase of computers and new technologies and machinery, are provided under two measures of Axis 1 of rural development — “Modernization of agricultural holdings” (code 121) and “Adding value to agricultural and forestry products” (code 123). The purpose of this action is to improve the consumption of information by giving farmers the possibility to develop the necessary infrastructure for accessing it.

3.5 Creation of micro-enterprises and business development

Micro-enterprises and rural off-farm businesses will also benefit substantially when it comes to the development of IT. The creation of ICT-based services, cooperation networking, e-commerce and e-marketing, cluster formation and bookkeeping, are the main targets of the current policy in the field. It is considered that they will represent a real support not only for the existing businesses but also for the start-up companies that will benefit for all the new technology and information provided by ICT.

3.6 Rural tourism and ICT

Rural tourism represents one of the major economic pillars for business development in the rural areas, a non agricultural activity that has become very popular in the last several years and that provides the local population with an additional income.

Tackling rural tourism with ICT can lead to positive effects everywhere, but especially in areas with poor or missing telephone infrastructure where access to the internet is hugely disadvantaged or absent.

In the new period ICT will contribute to rural tourism mainly through the creation of websites for marketing and e-booking, tourist web portals, information centers equipped with ICT, etc

3.7 Other expected effects

The current situation presents sufficient evidence that growth in rural areas can be achieved if ICT is used correctly by addressing current market and socio-economic deficiencies. Among other expected effects that will benefit the rural areas we can mention reducing the unemployment rate by creating new jobs, raising environmental awareness by distributing knowledge and education on environmental problems and issues and promoting sustainability, insuring the local population with the basic services, promoting the local cultural and natural heritage.

4. Conclusions

The new technologies that will emerge could radically change the present distance constraint of the ICT. These points to the need to develop tools and techniques to help rural areas to plan and ensure that the appropriate solutions are selected for their individual needs and in order to adopt to new technologies.

Never the less implementing ICT will benefit the rural areas by providing aid to traditional activities in the promotion and the commercialization of existing, traditional, products (small industry, handicrafts and agriculture) by creation of new service activities.

Agricultura este importantă nu numai pentru ceea ce produce, ci și pentru rolul deținut de societate prin populația agricolă numeroasă și prin rolul său în protecția mediului, în conservarea vieții rurale și a peisajelor. Datorită importanței agriculturii în economie este imperios necesar să se afle între prioritățile de dezvoltare pe termen scurt și mediu în vederea restructurării și modernizării, iar pe termen lung să rămână în continuare o șansă pentru dezvoltarea durabilă a mediului rural european

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THE FINANCING OF THE ADMINISTRATIVE – TERRITORIAL UNITS IN THE WEST DEVELOPMENT REGION THROUGH THE REGIONAL OPERATIONAL PROGRAMME 2007 - 2013

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The research approaches the theoretical and empirical aspects regarding the way the Romanian administrative-territorial units and development regions are organized and function, with emphasis on the West Development Region. It also focuses on the way the local autonomy is exercised and the administrative-territorial units may cooperate in order to perform common projects.

Furthermore, the financial resources of the Romanian administrative-territorial units are analyzed, with focus on the non-reimbursable funds available during the period 2007 – 2013 through the Regional Operational Programme 2007 – 2013, resources which allow the implementation of the European Union principles of cohesion policy.

The status analysis of the implementation of the projects submitted by the administrative-territorial units from the West Development Region and financed through the Regional Operational Programme 2007 – 2013 highlights which are the main areas of interest for the authorities of the public local administration and gives practical solutions for the reduction of the intra-regional development gaps.

This article is intended to be a guide for the administrative-territorial units in the systematic mobilization of the existing local energies and resources by means of projects which should meet the specific needs for development and which should involve the attraction of non-returnable funds with a minimum effort of co-financing.

Keywords: administrative-territorial units, non-reimbursable funds, region, local autonomy, projects.

JEL: F36, O18, O22, R58.

1. Introduction

In the current context, when the Romanian economy deals with the strong effects of the global economic crisis, the local public authorities incur difficulties in the settlement of the problems they deal with and in finding long term development solutions.

The first step to be taken by a local public authority in order to perform a coherent and durable development of the community is represented by the elaboration of projects in conformity with the development needs.

In such a situation, the financial support granted by the European Union to the member states by means of the structural instruments which finance the policy of economic and social cohesion represents an important opportunity of development for the administrative-territorial units.

2. The Administrative Organization of the Romanian Territory

In Romania, the communes, towns, municipalities and counties are defined as administrative-territorial units within which the local autonomy is exercised and the authorities of the local public administration are organized and operate.

The local, communal, town, municipality and county councils, as deliberative authorities, and also the mayors and the presidents of county councils as executive authorities have the duties to solve the public matters of the community, acting as authorities of the Romanian public administration.

According to the Law of the public administration no. 215 dated on the 23rd April 2001, with its subsequent amendments and addendums, in Romania, the local autonomy is only administrative and financial, having as objective the organization, operation, competencies and tasks, and also the management of the inland resources.

The principle of the local financial autonomy implies the fact that the administrative-territorial units have the right to financial resources, which can be used by the authorities of the local public administration when exercising their tasks. The authorities of the local public administration administer or, as the case may be, dispose of the financial resources, and also of the goods in public or private property of the communes, towns, municipalities and counties, in conformity with the principle of local autonomy (Law 215/2001, article 10).

3. The Development Regions

3.1. Definition of the Development Regions

The region notion bears several definitions, according to the type of the European institution which uses it.

The European Union defines the region as “the immediately inferior unit of the state”.

For the European Parliament, the region is “a territory which forms, geographically, a net unit, or a similar assemble of territories which has continuity, where the population has certain common elements and desires to maintain its specific feature thus resulted and to develop it in order to stimulate the cultural, social and economic progress”.

The European Council considers the region “as a medium size interval which can be geographically delimited and which is considered to be homogenous”.

The Assembly of the European Regions defines the regions as “political entities inferior to the state, which dispose of certain competencies exercised by a government, which in return answers before an assembly democratically elected”.

For the European Union, by means of EUROSTAT, there was elaborated the legal framework for the territorial and geographical division of the European Union territory, in order to coordinate the national and communitarian statistics: The Nomenclature of the Territorial Units for Statistics – NUTS (Common classification of territorial units for statistics).

In Romania, the development regions comply with the provisions of the EC Regulation no. 1059/2003 regarding the settlement of a common classification for statistics of the territorial-statistic units for the regions NUTS II and NUTS III and it represents the framework for the collection of specific statistic data in conformity with the European regulations elaborated by EUROSTAT for the statistic territorial level NUTS II.

Thus, in order to provide stability to the NUTS classification, the Law no. 315/2004 regarding the regional development consecrate the composition of the regions NUTS II, by specifying the counties which are part of the respective regions. Thus, at the end of 1998, eight development regions were created. They represent the framework for the elaboration, implementation and assessment of both the regional development policy and the programs of economic and social cohesion.

3.2. The West Development Region

The West Development Region is administratively-territorially made of four counties: Arad, Caraş-Severin, Hunedoara and Timiş. The West Region has a surface of 32,034 km², representing 13.4% of the country’s surface.

Within the West Region, 323 territorial administrative units are registered, which could be distributed as following: 12 municipalities, 30 towns and 281 communes made of 1327 villages. On the 1st January 2010, the population of the West Region was of 1,919,434 inhabitants, representing 8.94% of the Romanian territory’s population.

4. The available financial resources for the Romanian administrative-territorial units

The budget represents the document by which each year there are provided and approved the incomes and expenses or, as the case may be, only the expenses, according to the funding system of the institutions (in conformity with the Law 273 of the 29th June 2006 regarding the local public finances, article 2).

The public expenses from the local budgets are materialized in the acquisition of goods and services by the local authorities for the citizens, in the payments made to the citizens in the form of transfers (pensions, subventions, unemployment allowance, etc), and also in the payment of the loans contracted by the main credit authorizing officers.

The local budget incomes are made of: inland incomes (made of revenues, taxes, contributions, other payments, other incomes and defalcated quotas from the income revenue), defalcated amounts from some incomes of the state budget, subventions got from the state budget and from other budgets, donations and sponsorships, sums received from the European Union and/or other donors on behalf of the performed payments and pre-financing (Law 273/2006, article 5).

The inland incomes are the incomes realized locally by the authorities. The level and sources of these incomes are controlled and decided by the local authorities.

The incomes coming from the national level have as main objective to correct the possible unbalances which occur locally both vertically (the level of the local revenues and taxes do not cover the expenses necessary for the provision of public services), and horizontally, since not all the collectivities manage financially in the same way, although they have the obligation to provide equivalent services, both in quality and in quantity.

The authorities of the local public administration have the possibility to complete their own financial resources by contracting internal or external loans, which they could use to both realize public investments of local interest or to re-finance the local public debt.

According to the Law of the local public finances, the local budget incomes could be made also of the non-reimbursable funds granted by the European Union. Thus, as a Member State of the European Union, Romania participates with full rights in the policy of economic and social cohesion of the European Union.

The cohesion policy of the European Union has as objective the reduction of the development gaps between the member states and between the richest and poorest regions, being financed from the budget of the European Union from three funds: The European Fund for Regional Development, The European Social Fund and The Cohesion Fund, referred to as the Structural Instruments.

Within this policy, during the programming period 2007 – 2013, Romania benefits from a financial support in value of 19.667 billion Euros from the Structural Instruments. They represent financial instruments by which the European Union finances the cohesion policy in Romania, taking act for the removal of the economical and social disparities, in order to perform the economic and social cohesion.

5. The Regional Operational Programme 2007-2013 (ROP)

5.1. ROP in Romania

The Regional Operational Programme 2007-2013 represents one of the seven operational programmes elaborated by Romania and adopted by the European Commission and it is financed by the European Fund for Regional Development. The Regional Operational Programme pursues to support the economical and social development of the Romanian regions, both territorially balanced and durable, according to their needs and specific resources, by focusing on the growth urban poles and on the improvement of the infrastructure conditions and of the business environment.

ROP operates in all the eight development regions of Romania, being allocated throughout the current program period 4.178 billion Euros for the purpose of the local and regional integrated development.

The management, administration and implementation of ROP are borne by the Ministry of Regional Development and Tourism (MDRT), which is appointed as the Management Authority for this programme. The eight Agencies for Regional Development and the Directorate of Communitarian Funds Management for Tourism within the MDRT are designated as Intermediary Bodies for the ROP implementation. The Intermediary Bodies bear the responsibility of fulfilling the tasks delegated to them by the Management Authority.

The main eligible applicants to obtain finances through the Regional Operational Programme 2007 – 2013 are the authorities of the local public administration.

5.2. The status of the ROP implementation in the West Region

The financial grant for the West Region in the period 2007 – 2013 managed by the West Regional Development Agency (acting as Intermediary Body for the ROP implementation) is of 416.52 million Euros, representing approximately 10.34% of the total funds granted to ROP financing.

Until the 15th April 2011, 696 projects were submitted to the head office of the West Regional Development Agency, in order to request non-reimbursable financing.

139 projects were contracted, their total value being 350.93 million Euros, of which 254.46 million Euros represent the value of the non-returnable funds, the contracting degree being of 61.09%. 392 projects are under various stages of assessment, pre-contracting or reserve, having a total value of approximately 796.75 million Euros, of which approximately 569.49 million Euros represent the value of the non-reimbursable financing.

Synthetically, the ways which the key areas of intervention of ROP are accessed are presented in the table below:

Table 1. The implementation of Regional Operational Programme 2007 – 2013 in West Development Region (million Euros)

| Key areas of intervention | Regional financial allocation | Submitted projects | | Contracted projects | | Projects under assessment/pre-contracting/reserve | | Rejected projects | | Contracting degree** | Funds use degree*** |
|---|-------------------------------|--------------------|---------------------|---------------------|---------------------|---|---------------------|-------------------|---------------------|----------------------|---------------------|
| | | No. | Requested financing | No. | Requested financing | No. | Requested financing | No. | Requested financing | | |
| 1.1. Integrated Urban Development Plans | 42,29 | 24 | 72,51 | 10 | 42,07 | 12 | 22,81 | 2 | 7,63 | 99,48% | 153,42% |
| 1.1 „Urban development poles” (Arad and Deva) | 28,19 | 14 | 28,22 | - | - | 13 | 27,57 | 1 | 0,65 | 0,00% | 97,80% |
| 1.1 „Urban growth poles” (Timisoara) | 70,49 | 9 | 36,09 | - | - | 9 | 36,09 | - | - | 0,00% | 51,20% |
| 2.1. County roads and urban streets | 88,84 | 52 | 338,15 | 13 | 110,97 | 29 | 172,36 | 10 | 54,82 | 124,91% | 318,92% |
| 3.1. Health services’ infrastructure | 17,59 | 26 | 52,05 | 3 | 2,35 | 18 | 46,87 | 5 | 2,83 | 13,36% | 279,82% |
| 3.2. Social care infrastructure | 10,08 | 42 | 24,93 | 7 | 4,18 | 16 | 9,39 | 19 | 11,36 | 41,47% | 134,62% |
| 3.3. Interventions in emergency situations | 10,08 | 1 | 9,54 | 1 | 9,54 | - | - | - | - | 94,64% | 94,64% |
| 3.4. Infrastructure for education | 28,87 | 71 | 148,8 | 18 | 27,92 | 41 | 95,08 | 12 | 25,8 | 96,71% | 426,05% |
| 4.1. Business support structures | 27,81 | 23 | 74,39 | 2 | 8,84 | 17 | 50,86 | 4 | 14,69 | 31,79% | 214,67% |
| 4.2. Polluted industrial sites | 23,85 | 3 | 32,03 | - | - | 3 | 32,03 | - | - | 0,00% | 134,30% |
| 4.3. Micro-enterprises **** | 20,69 | 383 | 49,9 | 79 | 8,34 | 218 | 32,29 | 86 | 9,27 | 40,31% | 196,38% |
| 5.1. Cultural heritage infrastructure | 23,85 | 18 | 66,35 | 3 | 24,63 | 6 | 13,88 | 9 | 27,84 | 103,27% | 161,47% |
| 5.2. Tourism infrastructure | 23,89 | 30 | 91,66 | 3 | 15,62 | 10 | 30,26 | 17 | 45,78 | 65,38% | 192,05% |
| TOTAL | 416,52 | 696 | 1024,62 | 139 | 254,46 | 392 | 569,49 | 165 | 200,67 | 61,09% | 197,82% |

Source: data supplied from West Regional Development Agency and processed by author

* The values of the projects were calculated in million Euros

** (contracted value / regional allocation)

*** ((value of submitted projects – value of rejected projects) / regional allocation)

**** Administrative-territorial units are not eligible

Due to the great number of submitted projects, the most of the key areas of intervention were closed and no further projects could be submitted for them, except 1.1, 3.3 and 4.2.

It can be noticed that the most attractive key area of intervention for administrative-territorial units was 2.1, dealing with the financing for the road infrastructure, mostly county roads.

The second area of intervention is represented by the educational infrastructure financing, mostly for the schools rehabilitation.

Regarding the rehabilitation of the patrimonial touristic objectives, due to the considerable value of the projects, only 3 projects could be financed, according to the regional allocation.

On the key areas of intervention where the rule of the state aid is applied (4.1 and 5.2), due to the high level of co-financing, administrative-territorial units from the West Region were not very interested to submit projects, regional allocation being covered from projects submitted by private companies.

Also, where the rule “first-come, first-served” applied, a high competition was recorded and the available funds were quickly finished, in comparison with the key areas of intervention where the funds were distinctively granted for administrative-territorial units acting as “urban development poles” and “urban growth poles” respectively, for which even up to the current date there were not submitted sufficient projects to cover the allocated funds.

Conclusions

In Romania, the communes, towns, municipalities and counties are the administrative-territorial units within which the local autonomy is exercised and where the authorities of the local public administration are organized and operate, having the purpose to solve the public matters of the community. For the purpose of carrying out certain projects of common interest, the administrative-territorial units could cooperate together or could be associated, forming partnerships or associations of inter-communitarian development.

The solving of the community problems depends on the level of the available resources, on the management quality of such funds, but also on the cooperation between the various structures of the local administration.

The degree of the local autonomy of a community depends to a great extent on the amount of the incomes realized locally correlated with other income resources of the local budgets. The ideal situation would be that the inland incomes could cover the expenses made in order to fulfill the local needs. But for that purpose, the competences of the local authorities should be correlated with the incomes of the local budgets, and in reality this happens very rarely.

The development regions of Romania do not have the statute of administrative units, but they represent territorial units large enough to constitute a good basis for the elaboration and implementation of regional development strategies, allowing an efficient use of the financial and human resources. The scope for which these development regions were created had in view the support granted for the larger communities in their action to settle the problems which go beyond the administrative borders and which surpass the financial possibilities of one county.

By implementing the Regional Operational Programme 2007 – 2013 it is intended to reduce the inter-regional disparities, and also the disparities inside the regions, between the urban and rural areas, between the urban centers and their adjacent areas, and, within the towns, between the attractive and non-attractive areas for the investors.

The regular assessment of the progress recorded by Romania in the process of European integration has constantly showed the necessity to strengthen the capacity of the administrative-territorial units by means of projects which should allow the attraction of non-returnable funds with a reduced effort of own co-financing.

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THE DANGER OF “PUTTING ALL THE EGGS IN ONE BASKET” SOME CONCERNS REGARDING ROMANIA’S EXTERNAL TRADE

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Trade patterns across the globe vary in certain ways. For the EU27, the analyzed data suggests that approximately 70% of all Romania’s imports, and the same amount of its exports, are intra-community oriented. The question that arises is what will happen to te Romania’s external trade, if a crisis hits Europe? If countries like Germany, France, Italy, and United Kingdom are hit the hardest in this hypothetical European crisis, Romania will soon follow them. In order to decrease the impact of such possibility, it is necessary to tap new trade opportunities. For this purpose, first we have to analyze the present situation. Based on Eurostat, World Trade Organization, and the Romanian Statistics Institute data from 1999 to 2009, and on the works about trade creation (Balassa 1965, Jovanovic 2005, Molle 2006), the paper wants to point out the aspects of trade concentration in certain regions after the establishment of free trade agreements, and the danger posed by financial crises. This paper analyzes first the situation in the EU27, scanning each member state in order to see the degree of trade relations intra / extra – EU. The data will be than compared to another set of analyzes of other four important regions, the Andean Community, ASEAN, MERCOSUR, and NAFTA, whose free trade agreements could support such of comparison with the EU trade relations. The paper follows the assumption that EU27 has the most integrated trade relations among all the analyzed regions. Based on this assumption and on statistical data that points out the percentage change of total imports and exports in the Romanian GDP, some conclusions will be drown out in order to establish some necessary measures to prevent a future crisis, measures that involve the political class, taping new trade opportunities such as Latin American countries, Middle Eastern countries, and South-East Asia, but not forgetting Russia, Romania’s former main export partner, establishing clear objectives to future embassy personnel, and a more aggressive advertising campaign in the selected target markets conducted by national agencies.

Key words: free trade agreements, custom union, Romania’s trade relations, imports, exports.

JEL codes: F01, F10, F14, F15,

Introduction

Everybody wins from external trade. This phrase is used almost in every book that you read on this subject. It doesn’t matter that you are a producer, a consumer, a retailer, a distributor, or an economic agent part of the logistic chain, everybody takes a piece of the pie, and they are happy about. People have started trading because not all the goods and services are produced inside a country, because that country is not endowed with the necessary resources (natural, technological, human and capital resources), or just because the purchasing costs are cheaper. That’s why people started focusing on barter as the main process, ending up paying money on what they want to buy. For example, if you are a Romanian consumer that wants an iPod, you need to import it because this device is designed and produced outside the Romanian custom territory.

This relationship between supply and demand has been the cornerstone of modern capitalism and free markets, where clients demand newer, cheaper, enhanced, greener products every time, and producers trying to keep up with them. If you look this thing from the supply side point of view, you will be confronted with two scenarios. In the first situation, you can be a big multinational corporation, having production facilities all over the world, supplying the international markets

from multiple locations. In the second situation, you are a small company, with no production facilities abroad, trying to export your products. If you sell them to another company, you need to search the international markets for someone whose needs match your offer. After negotiations, you will start doing business with that company because the price is right. After a while, you get acquainted, starting an interpersonal relationship, ending up putting the bricks to a solid foundation. In the end, almost all of your production is sold to your partner, and everything goes smooth. But what happens to you, and your business, when your partner starts facing some setbacks?

Trade situation in the EU and across the Atlantic

The answer lies in the analysis of trade patterns across the globe. Based on Eurostat and World Trade Organization data from 1999 to 2009, and on the works about trade creation (Balassa 1965, Jovanovic 2005, Molle 2006), the paper wants to point out the aspects of trade concentration in certain regions after the establishment of free trade agreements, and the danger posed by financial crises.

The main purpose of a free trade agreement is to encourage trade creation among the states that signed it. For the EU27 as a trade union, and for the other four free trade agreements, based on Eurostat and World Trade Organization data, the figures bellow presents the current state of external trade among regions and countries.

For the EU27, data analyzed (Table 1: Share of the Intra-EU27 trade, and the situation of the Trade Balance) suggests that approximately 70% of all imports, and the same amount for exports, are directed to other member states.

With the exception of the Netherlands (where the average sum shows that less than 50% of its imports come from the EU27, but more than 80% of its exports go to the EU27), and Malta (where the average sum shows that less than 45% of its exports go to the EU27, but more than 70% of its exports go to the EU27), the rest of the 25 member states register high figures both on the import side and on the export side.

Cyprus registers the biggest increase in its trade with EU27, with its figures jumping from 60% in 1999 to almost 70% in 2009.

Although the financial crisis affected trade relations, the figures presented show that in 2009, almost every state kept its share of trade with the EU27.

If we take a closer look at the situation of the external trade balance situation, out of the 27 countries, only 7 register a trade balance surplus with the EU27, the Netherlands, Germany and Belgium having the highest figures.

On the trade balance deficit side, out of the 20 member states, the United Kingdom, France, Spain, Greece, Portugal and Romania register the worse deficits with the EU27 member states. What is more curious is that France and Portugal do not register corrections amid the financial crisis, having their trade deficits increased between 2007 and 2009.

The worse correction was suffered by Spain, its trade balance deficit reducing by almost 60%. Romania and the United Kingdom follow the same correction, the first having its trade balance deficit reduced by 55%, and the second with 30%.

The curious evolution is represented by Poland, reducing its trade balance deficit year after year, ending 2009 with a surplus of 609 million euro's.

From all of this, the Czech Republic and Slovakia win the most, registering trade surpluses in all the years analyzed, having their trade balanced increased exponentially between 2005 to 2007, and keeping this phase through 2009.

Table 1: Share of the Intra-EU27 trade, and the situation of the Trade Balance.

| | 1999 | | 2001 | | 2003 | | 2005 | | 2007 | | 2009 | |
|----------------|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|
| | Imp | Exp |
| | 72% | 79% | 72% | 78% | 74% | 77% | 72% | 77% | 71% | 76% | 71% | 76% |
| Belgium | 20491 | | 22046 | | 21581 | | 21539 | | 27345 | | 21915 | |
| | 55% | 57% | 57% | 61% | 58% | 63% | 63% | 60% | 58% | 61% | 60% | 64% |
| Bulgaria | -686 | | -1172 | | -1336 | | -2284 | | -4559 | | -2497 | |
| | 77% | 87% | 75% | 86% | 71% | 87% | 81% | 86% | 80% | 85% | 78% | 85% |
| Czech Republic | 1359 | | 1959 | | 4930 | | 3635 | | 7164 | | 9854 | |
| | 74% | 71% | 73% | 70% | 73% | 70% | 71% | 71% | 73% | 70% | 70% | 67% |
| Denmark | 1884 | | 3336 | | 4058 | | 5227 | | 562 | | 3881 | |
| | 66% | 65% | 65% | 64% | 66% | 65% | 64% | 64% | 65% | 65% | 65% | 63% |
| Germany | 40307 | | 55547 | | 77798 | | 98947 | | 126577 | | 70543 | |
| | 73% | 86% | 66% | 81% | 65% | 82% | 76% | 78% | 79% | 70% | 80% | 69% |
| Estonia | -445 | | -178 | | -414 | | -1432 | | -3352 | | -1332 | |
| | 63% | 67% | 67% | 64% | 63% | 62% | 67% | 64% | 70% | 63% | 66% | 61% |
| Ireland | 17384 | | 21605 | | 21257 | | 19478 | | 13479 | | 21329 | |
| | 70% | 66% | 64% | 64% | 58% | 65% | 58% | 62% | 58% | 65% | 64% | 63% |
| Greece | -13147 | | -15478 | | -15385 | | -16898 | | -20996 | | -18566 | |
| | 70% | 74% | 69% | 74% | 69% | 75% | 64% | 72% | 63% | 71% | 61% | 69% |
| Spain | -16695 | | -21691 | | -23964 | | -36897 | | -48212 | | -18991 | |
| | 69% | 65% | 68% | 64% | 70% | 67% | 68% | 63% | 70% | 66% | 69% | 62% |
| France | -3905 | | -15951 | | -16550 | | -37211 | | -52381 | | -61690 | |
| | 66% | 64% | 62% | 61% | 63% | 62% | 59% | 61% | 58% | 61% | 57% | 57% |
| Italy | 5351 | | 3366 | | -1473 | | -186 | | 6720 | | -2295 | |
| | 59% | 58% | 59% | 55% | 60% | 61% | 69% | 73% | 69% | 72% | 72% | 67% |
| Cyprus | -1421 | | -1936 | | -1898 | | -2649 | | -3600 | | -3451 | |
| | 76% | 78% | 76% | 79% | 76% | 79% | 75% | 77% | 77% | 72% | 75% | 68% |
| Latvia | -845 | | -1222 | | -1465 | | -2087 | | -4263 | | -1567 | |
| | 60% | 74% | 55% | 73% | 56% | 63% | 59% | 66% | 68% | 65% | 59% | 64% |
| Lithuania | -715 | | -198 | | -914 | | -1203 | | -4073 | | -170 | |
| | 82% | 88% | 81% | 88% | 77% | 89% | 73% | 90% | 74% | 89% | 72% | 87% |
| Luxembourg | -1923 | | -1588 | | -567 | | 749 | | -335 | | 489 | |
| | 72% | 84% | 66% | 84% | 64% | 84% | 70% | 81% | 69% | 79% | 69% | 79% |
| Hungary | 987 | | 3719 | | 4808 | | 3537 | | 6517 | | 8784 | |
| | 66% | 49% | 65% | 53% | 68% | 49% | 76% | 52% | 74% | 49% | 69% | 42% |
| Malta | -853 | | -760 | | -974 | | -1261 | | -1455 | | -1142 | |
| | 57% | 82% | 54% | 81% | 55% | 80% | 49% | 80% | 50% | 78% | 49% | 77% |
| Netherlands | 57340 | | 84508 | | 81934 | | 116108 | | 133624 | | 120390 | |
| | 82% | 76% | 81% | 75% | 82% | 75% | 80% | 72% | 79% | 73% | 78% | 72% |
| Austria | -7726 | | -7956 | | -7310 | | -10092 | | -7709 | | -9338 | |
| | 72% | 82% | 70% | 81% | 70% | 82% | 75% | 79% | 73% | 79% | 72% | 79% |
| Poland | -10121 | | -6413 | | -3077 | | -5019 | | -7953 | | 696 | |
| | 79% | 84% | 77% | 81% | 79% | 81% | 77% | 80% | 75% | 77% | 78% | 75% |
| Portugal | -10195 | | -11955 | | -10386 | | -13130 | | -14196 | | -15801 | |
| | 69% | 73% | 67% | 75% | 68% | 75% | 63% | 70% | 71% | 72% | 73% | 74% |
| Romania | -918 | | -2093 | | -2700 | | -4915 | | -15314 | | -6881 | |
| | 77% | 74% | 77% | 71% | 77% | 68% | 79% | 68% | 74% | 69% | 71% | 69% |
| Slovenia | -1417 | | -1459 | | -1670 | | -2434 | | -1756 | | -478 | |
| | 75% | 89% | 72% | 91% | 74% | 86% | 78% | 87% | 75% | 87% | 75% | 86% |
| Slovakia | 657 | | 872 | | 1757 | | 678 | | 4056 | | 4820 | |
| | 69% | 65% | 69% | 61% | 68% | 60% | 67% | 57% | 64% | 57% | 65% | 56% |
| Finland | 5080 | | 3941 | | 2646 | | -1600 | | -855 | | -3308 | |
| Sweden | 71% | 63% | 70% | 59% | 72% | 59% | 70% | 59% | 71% | 61% | 68% | 58% |

| | 1999 | | 2001 | | 2003 | | 2005 | | 2007 | | 2009 | |
|----------------|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|
| | Imp | Exp |
| | 4044 | | 410 | | -134 | | -1063 | | -4105 | | -3491 | |
| United Kingdom | 55% | 61% | 54% | 60% | 57% | 59% | 56% | 57% | 55% | 58% | 53% | 55% |
| | -11896 | | -23380 | | -40185 | | -55212 | | -62459 | | -43704 | |

Source: Own computations based on Eurostat data for the EU27 member states.

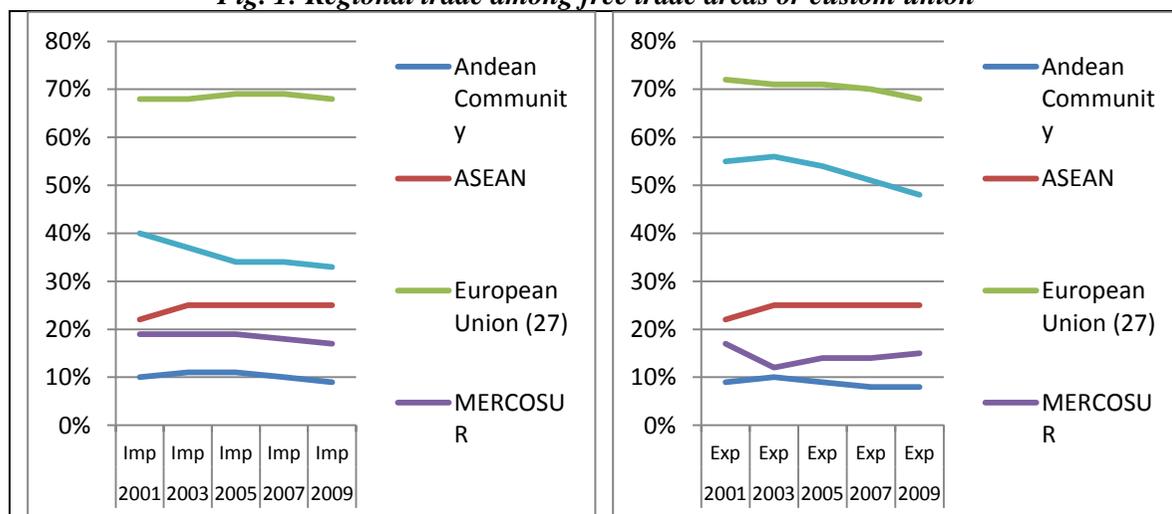
On the other side of the Atlantic, the situation is a little different. Having picked the regions for analysis, with:

- Andean Community (Bolivia, Colombia, Ecuador, Peru)
- ASEAN (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam.)
- EU 27 (countries stated above)
- MERCOSUR (Argentina, Brazil, Paraguay, Uruguay, Venezuela)
- NAFTA (United States, Canada, Mexico)

The results showed below (Fig. 1: Regional trade among free trade areas or custom union), illustrate that on the import side, the EU27 has the most integrated commerce of all the analyzed regions, with imports holding steady around 70%. The closest regional trade community is NAFTA, which registers a decline on its imports in the analyzed period, decreasing from almost 40% to 33%. ASEAN countries register a steady evolution, their imports increasing from 23% to 27% and holding steady. The imports in MERCOSUR suffer a slight decrease, amid the financial crisis, from almost 20% to a figure close to 17%. And last but not least, the Andean Community which registers steady figures near 10%.

On the export side, the situation with EU27 remains almost the same, decreasing from 2007 to 2009. In the NAFTA region the figures are more interesting, observing a steep decrease of exports between the three countries starting in 2003, decreasing from 56% to 48%, a decrease of almost 15%. ASEAN registers the same evolution on the export side, meaning a steady increase from 23% to 27% and holding steady. The fluctuations inside MERCOSUR on the other hand, point out a decrease from 2001 to 2003, and after that, just a mild recovery. Again the last but not least, the Andean Community is closed to the 10% line, having slight fluctuations in the analyzed period.

Fig. 1: Regional trade among free trade areas or custom union



Source: Own computations based on Eurostat and World Trade Organization data.

The regional crisis hypothesis and its impact on Romania's trade

We are familiar with a crisis situation from time to time. An old saying tells us to learn from our mistakes so that we won't repeat them but somehow, we manage to forget this wisdom. The current financial crisis that began in late 2007, was so intense, that surpassed the previous regional ones (The "Tequila crisis" 1994, the Asian Crisis 1997, the Russian Crisis 1998, and the Argentinean Crisis 1999-2002).

Because of its intensity, almost every corner of the globe was caught in this whirlpool. Consumption dropped dramatically, unemployment phenomenon and the bankruptcy cases soured, lending money became scarce, and investments stalled. Because of all this, inevitably, trade was affected.

Assuming now that there is only a regional crisis, like those mentioned before, the question is what happens to the Romanian trade, if a crisis situation hits Europe. As we saw above, almost 70% of our trade relations are with the EU member states. If countries like Germany, France, Italy and United Kingdom are hit the hardest in this hypothetical European crisis, Romania will soon follow them.

Trying to see what happened in the current financial crisis, and trying to cope the numbers with a future European crisis, we take a closer look at Table 2. If we watch closely, the steepest decline was in the import section. Because many Romanians were relying on cheap credit to finance their consumption and because in 2008, all the banks stopped lending money, we can see what happened (a sharp decline of imports).

On the export side, although it surged from 24% to 25% in nominal terms, in real terms, it didn't. In 2009, the Romanian GDP decreased with almost 8%, meaning that the same amount of exports of 2008, were now divided to a smaller GDP. That means, the West stopped making new orders, the industrial production declined, and so did our exports.

Table 2: Share of Exports and Imports in the Romanian GDP between 2000 - 2009

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---------|------|------|------|------|------|------|------|------|------|------|
| %X/GDP | 28 | 28,4 | 30,3 | 30,8 | 31,2 | 28 | 26,4 | 23,9 | 23,7 | 25 |
| %IM/GDP | 32,5 | 35,7 | 36 | 38,6 | 39,9 | 37,8 | 38,5 | 38,3 | 37,5 | 30,2 |

Source: own computations regarding the percentage of imports and exports in total GDP, based on data provided by INS (*National Institute of Statistics* of Romania)

Conclusions

Trade relations among EU27 member states represent more than 70% of their total trade. It is a high figure that can have severe consequences if a regional crisis hits the region. In order to reduce this possibility, it is necessary to tap new trade opportunities.

The data analyzed points out that the Andean Community, ASEAN and MERCOSUR have the least integrated trade relations, while NAFTA and EU27 present a different situation. If a crisis hits the first three regions, it is possible to avoid a steep decline in trade relations, because the main trade partners are not there.

Highlighting the Romanian situation, it is known that its products are not as competitive as the products of our EU15 Member States. Because of this, we should rethink our strategy and try to encourage the following strategies:

- benefiting from all trade agreements signed by the EU, we should try to divert a part of our exports to Latin American countries, Middle Eastern countries, and South-East Asia, where the Romanian products are more competitive.
- the state department agencies should work together in order to promote more aggressively the Romanian products and services on the international arena, especially towards the selected target markets, through international fairs, bilateral economic forums.
- making international political visits that involve the participation of high ranking political figures accompanied by important business people, in order to establish future commercial contracts and develop trade relations

- all our ambassadors and economic attachés should review their work by including some clear objectives regarding a certain number of export contracts, a quantum sum that needs to be achieved, and what measures need to be taken in order to have a good information flow between them and the national business associations.

Acknowledgements

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THE JOURNEY TO COMPETITIVENESS: EU SPEEDING UP ON THE ROAD PAVED WITH KNOWLEDGE AND INNOVATION

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In the attempt to boost its international competitiveness, the European Union realized that it should enrich the ways to achieve it by using the intangible assets that it holds. Knowledge and intellectual capital, innovation, science and entrepreneurship are key drivers of economic development and renewal. The traditional resources on which economies rely on are scarce, while these ones are abundant and steady. Moreover, this type of assets can easily increase their value through sharing and they trigger multiplicative effects in the economy. The paper tackles these issues and makes an assessment of the degree of innovation in the EU. The study aims to provide an answer to the question of whether EU's overall performance proves that it is truly driven by knowledge and innovation or not. Using a qualitative method of research, this paper identifies innovation patterns of the member states from a geographical perspective. In order to provide a compelling analysis, the data ranges from indicators capturing science and technology activities, firm innovation to the internationalization of research activities and the tertiary-level graduates. The results show substantial discrepancies between the European countries and reveal that knowledge flows scaled by the level of innovation are a localized phenomenon, therefore some countries are more innovation-oriented and they reap the benefits better.

Keywords: *knowledge-based economy, competitiveness, innovation, R&D, technology.*

JEL code: *O31, O33, M21, I25*

I. Introduction

The European Union is continuously trying to enhance its international competitiveness and to find new sources of growth by using intangible assets such as innovation, science and entrepreneurship. The development of the knowledge-based economy highlights the need to generate knowledge, to exploit, to transfer and to apply it. Since nowadays information is widely accessible, the knowledge and skills are assets that can provide a real edge. Knowledge and innovation are hot topics because they are key drivers of economic development and along with other components they can turn into a strong competitive advantage of any nation. So far, regions were identified as important players in the knowledge-based economy. Because they fail to enhance their potential on their own, the triple helix model involving the public sector, the business community and the higher education institutions was developed. Its purpose is to create links and interactions between those three and in this manner to create a synergy. UE regions and countries differ from each other in terms of intangible assets and factors of competitiveness.

Knowledge is a special type of resource for an economy and it's a non-rival input in generation of new knowledge. This particular subject is important because unlike most resources that become depleted when used, knowledge can be shared and grow through application which further leads to innovation. Knowledge is not based on the scarcity principle but rather on abundance, hence knowledge and technology became the heart of the global economy. This points out that intangible assets are increasingly turning into competitiveness determinants. Moreover, evidence from a number of countries suggests a faster growth of investment in intangible assets than in tangibles hence the interest for them. The Knowledge Economy Index developed by the World Bank shows that in 2009, the top five countries are European. Denmark is ranked first, followed by Sweden, Finland and the Netherlands, this fact suggesting that the

Nordic countries of EU are economies driven and based on knowledge. Among the economies least based on knowledge are Greece, Bulgaria and Romania. EU's competitors in the global arena are Canada (ranked 6th), the United States (ranked 9th) and Australia (ranked 11th).

Through the multi-level policy governance, the European institutions support the investment in research, infrastructure and transfer of knowledge and technology. The most important pillars are the 7th Framework Programme for Research and Technological Development, the Competitiveness and Innovation Programme and the Structural Funds as tools. Innovation is a growth driver for businesses, industries and countries as it reinforces their competitive position on the markets, boots their productivity and develops key competences. At the European level there are large discrepancies concerning the innovation rates. While different forms of innovation activities do occur in most of the EU regions, those based on R&D are spatially concentrated. Industrial structure, capabilities and other territorial characteristics affect the capacity of various economic actors to generate and absorb knowledge, as well as fostering the innovation processes. EU spends annually an average of 1,81% of the total GDP on research and development activities. Regional knowledge networks and joint research initiatives of the business community and the European universities are becoming increasingly prevalent. The creation of science parks is one of the strategies used by the European universities in order to enhance the knowledge spillovers. Science parks enable rapid technology transfer, offer improved funding for academic programs, sponsored research agreements and they create opportunities to trade the intellectual property. Research partnerships between companies and universities often lead to a high impact on the knowledge flows and innovation.

The paper aims to investigate the degree of innovation throughout the member states of EU as well as to launch hypotheses regarding the causes of the discrepancies between countries. The study attempts to answer the following question: "To what extent is the European Union driven by knowledge and innovation?". The main goal of the research is to identify the innovation patterns of countries from a geographical perspective and to assess the overall status of the EU as a knowledge-based economy.

I. Literature review

The literature referring to the intellectual capital or knowledge, human capital and innovation is not as broad as other topics in economics because it is relatively new and many areas are still to be explored. The theories of knowledge creation have social foundations as Fleck (1935) defined "thought communities", Schon (1983) investigated the "communities of reflective practitioners", Egestrom (1987) "activity systems". Others researched the "communities of practice" or "networks of practice" (Brown and Duguid, 2000). A substantial addition to the literature was brought by Nonaka (1995, 2008) though the concepts of "socialization and Ba". The innovation theories are rooted in a microeconomic approach as they started to arise based on the firm level and later they extended to markets, which further led to a regional approach. A large part of them related to the organizational theories, investigated the conditions in which innovation arises, the intensity of it, the impact of external knowledge while others attempted to create models of innovation (Von Hippel, 1977; Chesbrough, 2003; Nonaka, Toyama and Hirata, 2008). Gary Backer was the pioneer of the human capital theory. The emphasis on human capabilities has been followed and expanded in modern research on innovation. Studies regarding innovation reveal that the development of new technologies and innovation itself occurs through the activities of skilled personnel such as researchers, engineers and managers. Innovation is a social process, involving not only new techniques but also new forms of knowledge and competences. Competence is embodied in the collective experience and activities of the people who implement new technologies (OECD, 2010: 8). Competitiveness depends, to a large extent, on the ability to generate a good momentum of employment, which is the result of issues related to demographics, limitations of the labor market, qualifications of human resources and achievement of high levels of productivity (Couto, Vieira and Tiago & Natario, 2006). Econometric studies confirm the

positive relationship between labor productivity and innovation (Vieira and Vazquez, 2008: 60). In the knowledge-based type of economy, wealth is increasingly created through effective management of knowledge workers instead of using the efficient control of physical and financial assets. The growing importance of knowledge and innovation leads to more investments in the companies' intangibles such as experience, talents, skills, capabilities and intellectual capital (Stewart, 1999: 67).

European cross-country studies using equilibrium models were conducted to define the dynamics of innovation and productivity growth. One particular paper finds that technology diffusion between countries falls as the distance between them grows (Eaton and Kortum, 1996: 251-278). The same authors conclude that human capital raises the ability of a country to absorb technology. The technology diffusion is significant and proportional to the countries' ability to absorb innovation, thus spillover effects arise in different regions (Bottazzi and Peri, 1999: 8). The fact that innovation production is more sensitive to demand pull pressures and less sensitive to supply pressure is underlined by other studies (Gerowski and Van Reenen, 1996). Parts of the literature also tackle the personnel mobility issue and the national innovation systems. The movement of labor force and the tacit knowledge they care with them is a key flow in any national innovation system. The movement of workers through sectors and firms is a way of spreading innovation. Knowledge transfer, human capital enrichment in the form of the production of graduates along with the development of the regional labor force by training activities outlines the potential to promote economic development (Riddel and Schwer, 2003: 80). Despite restrictions and limitations, universities serve as sources of knowledge for businesses. Policies designed to build new niches of knowledge and develop more effective mechanisms for transferring university-based knowledge to regional partners can bolster technology communities and shape innovation cultures (Benneworth and Charles, 2005). Another important idea provided by the literature is that just as agglomerations of traditional resources appear, knowledge spillovers can generate an agglomeration of innovative activity.

III. Methodology

The paper uses an exploratory data analysis in order to examine the spread of knowledge and innovation within the EU, through the research and development activities. The qualitative method of direct observation was considered appropriate in this particular case because it allows making suitable connections between the indicators and it is proper for comparisons. Following it, meaningful conclusions will arise and the main goal of the study can be achieved. A pool of six countries was chosen as a base for the comparison along with the European level comprising the 27 member states. The selection was carried out by geographical criteria and each of the countries aims to represent a group (the core of EU or the West countries, the Central countries, the Nordic countries and the countries located to the periphery). The data collection entailed identifying appropriate indicators that can describe the extensiveness of the R&D activities and their effects (the level of firm innovation, the type of innovation). The "Science, Technology and Industry Scoreboard 2009" by OECD was the primary source for data collection and the information refers up to the year 2008. The first group comprising of four indicators captures a synoptic view over the expenditures in R&D, the main sources and the performers of these activities (Table 1). The second group including three indicators aim to emphasize how does EU and its countries compete in the world economy as far as innovation is concerned, and the next two provide an insight of how Europe connects to the global research. Finally, the last indicator shows to what extent the European Union invests in the knowledge economy through education.

Table 1 The status of research and innovation in the EU

| Indicator | EU27 | Finland | Germany | Sweden | Czech Republic | Luxemburg | Portugal |
|--|-----------|---------|----------|--------|----------------|-----------|----------|
| GERD (Million current PPP, \$) | 299 635 | 7 555 | 83 974,8 | 12 521 | 4 094,8 | 708,5 | 4 410 |
| R&D financed by : | | | | | | | |
| - Industry | 54,3 | 68,1 | 67,3 | 58,9 | 45,8 | 76,0 | 48,1 |
| - Government (%) | 34,2 | 24 | 28,4 | 27,3 | 43,9 | 18,2 | 43,7 |
| R&D performers: | | | | | | | |
| - Higher education | 24 | 19,7 | 17,3 | 24,9 | 18,1 | 9 | 35,4 |
| - Industry | 61,2 | 71 | 68,2 | 70,5 | 60 | 73,3 | 46,7 |
| - Government (%) | 13,6% | 9,3 | 14,5 | 4,4 | 21,4 | 17,3 | 7,4 |
| Researchers | 1 531 000 | 40 849 | 311 500 | 46 719 | 28 759 | 2 041 | 45 909 |
| Share of large firms with new-to-market product innovation (%) | 32 | 49 | 41 | 42 | 35 | 34 | 39 |
| In-house product innovators (%) | 39 | 43 | 59 | 47 | 40 | 70 | 43 |
| Non-technological innovation (%) | 69 | 75 | 90 | 86 | 70 | 90 | 80 |
| The ownership of inventions made abroad but within the EU (%) | 11 | 16 | 7 | 20 | 10 | 50 | 3 |
| Firms with foreign collaboration on innovation as a percentage of all firms, within EU | 7,9 | 17 | 12 | 10,5 | 8,2 | 14 | 4 |
| Tertiary-level graduates in total employment * (%) | 28 | 41 | 28 | 34 | 16 | 32 | 16 |

* Tertiary-level graduates are defined as holders of degrees at the ISCED levels 5B, 5A and 6.

Source: compiled by the author based on OECD statistics ("Science, Technology and Industry Scoreboard 2009")

In the coming part I will point out the reasons for choosing these indicators and their relevancy for the analysis. The Gross Domestic Expenditure on Research and Development (GERD) is an indicator of the science and technology (S&T) activities and it is used as a summary of R&D activities. The purpose of including is to assess the amplitude of these expenses in each of the countries included in the study and to underline the large differences in the absolute value. If linked to growth and national income indicators it can contribute to measuring the sustainable development of a country. Further, identifying the finance sources for the R&D activities can uncover the proportion in which a country relies on the private business sector and on the government in this matter. Depending on which sector prevails, conclusions can be drawn regarding the interest and the financial power of each in supporting such activities. As the next step, it is important to also identify which are the performers of the R&D activities and evaluate to what extent the sponsors are also performing them. However, because expenditure does not reflect the potential of R&D in a given country but only the effort conducted in a certain period of time it is appropriate to add other relevant indicators to the analysis.

To have a deeper understanding it is necessary to take a microeconomic approach of this issue and assess the innovation and firm performance. Innovations have different degrees of novelty and the impact of those is significant on the performance and on the competitiveness. Nevertheless, it is a clear distinction between being an adopter and being an innovator. The share

of large firms with a new-to-market product innovation indicator aims to show the scale or the spread of the innovation phenomenon. Large companies were preferred as a measurement unit because usually small and medium enterprises are less likely to introduce novel innovations and they are rather known as adopters. In order to appraise the diffusion of new technologies in EU, the indicator related to in-house product innovators captures whether an innovation was developed within or outside the firm. This shows to what extent the firm interacted with other parties during the process. Innovation has both technological and non-technological aspects. The non-technological innovation arises especially in the case of services and it deals with the development of new marketing methods. EU's economies are mostly tertiary hence it is appropriate to analyze the cases in which innovation is not dependent on technology.

Cross-border inventions occur when the country of residence of the owner and the inventor are different and in most cases it is a result of the activities of multinational corporations (the applicant is a corporation and the inventors are located in a foreign subsidiary). The internationalization of research activities is a driver of innovative firms and country competitiveness. This is often measured through the share of patents filled by one country for an invention made in another country. This ratio shows the extent to which domestic firms control inventions made by residents of other countries. Employment of tertiary-level graduates is an indicator of the innovative potential of an economy and of the capacity of its labor market to allocate human capital to the production processes. Additional data concerning the investments in knowledge economy measured by the new university graduates unwraps pinpoints that EU has a 35% university graduation with almost 2,2 millions of degrees annually. This indicator reflects a country's capacity to absorb, develop and diffuse knowledge and to supply the labor market with highly skilled workers. The scientific studies are more popular in the Nordic Countries where science and engineering degrees account for more than 37% and 29% of total awards [1]. However, most university degree recipients graduate in the social sciences, which in Poland and Hungary exceed 40% of total graduates.

IV. Results

The research and development activities in most of the EU member states are financed by the private sector, through the industry but in the Central and periphery countries a large share is still supported by the national governments. The main performers of these activities are those who fund them, therefore the business sector. However, higher education institutions (universities, institutes or research organizations) conduct a significant part of the European R&D activities (24%). Countries like Portugal or Sweden have a significant level of researching within the academic environment, while Luxemburg does not rely on this category of performers. In the Nordic countries, the governments develop research activities in an extremely limited share as they prefer to contract these services either from institutes, either from business performers. The European Union has more than a million and a half of researchers of which almost one fifth comprises of German researchers. Finland and Sweden have a reduced population but a large ratio of researchers while countries in the Central Europe have higher population and a lot lower shares of researchers than the Nordic ones. The statistics show that product innovation within the large companies in EU is not very widely spreaded, only 32% of the firms were able to bring completely new-to-market product innovations. This means that the majority of companies, both MNCs and SMEs are adaptors and not innovators. However, there are substantial discrepancies between countries but the West and Nordic ones seem to develop new products or improve the existing ones at a larger scale than the rest of the member states. On average, just 39% of the European companies prefer to engage in the innovation process within their own organization, which means the environment for technology diffusion is proper as they strongly interact with other entities. Luxemburg is an exception from this case. Due to the fact that almost all EU's countries have tertiary economies, the non-technological innovation has very high levels which indicates to some extent a certain level of creativity of the marketers. The data emphasizes that a

weakness of the European Union is the reduced internationalization of the research activities. This fact is proven both by the low share of ownership of inventions made within the EU states and the reduced percentage of firms involved in collaboration on innovation. That is rather a surprising finding considering that EU is the host of many transnational corporations, which usually trigger the research internationalization phenomenon. However, significant differences among the countries can be observed in this case too. The Nordic countries or small economies of EU (Luxemburg) tend to collaborate more frequently with foreign partners. Cross-country differences in international collaboration could be explained by the propensity of the firms. Some have similar innovation rates but a different international collaboration rate, which suggests that some are more open or inclined to participate in joint activities. The innovation partnership outside EU is much less frequent and it is usually below 5% in most EU countries. At last, the labor markets within the European Union don't seem to benefit of a strong supply of highly skilled graduates. The low share of tertiary-level graduates indicates that valuable human capital is not allocated properly to the production process, which means that the innovative potential is not harnessed.

V. Conclusions

The European Union raised the awareness of the prominence of knowledge, technology, innovation and science in the race for the world competitiveness. The study confirms that knowledge flows measured by the level of innovation are a localized phenomenon. The West and the Nordic European countries are those with intense research and innovation activities. Furthermore, same countries have a high-income per capita, which could lead to the conclusion that innovations arise only in certain conditions. The presence of research hubs belonging to the multinational corporations, the public research labs and leading research universities, all located in these countries, could be an explanation for this phenomenon. However, the rest of the regions are catching up by developing their research capacity. One major problem is that due to the economic turmoil, the R&D budgets of the European companies were severely diminished. Once the economies will overcome the disarray completely, the situation will certainly improve.

One common characteristic of the European countries is that R&D activities are funded by the business sector which is also the main performer. Private enterprises are those that compete on the national, European and international markets, consequently a higher competitiveness can be achieved by extensive innovation at this level. Large companies innovate more frequently than small and medium size companies, but the situation is not exceptionally great because only one third of them were able to compute new-to-market product innovations. However, the majority of the European firms rely on marketing innovations and not on process, procedure or product innovation. Organizational capabilities and the blend between creativity and productivity usually leads to incremental innovations, which are the most widely spread in business. EU has a proper environment for technology diffusion and innovation as companies are linked through innovation and knowledge flows [2]. Unfortunately, the research activities known as a key determinant of the enhancement of innovation has a low internationalization. Collaborating on innovation with foreign partners is an important source of knowledge inflows and the European companies should be aware of that. The linkages between firms are allowing them to access a broader pool of inputs (technology, human resources, funds, information) than what is available in their local environment as well as it lowers the costs and they share the risks. Since the companies prefer to innovate mostly with partners within the European Union, it suggests that geographical and cultural proximity are factors that have an influence on the innovation processes. A few EU countries are conducting a considering part of the research and development activities through education institutions. It is generally acknowledged that EU has low-mobility labor market and the low share of tertiary level graduates overcasts the innovative potential. It is extensively consented that research and development and a highly trained labor force are among the conditions for innovation and economic development of a country, region or group of countries.

This study contributes to the existing literature by focusing on basic aspects of the R&D activities in the EU countries, making connections between knowledge flows and innovation from a territorial perspective and revealing both strengths and weaknesses of the European innovation networks. Just like a racing car on the move, the European Union despite of having good aerodynamics it cannot reach the finish line (achieving the world competitiveness) if the road is not safe and paved with a durable material (knowledge and innovation).

VI. Notes

1. Science degrees include: life sciences, physical sciences, mathematics and statistics and computing, Engineering degrees comprise: engineering and engineering trades, manufacturing and processing; architecture and building.
2. and services) or process innovations (mainly production processes).

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E-GOVERNMENT: A DRIVING FACTOR FOR STIMULATING INNOVATION PERFORMANCE IN ROMANIA?

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The development of public services is one of the priorities on the agendas of all policies, both national and European. One of the most recent concerns of the European Commission, as shown in the 2010 Innobarometer, is to find ways and develop strategies to support the innovation in the public administration sector, in the context of the continuously changing economic background. In this paper, we'll investigate the relationship between e-Government, and the overall innovation performance at national level, for some European Union countries. e-Government is already a known concept, widespread in the world, promoting the implementation of information and communication technologies in the public administration, in order to provide better public services to citizens and businesses. A main component of the e-Government concept is the "counter reform", aimed to streamlining administrative act quickly in order to respond to the demands of citizens, businesses and government structures. Innovation in e-Government will be measured with two Eurostat indicators – "e-Government on-line availability" and "e-Government usage by individuals" – while for the overall innovation performance we'll use a composite indicator – the Summary Innovation Index (SII) – from the Innovation Union Scoreboard (IUS). In Romania, even if the values of these indicators are not at the level of other EU countries, we can say that the situation has improved and electronic public services are being used increasingly often. The study also includes a comparison between two „modest innovators”: Romania and Bulgaria. Regarding the overall innovation performance, according to the 2010 Innovation Union Scoreboard ranking, Romania is the leader of the "modest innovators" countries, overcoming Latvia, Bulgaria and Lithuania. However, in the field of e-Government our country has major shortcomings. Romania has registered a significant progress in the years after the EU integration, followed by a setback in 2009, still having values below those of other EU countries, including Bulgaria.

Keywords: innovation, e-Government, public sector, SII, correlation

JEL classification: O11

1. Introduction

European Commission's recent concerns are focused on innovation, inclusive in the public sector. Through the "Innovation Union" flagship initiative, launched within *Europe 2020 Strategy*, the European Commission proposed, among others, monitoring innovation in the public sector using a "European Public Sector Innovation Scoreboard". A first step towards achieving this instrument was the "Innobarometer 2010", which was devoted to an analytical study of innovation in public administration. This document, based on a survey of 4000 public administration institutions in all 27 Member States of the European Union (EU), has shown a relatively high degree of innovation in this sector ("at the EU level, two-thirds of public administration institutions introduced a new

or significantly improved service in the last 3 years” (European Commission 2010a: 8). The report also highlighted out the positive effects of innovation on the activity of the public administration institutions, among which: the improved user access to information, improved user satisfaction, more targeted services, faster delivery of services, simplified administration, improved working conditions or employee satisfaction, and cost reduction resulting from innovations (European Commission 2010a: 9).

E-Government or electronic government is the use of ICT in public administration in order to improve public services provided to citizens and businesses. Implementing electronic government is not an easy process. Providing user-centered public services designed to reduce bureaucracy involves profound organizational changes. Thus, the transition to e-Government meets resistance because many times, although efforts involved are obvious, benefits they bring can be seen only over time. These benefits, however, play an important role in social and economic model of Europe, being the starting point in ensuring a higher level of welfare for its citizens, leading to economic and social cohesion and supporting the development of a functional market economy.

In this context, we have analyzed the relationship between e-Government and the overall level of innovation at country level, in order to determine the main factors that stimulate the innovation process. This is of special importance for Romania, given that our country is still a "modest innovator" within the European Union.

2. The SII indicator – measure of Innovation performance

SII (the Summary Innovation Index) is a composite indicator that measures the overall innovation performance at country level. It has been computed since 2001 and annually published in the European Innovation Scoreboard (EIS), under the surveillance of the European Commission, through the PRO INNO Europe initiative (EIS 2001, 2002-2006, 2007, 2008, 2009, 2010). Over time the SII structure and methodology have changed, and starting with 2010, the European Commission has proposed to “abandon” the EIS and create a new instrument, called the Innovation Union Scoreboard (IUS).

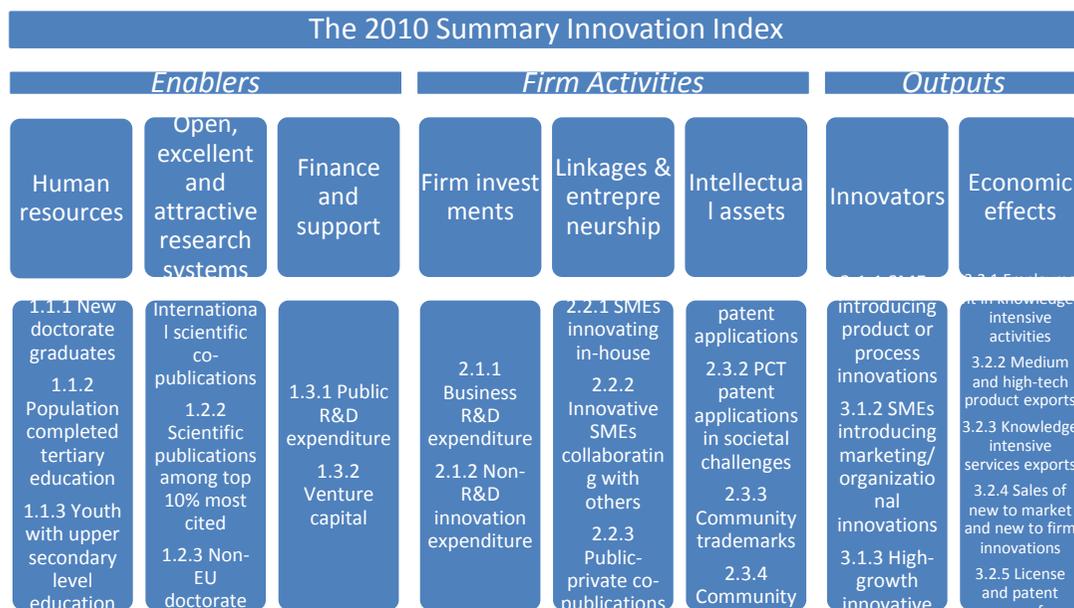


Figure 1. The structure of the 2010-SII indicator: the first level represents the three main types; the second level includes the eight dimensions which contain 25 sub-indices (Source: figure made by the authors)

The IUS purpose is to monitor implementation of innovation policies and strategies under the flagship initiative “Innovation Union”. Thus, in February 2011, the first edition of the IUS – IUS 2010 – was published, using a new structure for the SII indicator. The SII 2010 is a composite indicator that summarizes the performance of research and innovation systems at country level using 25 sub-indices, grouped into three main categories – “Enablers”, “Firm activities” and “Outputs” – and eight dimensions of innovation (Figure 1). SII 2010 includes 18 of the 29 sub-indices used in SII 2009 and 7 new sub-indices. Due to the lack of data for each of the sub-indices used in the SII 2010, only 24 of them could be effectively taken into account (the exception is the sub-indicator 3.1.3.). However, out of the 24 sub-indices, 4 relate to information in 2007, 10 to data of 2008 and 10 gives the values for the year 2009; therefore, the SII 2010 does not capture the full impact of the economic and financial crisis on innovation. Depending on the SII 2010 values (ranking), the 27 EU member states have been divided into four groups (clusters) of innovation:

- “*innovation leaders*”: Denmark, Finland, Germany, Sweden;
- “*innovation followers*”: Austria, Belgium, Cyprus, Estonia, France, Ireland, Luxembourg, Netherlands, Slovenia and the UK;
- “*moderate innovators*”: Czech Republic, Greece, Hungary, Italy, Malta, Poland, Portugal, Slovakia and Spain;
- “*modest innovators*”: Bulgaria, Latvia, Lithuania and Romania.

3. Econometric tests

We have investigated the existence and the intensity of the correlation between “e-Government” and the innovation performance at country level, registered in the EU. In this regard, we approached the “e-Government”, both in terms of the “supply” of electronic public services (“*e-Government on-line availability*”) and the “demand” for these services (“*e-Government usage by individuals*”). Our working hypothesis was that e-Government (both the demand and the supply) is closely linked to innovation, influencing it and being influenced by this one.

3.1. The correlation between e-Government and innovation performance at country level for some EU countries, in 2006-2010

We have calculated the correlation coefficients between the overall innovation indicator *SII* and two representative e-Government indicators, respectively “*e-Government on-line availability*”⁽¹⁾ and “*e-Government usage by individuals*”⁽²⁾ for 22 EU Member States ⁽³⁾. The results, presented in Annex (Table 1) and plotted in Figures 2 and 3 reveal the four clusters of innovation (the leaders in innovation on the right side, the modest innovators on the left side).

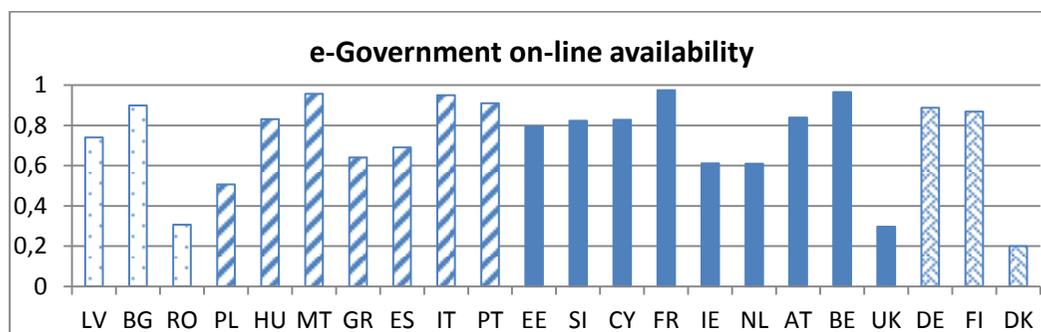


Figure 2. Correlation between “e-Government on-line availability” and innovation performance for 22 EU countries in the period 2006-2010

(Source: figure made by the authors)

Statistically, data presented in Figure 2 show that – although there are three countries (including Romania) that do not register a significant correlation between the two indicators, and for another six countries there is a weak linkage – the most of EU countries analyzed had a significant correlation (above 0.75), and even a strong one (above 0.90, for five countries, including Bulgaria). Generally, countries with moderate innovation level, considered as “moderate innovators” and “follower innovators” countries (according to the IUS 2010 report) present a high correlation between the innovation performance and the availability of the public service indicator.

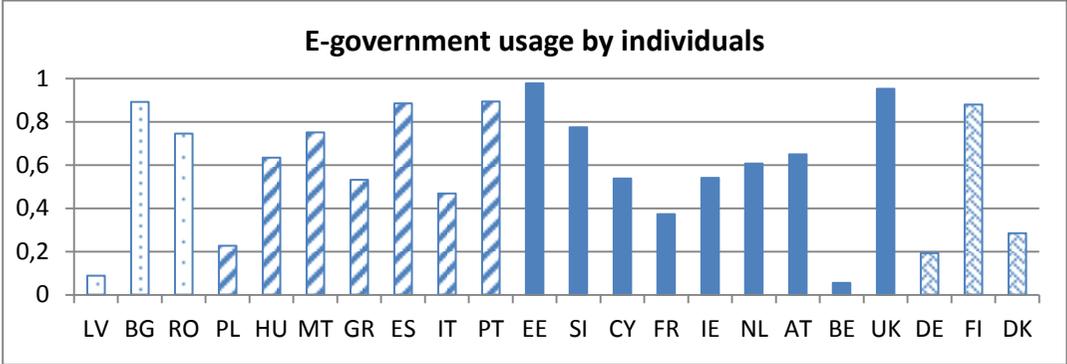


Figure 3. Correlation between “e-Government usage by individuals” and SII for 22 EU countries in 2006-2010
(Source: figure made by the authors)

In figure 3 it can be noticed that the degree of correlation between the two indicators is significant in most countries with medium level of innovation (the “followers in innovation” and the “moderate innovators” groups) and even very strong for Romania and Bulgaria, who are leading innovators within the group “modest innovators”.

3.2. The correlation between “e-Government usage by individuals” and SII for Romania and Bulgaria during 2006-2010

In order to describe the relationship between the degree of interaction of citizens with public administration, using Internet, and the overall innovation performance for Romania and Bulgaria, we have examined, for the period 2006-2010, the correlation between the indicators: SII and “e-Government usage by individuals”.

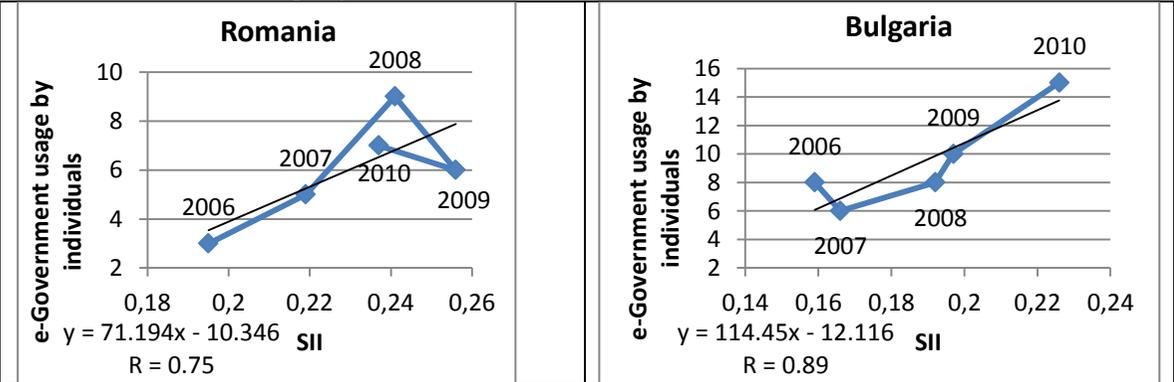


Figure 4. The correlation between “e-Government usage by individuals” and SII for Romania and Bulgaria during 2006-2010
(Source: figure made by the authors)

As it can be seen in Figure 4, the correlation between the analyzed indicators for both countries is significant, Bulgaria reporting even a very strong correlation. Both countries have made progress

in terms of overall performance in innovation, following the integration in the European Union, but they had different evolutions in the period 2009-2010. Thus, Romania, unlike Bulgaria, recorded in 2010 a decline of SII value (from 0.25 to 0.23), while remaining yet the leader of the “modest innovators” group of countries, according to the classification published in the IUS 2010 report and overcoming Latvia, Bulgaria and Lithuania. Regarding the indicator “*e-Government usage by individuals*”, Bulgaria after its integration into UE, progressed steadily, with significant values that have increased from 6 in 2007 to 15 in 2010. As for Romania, it has made a significant progress after its integration into EU (from 5 in 2007 to 9 in 2008), but has reported a significant decrease in 2009 (down to a 6), and a slight recovery in 2010 (value 7).

4. Conclusions

After the integration in the European Union, Romania recorded a real progress in innovation performance, reaching in the year 2010 a top position in the group of the “modest innovators”, according to the classification published by the European Commission in the IUS 2010 Report, overcoming Latvia, Bulgaria and Lithuania. However, the SII indicator value is still very low and therefore there is a major concern of stimulating the innovation in all fields and to identify factors that can stimulate it. Through a set of econometric tests, our approach proves that the e-Government system can be such a driver.

In general, the indicators of the “supply” and the “demand” for electronic public services (e-Government) are significantly correlated with innovation performance at country level, as measured by the SII indicator for most countries of the European Union between 2006 -2010. This suggests that improving the performances of the e-Government system in Romania, at least reestablishing the position from 2008 as a very near future desiderate, could yield to the increase of the innovation level.

5. Notes

⁽¹⁾ The “*e-Government on-line availability*” indicator is provided by EUROSTAT and it is measured as the percentage of online availability of 20 basic public services. The data are last updated in March 2011.

⁽²⁾ The “*e-Government usage by individuals*” indicator is provided by EUROSTAT and it is measured as the percentage of individuals aged 16 to 74 using the Internet for interaction with public authorities. The data are last updated in April 2011.

⁽³⁾ The 22 UE countries are: Austria (AT), Belgium (BE), Bulgaria (BG), Cyprus (CY), Germany (DE), Denmark (DK), Estonia (EE), Spain (ES), Finland (FI), France (FR), Greece (GR), Hungary (HU), Ireland (IE), Italy (IT), Latvia (LV), Malta (MT), Netherlands (NL), Poland (PL), Portugal (PT), Romania (RO), Slovenia (SI) and United Kingdom (UK).

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Annexes

Table 1. The correlation coefficients between the indicator “e-Government on-line availability”, respectively „e-Government usage by individuals” and SII for 22 EU countries during 2006-2010 (by group of innovation)

| Modest innovators | | | Moderate innovators | | | Innovation followers | | | Innovation leaders | | |
|-------------------|--------|--------|---------------------|--------|--------|----------------------|--------|--------|--------------------|--------|--------|
| State | Coeff1 | Coeff2 | State | Coeff1 | Coeff2 | State | Coeff1 | Coeff2 | State | Coeff1 | Coeff2 |
| LV | 0.740 | 0.088 | PL | 0.506 | 0.226 | EE | 0.795 | 0.979 | DE | 0.887 | 0.192 |
| BG | 0.899 | 0.892 | HU | 0.831 | 0.634 | SI | 0.822 | 0.775 | FI | 0.868 | 0.880 |
| RO | 0.306 | 0.745 | MT | 0.956 | 0.751 | CY | 0.827 | 0.539 | DK | 0.199 | 0.284 |
| | | | GR | 0.640 | 0.531 | FR | 0.975 | 0.373 | | | |
| | | | ES | 0.690 | 0.885 | IE | 0.611 | 0.541 | | | |
| | | | IT | 0.950 | 0.468 | NL | 0.610 | 0.608 | | | |
| | | | PT | 0.910 | 0.894 | AT | 0.839 | 0.650 | | | |
| | | | | | | BE | 0.965 | 0.055 | | | |
| | | | | | | UK | 0.296 | 0.954 | | | |

Note: Coeff1 – The correlation coefficients between the indicator „e-Government on-line availability” and SII

Coeff2 – The correlation coefficients between the indicator „e-Government usage by individuals” and SII

Table 2 (a). Statistical analysis of the correlation between “e-Government usage by individuals” and SII for Romania during 2006-2010

| <i>Regression Statistics</i> | | | | |
|------------------------------|---------------------|-----------------------|---------------|----------------|
| Multiple R | 0.745 | | | |
| R Square | 0.555 | | | |
| Adjusted R Square | 0.407 | | | |
| Standard Error | 0.018 | | | |
| | <i>Coefficients</i> | <i>Standard Error</i> | <i>t Stat</i> | <i>P-value</i> |
| Intercept | 0.183 | 0.025 | 7.172 | 0.006 |
| Egovernment | 0.008 | 0.004 | 1.936 | 0.148 |

Table 2 (b). Statistical analysis of the correlation between “e-Government usage by individuals” and SII for Bulgaria during 2006-2010

| <i>Regression Statistics</i> | | | | |
|------------------------------|---------------------|-----------------------|---------------|----------------|
| Multiple R | 0.892 | | | |
| R Square | 0.795 | | | |
| Adjusted R Square | 0.727 | | | |
| Standard Error | 0.014 | | | |
| | <i>Coefficients</i> | <i>Standard Error</i> | <i>t Stat</i> | <i>P-value</i> |
| Intercept | 0.123 | 0.020 | 6.094 | 0.009 |
| Egovernment | 0.007 | 0.002 | 3.414 | 0.042 |

EVALUATING THE EFFICIENCY OF LOCAL ECONOMIC DEVELOPMENT POLICIES

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This paper studies the way public authorities can fundament and evaluate the local economic development policies they want to promote, according to their efficiency. After presenting the relevant literature overview regarding the local economic development and its policies, we try to underline the importance of evaluating and prioritizing the local development policies and also to propose an efficiency-based model that we later use in building and evaluating local development policies scenarios. The research methodology is both descriptive, while presenting the theoretical framework, and empirical, while building scenarios and evaluating local policies. The obtained results show us that the local policy we tested is efficient, enabling new investments to bring bigger financial benefits than the cost needed to attract them.

Keywords: local development, policies, measuring, efficiency.

JEL classification codes: O21, O22

I. Introduction

One of the main challenges facing the European Union in the last years is the development disparities between Member States and also between its regions. EU's regional policy aims to reduce these differences by directing financial resources to less developed areas through the European Regional Development Fund, European Social Fund and Cohesion Fund.

However, to eliminate disparities in development between EU regions at all existing levels, a sustained effort is required by national and local public authorities to promote and support economic and social development.

Given limited resources, on one hand, and multiple and diverse development needs, on the other hand, and competition between public authorities in attracting investors, it is imperative for those public authorities to substantiate, monitor, evaluate and prioritize their local development policies. This paper proposes the use of theory in critical point in achieving the above. The objectives of the scientific research in this paper refers to the stage presentation of previous research related to local development and local development policies, emphasizing the importance of grounding and prioritizing local development policies, presenting a model for the assessment of these policies and, finally, to test this model and presentation of research results.

II. Literature overview regarding local economic development

The literature in the field contains many and various approaches and definitions of the concept of local economic development. In the view of most economists, development refers to stimulating local economic activity, boosting investment, helping to reduce unemployment and improving living standards (Matei and Anghelescu 2009: 14) in a certain area or a particular community.

According to the paper "Local Economic Development. Quick Reference" prepared by the Urban Development Unit of the World Bank in 2006, local economic development is the process in which public, private and non-governmental organizations work together to improve conditions for economic growth and employability of the workforce. Analysing the presentation of the same World Bank study and the historical evolution of local economic development, we see a move of the centre of gravity in the three analyzed periods (60s - 80s, 80s - mid 90s, late '90 - present)

from the exclusive action of the state, towards acts of state and public-private partners and diversification of these actions.

On the same note, Canzanelli and Dichter (2001: 12-13) observed a change in local economic development perspective in terms of participation (from trying to reach a consensus, to participatory decision making), goals (from the increase rate of employment to improving the quality of life), policies (from policies oriented to domestic firms and SMEs to development policies of the local economy), tools (from specialized services and specific help for SMEs, developing industrial parks, use of local human resources to more integrated and more complex actions, such as development projects), social inclusion (from the lack of its promotion to promoting it locally in view of existing needs) and sustainability (from financial and managerial dependence to public sector to sharing revenues, responsibility and power).

The purpose of local economic development, according to World Bank, is strengthening the economic capacity of the administrative-territorial units to improve the economic future and quality of life for all residents.

In terms of local economic development objectives, Parlagi (2000, in Matei, Angheliescu and Savulescu 2009: 12) believes that they are represented by economic prosperity and social welfare by creating a favorable business environment, with the integration of vulnerable groups in the community, the use of endogenous resources and private sector development.

A key role in local economic development is held by strategic planning with regard to the specific area (Matei and Angheliescu 2009: 28). This refers to establishing a local development strategy, of the connected development policies and the needed activities or instruments to implement these policies.

Based on existing scientific work up to that point, Neiman and Fernandez (1999: 322-327) group and prioritize local economic development policies, as follows: institutional reform policy (facilitating the establishment of companies, representing business environment, public-private partnership, business networking, providing a solid legal framework for development), classic development policies (increasing business through assigning larger territory for business, allocation of land for commercial businesses, developing public infrastructure to boost business), indirect subsidies (exemption from payment of development fees, subsidized infrastructure costs, allocated business grants, tax breaks) and direct subsidies (grants for staff training, discounts on utilities costs, lower taxes, creating industrial parks, loans for businesses).

In a less structured form, the World Bank lists among local economic development policies stimulating local business growth, collaboration between communities, human resource development, sustaining the increase of life quality, facilitating the formation of clusters, bringing local and regional development programs. We can observe the key role of the collaboration between the public sector private sector and civil society in ensuring local economic development, which makes us conclude that this cooperation is itself a main factor.

Formulation and implementation of local policies must take into account factors such as infrastructure (roads, public utilities, transportation, telecommunications, tourism infrastructure), buildings and land available (free land for the location of economic activities, available buildings, business centers), resources human resources (skilled labor, training), financial support (local, regional, national, European), support and dissemination of knowledge management (advisory services, dissemination of information), the living environment (quality of service natural environment, criminal status) and organizational capacity (organizational structures, economic cooperation, private sector involvement) (Roscovan 2003: 17). They provide the ability to develop a SWOT analysis on the relevant administrative-territorial unit on which to build strategies, policies and activities needed to ensure local economic development.

The criteria for evaluating local development policies may consider the relevance, effectiveness, efficiency and utility or durability (Matei, Angheliescu and Savulescu 2009: 33-36). The relevance shows the connection between the objectives and the needs, the effectiveness shows the quality and quantity of the achievement of objectives formulated through appropriate solutions,

the efficiency compares the costs associated with the proposed policies with results, and the usefulness shows in which extent the policies implemented meet the needs. Through the present paper we propose a model for evaluating the local public development policies which analyzes their efficiency, comparing the financial benefits brought by a new investment with the necessary funds for attracting it.

III. Measuring the efficiency of local development policies

To fundament, measure and evaluate the effectiveness of economic development policies supported by local government we resorted to constructing an index (I_e) which compares the revenue from a new investment with expenses needed to attract such an investment, meaning the facilities that are granted. For a local policy to be effective, the index must have a value over 1. Financial income to the local budget is composed of tax on buildings (I_{cl}), land tax (I_{teren}), income from selling or leasing land (V_{teren}) and shares deducted from the tax rates on income (CD_{IVG}) in percentage of 47%. Facilities granted by the local authority to new investors refer to economic incentives (F_{ec}) which consists of the opportunity cost of sale, the land concession, tax incentives ($F_{fiscale}$) which consists of tax reductions and exemptions from tax on building and land and also facilities regarding public utilities (F_{up}), the local authority committing in some cases to ensure the necessary utilities.

Therefore,

$$I_e = \frac{I_{cl} + I_{teren} + V_{teren} + CD_{IVG}}{F_{ec} + F_{fiscală} + F_{up}}, \text{ and}$$

$$I_{cl} = \sum_{i=1}^n \frac{(c_{im} + k_{Mj}(i-1)) \times B_i(V_i)}{(1+r_a)^i}, \text{ where } n=\text{duration of use, } c_{im}=\text{tax share, } k_{Mj}=\text{tax rate increase, } B_i(V_i)=\text{taxing base/investment value, } r_a=\text{discount rate}=5,5\%$$

$$I_{teren} = \sum_{i=1}^n \frac{S_t \times I_t [lei / ha / zonă] \times (1 + k_{Mj}(i-1))}{(1+r_a)^i}, \text{ where } s_t=\text{land size, } I_t=\text{set tax}$$

$$V_{teren} = S_t \times V_t, \text{ where } V_t=\text{trading value}$$

$$CD_{IVG} = \sum_{i=1}^n \frac{\overline{N_s} \times \overline{S_m} \times c_{IV} \times 47\% \times 12}{(1+r_a)^i}, \text{ where } \overline{N_s} = \text{average employees no.}, \overline{S_m} = \text{average}$$

salarz, c_{IV} = income tax rate = 16%

$$F_{ec} = S_t \times (V_p - V_t), \text{ where } V_p = \text{market value}$$

$$F_{fiscale} = p_{red} (\%) \sum_{i=1}^5 I_{cl_i} + I_{teren_1}, \text{ where } p_{red} = \text{reduction percentage } (\%)$$

$$F_{up} = \sum_{i=1}^{n_{up}} Cu_{up} \times U.M._{up}, \text{ where } n_{up} = \text{no. of utilities, } Cu_{up} = \text{unit cost of public utilitz, } U.M._{up} =$$

measuring unit for public utilities (kml)

IV. The research methodology and findings

Starting from the theoretical basis set above which is the result of descriptive research methodology, we continue with the empirical research. This refers to the use of efficiency method to substantiate the various simulations and evaluation of local development policies. For these simulations to be as real as possible, we analyzed existing policies of Oradea municipality based on "Rules of granting tax incentives on taxes on corporate buildings and land, in order to attract investment and support sustainable economic development" attached to the Council's Decision no. 407/2010.

Under this regulation, traders who start a business in Oradea with an investment value of over € 500,000 benefit from reductions in tax on buildings for a period of five years, the limit of the equivalent in lei of 200,000 euro, 100,000 euro for transport profile companies, as well as exemption from land tax payment for the period of validity of the construction permit. The share of total tax reduction is calculated by adding the tax reductions according to the following criterias: the investment value, investment value for SMEs established by young entrepreneurs, medium number of employees, location and profile of investment or profile. To evaluate this local development policy, we used the theory of critical points in the analysis of two facilities which benefit from minimum and maximum reductions from taxes from Oradea municipality.

The first simulation refers to a trading business with a investment project (construction of a building) in value (V_i) of EUR 500,000, respectively 2,000,000 lei, situated in an area tax C (St) of 1.5 ha and will employ 80 people (N_s). The land required is owned by Oradea municipality who is willing to lease it (V_t) starting from a price of 1 euro/sqm/year, while the market value (V_p) is 3 Euro/sqm/year, or starting to sell it at a price of 10 euro/sqm, while the market value is 20 euro/sqm. Also, the municipality will ensure the provision of 0.1 kml water and wastewater utilities (500,000 euro/kml) road (one million euro/kml) and electricity (200,000 euro/kml).

The tax rate for buildings is 1.1% in Oradea and we assume that its annual growth and land tax will be 1% each year. We consider the normal use of the building for 10 years, and the discount rate of 5.5%. According to the Monthly Statistical Bulletin of Bihor, the average gross salary in January 2011 was 1,474 lei.

Given the characteristics of the investment, the trader will receive a share of the reduction on buildings tax of 30% (15% for investment amount, 5% for the number of employees, 5% for the fiscal area and 5% for the activity profile).

For this policy to be effective, the efficiency index at local level must be bigger than 1.

$$I_{cl} = \sum_{i=1}^{10} \frac{(1,1 + 0,01(i-1))\% \times 2.000.000}{(1 + 5,5\%)^i} = 171.948,93lei$$

$$I_{teren} = \sum_{i=1}^{10} \frac{1,5ha \times 3.832lei / ha / zonaC \times (1 + 0,01(i-1))}{(1 + 5,5\%)^i} = 45.085,50lei$$

$$V_{teren-concesiune} = 15.000mp \times 4lei / mp / an \times 10ani = 600.000lei$$

$$V_{teren-vanzare} = 15.000mp \times 40lei / mp = 600.000lei$$

$$CD_{WG} = \sum_{i=1}^{10} \frac{80pers \times 1.474lei / luna \times 16\% \times 47\% \times 12luni}{(1 + 5,5\%)^i} = 802.086,30lei$$

$$F_{ec-concesiune} = 15.000lei / mp \times (12 - 4)lei / mp / an \times 10ani = 1.200.000lei$$

$$F_{ec-vanzare} = 15.000lei / mp \times (80 - 40)lei / mp = 600.000lei$$

$$F_{fiscale} = 30\% \sum_{i=1}^5 I_{cl_i} + I_{teren_i} = 30\% \times 95.563,03 + 5.448,34 = 28.668,91 + 5.448,34 = 34.117,25lei$$

$$F_{up} = (500.000 + 1.000.000 + 200.000)euro / kml \times 0,1kml = 170.000euro = 680.000lei$$

$$\Rightarrow I_{e-concesiune} = \frac{171.948,93 + 45.085,50 + 600.000 + 802.086,30}{1.200.000 + 34.117,25 + 680.000} = 0,85 < 1$$

$$\Rightarrow I_{e-vanzare} = \frac{171.948,93 + 45.085,50 + 600.000 + 802.086,30}{600.000 + 34.117,25 + 680.000} = 1,23 > 1$$

Given the resulted values of the efficiency index, it can be concluded that although the facilities considered are the minimum allowed, this policy is not effective if the land is leased at a rate so low. Sale of land, even if performed well below market price contributes to a useful development results. However, we propose a increase in land selling price, closer to the market price.

The second simulation refers to a production firm wishing to invest (construction of a building) in value (V_i) of 10.5 million euro, meaning 42,000,000 lei, located in tax area D and on a surface (S_t) of 1.5 ha and will employ 350 people (N_s). The remaining specifications remain the same as for the first simulation. Given the characteristics of the investment, the trader will receive a reduction share of the tax on buildings of 85% (40% for the investment amount, 20% for the number of employees, 10% for the tax area and 15% for the profile of activity).

$$I_{cl} = \sum_{i=1}^{10} \frac{(1,1 + 0,01(i-1))\% \times 42.000.000}{(1 + 5,5\%)^i} = 3.610.927,57lei$$

$$I_{teren} = \sum_{i=1}^{10} \frac{1,5ha \times 1.821lei / ha / zonaD \times (1 + 0,01(i-1))}{(1 + 5,5\%)^i} = 21.425,02lei$$

$$V_{teren-concesiune} = 15.000mp \times 4lei / mp / an \times 10ani = 600.000lei$$

$$V_{teren-vanzare} = 15.000mp \times 40lei / mp = 600.000lei$$

$$CD_{WG} = \sum_{i=1}^{10} \frac{350pers \times 1.474lei / luna \times 16\% \times 47\% \times 12luni}{(1 + 5,5\%)^i} = 3.509.127,84lei$$

$$F_{ec-concesiune} = 15.000lei / mp \times (12 - 4)lei / mp / an \times 10ani = 1.200.000lei$$

$$F_{ec-vanzare} = 15.000lei / mp \times (80 - 40)lei / mp = 600.000lei$$

$$F_{fiscale} = 85\% \sum_{i=1}^5 I_{cl_i} + I_{teren_i} = 85\% \times 2.006.823,67 + 2.589,10 = 1.708.389,22lei$$

$$F_{up} = (500.000 + 1.000.000 + 200.000)euro / kml \times 0,1kml = 170.000euro = 680.000lei$$

$$\Rightarrow I_{e-concesiune} = \frac{3.610.927,57 + 21.425,02 + 600.000 + 3.509.127,84}{1.200.000 + 1.708.389,22 + 680.000} = 2,16 > 1$$

$$\Rightarrow I_{e-vanzare} = \frac{3.610.927,57 + 21.425,02 + 600.000 + 3.509.127,84}{600.000 + 1.708.389,22 + 680.000} = 2,59 > 1$$

The results of the second simulations indicate that the policy to stimulate local economic development by providing incentives for investment in Oradea is very effective in the long term. According to the calculated indicator of efficiency, the benefits of a high-value and durable new investment are at least two times higher than the cost of facilities provided, even when the municipality bears the cost of equipping the facilities of the location.

V. Conclusions

This paper proposes the evaluation approach of local development policies in terms of their effectiveness through an analysis of costs and benefits of the local public authority. This is a scientific and financially accessible method, with immediate application in substantiating certain local policies. It can be the starting point of more complex analysis on the effectiveness of local

development policies on economic and social level, and also on their relevance, effectiveness and utility.

The authors have proposed a model for assessment of local development policies that have proved effective through the policies of Oradea municipality of granting tax breaks, reasoned by attracting investment and supporting sustainable economic development.

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SPATIAL MODELING IN LOGISTICS DECISION-MAKING PROCESSES. IDENTIFYING THE OPTIMAL LOCATION FOR A SINGLE CENTRAL WAREHOUSE

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In the context of the EU single market formation it was observed a trend of giving up local deposits in favor of central regional warehouses. Another factor favoring centralization of storage is the economic crisis that has forced the need for efficient activity by making decisions on reducing costs. The first part of this paper focuses on literature review and presentation of the most important decision-making models developed in the field of logistics. Several models were selected and analyzed in detail to build a modern research methodology, based on precise mathematical calculations.

In the decision making process of selecting an optimal location for a central warehouse, we used a series of mathematical models to identify the exact geographical position, which induces minimal cost for transportation to consumption points.

In the second part of the paper, the article aims to identify the optimal location for a central warehouse in Romania.

In this methodology, we chose 100 cities in Romania, positioned throughout the country and characterized as input by three sizes: latitude, longitude and population size. Latitude and longitude were used for graphical representation of the space considered (Romania) by individual points (cities), and the population was used as approximation of the demand for generic products. We applied a mathematical model in order to calculate the gravitational center using an excel spreadsheet. Each step in applying the model is explained in detail in the paper. The results of the research indicate the optimal location (characterized by its latitude: 45.469408 N and longitude: 25.630817 E) for placing a central warehouse that can supply the 100 cities with minimal transportation costs. Were also calculated the distances between the optimal location and the 100 cities and then identified 10 cities, the closest to our optimal location (Sinaia, Sacele, Brasov, Campina, Campulung, Ploiesti, Fagaras, Pitesti, Mierucurea-Ciuc, Odorheiu Secuiesc). Any of these cities can be chosen as location to build a central warehouse in Romania, because they represent a relatively good approximation for the gravitational center identified in the model applied.

Keywords: logistics, decision making process, optimal location, warehouse, spatial modeling

JEL Codes: C21, C23, R31

1. Introduction

At the microeconomic level, there are several categories of decisions to be taken for the development in terms of efficiency of economic activity of the company. These categories refer to:

- Choice of locations for production and distribution (storage)
- Establishment of production and inventory levels
- Selecting the way for transport, routes and shipment size

All these decisions can be taken on short, medium and long term. In general, decisions about production and storage location are taken for long term (5-10 years) and those related to transport routes and size expedition on a short time horizon. Every decision belongs to a specific market

with its own supply and demand (the company's product market, transport market, the market for storage space) and the effects of decisions are interconnected. Models have been developed to deal with one of these categories of decisions, but complex and dynamic models attempt to provide a long-term interaction of each decision and the related markets.

2. Literature Review

The decision-making process regarding the way of transport has been incorporated into theoretical models, which can be classified by type of strategic decision to be taken, which may be concerning the supply, production, transportation or distribution.

2.1 Decisions related to sales and supply

The two functions of the firm, supply and sales have a spatial interaction: at the aggregate level this type of models are used to calculate the exchange of goods between regions. Depending on the assumptions of the decision process at individual level, there are two types of spatial models:

- Linear programming models (LP models), in which decision making is based on the determination of alternative relationships, this model is applicable to individual firms, but cannot be applied for predicting the behavior of a large number of carriers in the business of transport of generic goods (Harker, 1988);
- Gravitational models that assumed that decision-making occurs in random utility terms (random utility conditions); models derived from this class use behavioral principles related to profit maximization model for interpreting the decision variables (Linneman, 1966);

2.2 Models related to logistics and storage services (inventory models)

In order to ensure product availability according to demand conditions, a temporary storage is needed. Ensuring the optimal functioning of a production process or the supply with different types of products according with market demands is performed using storage models (Trandafir, 2004).

Using traditional storage models (conventional inventory model) provides an optimal inventory policy.

To find the optimal balance between stock size (which involves storage costs) and quantity of individual supply/delivery (involving transport costs) information on shipping is necessary, as well as the size and frequency. This way we can determine storage and related costs, in terms of actual costs and opportunity costs.

The inventory model is based on data regarding product logistic characteristics (amount, method of packing, size of shipments, volatility of demand). The necessary time for transport, and its security are essential variables in inventory models, so the choice of route and transport modality should be integrated into the model. In some models the choice of location and size of deposit is not a decision variable (Stada and Hauwert, 1992).

3. Research Methodology

The methodology used for the empirical research in this article is based on selected elements from different models listed below.

3.1 Modeling the decision regarding the mode of transport

The decision regarding the mode of transport used for delivery can be made either by the seller or the buyer, either by forwarding company, for the sender or recipient.

Regarding the reference delivery quantity for which a decision is made there are two different approaches. A first type are models that take into account delivery units at individual shipments level or total amount delivered over a certain period of time (classified according to product type and point of origin/destination). Decisions are taken in the context of minimizing the costs of

storage and transportation, and the size and frequency of delivery are considered fixed in the model input (Di Gangi et al, 1994; Montella et al, 1994).

Another type of models is those with a logistic approach of choosing the mode for transport, which takes into account simultaneously the decision regarding the size and frequency of delivery. In general delivery unit of reference in this case is considered annual. Models of this type have been developed at MIT (Freight Transportation Group, 1980; Vieira, 1992).

Nuzzolo and Russo (1998) developed a logistic decision making model for choosing the mode for transport, which takes into account specific delivery units for different types of transport

3.2 Models for minimizing the aggregate transportation cost

This model is based on linear programming problems, which is based on certain hypotheses, including:

- We consider m supply centers (warehouses) and n points of consumption (stores)
- For simplicity, we consider a single product, which is found in the amount a_i at the warehouse i and the quantity b_j is required in the shop j, where:

$$1 \leq i \leq m \quad 1 \leq j \leq n$$

- The cost of transporting a unit of product from warehouse i to store j is c_{ij} , and it does not depend on the amount transported

The methodology for building the model is the following:

- X_{ij} denote the unknown quantity of product that will be transported from the warehouse i to the store j

- We express the required amount of product from the warehouse i to all the n stores:

$$a_i = x_{i1} + x_{i2} + \dots + x_{in} \quad (1)$$

- We express the quantity transported from all the m warehouses to store j:

$$b_j = x_{1j} + x_{2j} + \dots + x_{mj} = \text{quantity required at store j} \quad (2)$$

- The cost of transport for the whole amount of product is $\sum_{ij} c_{ij} x_{ij}$

Conditions: $x_{ij} \geq 0, 1 \leq i \leq m, 1 \leq j \leq n$

- Total cost of transport from all m deposits to all n consumption centers is:

$$\sum_{i=1}^m \sum_{j=1}^n c_{ij} x_{ij} \quad (1)$$

In order to realize the transport it is necessary that:

$$\sum_{i=1}^m a_i = \sum_{j=1}^n b_j \quad (2)$$

(equilibrium condition)

The system of equations (1) and (2) has an infinity of solutions, of which we are interested in those with the minimum cost of transport. In order to obtain it, we built a linear transport program:

$$\begin{aligned} \min & \sum_{i=1}^m \sum_{j=1}^n c_{ij} x_{ij} \\ \sum_{j=1}^n x_{ij} &= a_i, \quad 1 \leq i \leq m \\ \sum_{i=1}^m x_{ij} &= b_j, \quad 1 \leq j \leq n, \quad x_{ij} \geq 0 \end{aligned}$$

Solving this linear transport problem is accomplished using specialized software that obtains the solution / solutions that lower the total cost of transport induced by the transport of goods from warehouses to points of sale. Similar models can be built to find solutions that minimize the cost of raw material supply for production centers. The model may be complicated by adding additional conditions (constraints), such as a minimum amount that can be ordered, or different price depending on the size of delivery.

3.3. Modeling decision on choosing the location for production and storage centers

The location of factories and warehouses is an essential problem in the firm's logistics strategy. One way of constructing such a model is based on the transport problem, which starts from the assumption of fixed supply and consumption and the solution must minimize the cost of transportation between origin and destination points (Ballou, 1999).

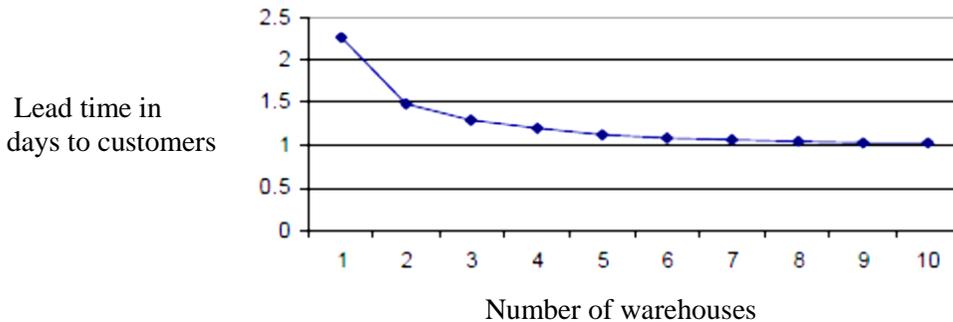
In order to build a simple gravity model we need a map with points of consumer demand (defined by latitude and longitude). The model will identify the optimal location solution for a central warehouse, with the lowest costs for transportation between the storage and consumption points.

Newest approaches performed a combination of cost minimization model and a gravitational model with double restriction. This model allows to set customer service level requirements (for example, imposing a maximum delivery time of 24 hours or less) as an additional restriction on the choice on optimal locations (Wilson, 2008).

The doubly constrained gravitational model uses a matrix that contains the centers of production and consumption. The matrix is used as basis to build a linear programming model that approximates the optimal flows between these locations.

Chicago Consulting (2003) applied such a model for the entire territory of the United States and identified the optimal location for a single central store in the city of Bloomington Indiana. The model took into account the possibility of adding additional storage (up to 10), each store added reducing transit time to customers.

Figure 3: The optimal locations for placement of deposits in U.S.



Sursa: Chicago Consulting, "The 10 Best Warehouse Networks 2003", <http://www.chicagoconsulting.com/10best.shtml2003>

We can observe in Figure 3 that as an extra storage is added to the model the delivery time (in days) decreases.

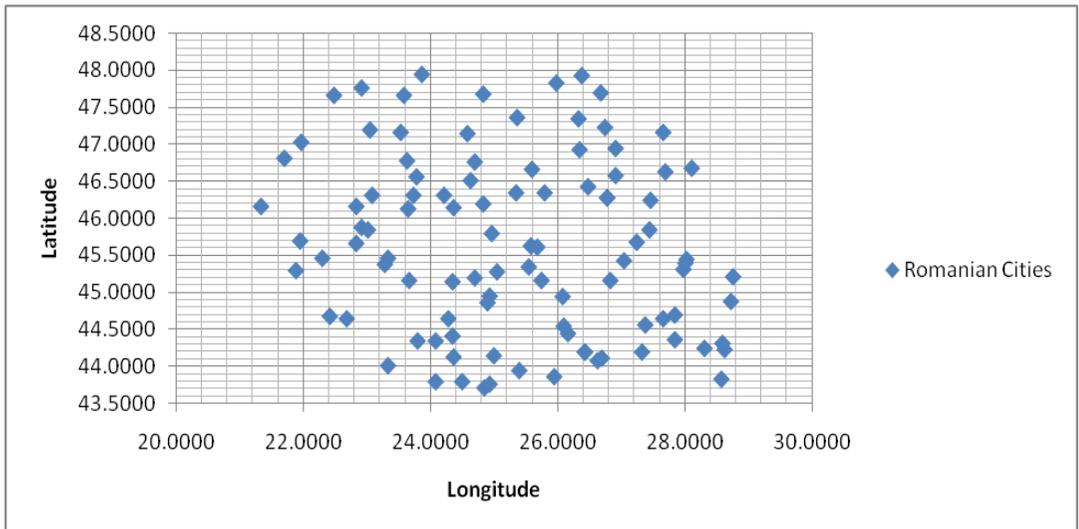
4. Case study: determining the optimal location for a central warehouse in Romania

In order to build a model for determining the optimal location for a central warehouse and apply it, we selected 100 towns in Romania and found their geographical position data by latitude and longitude coordinates. Based on a table in Excel with all the details, the geographical coordinates were transformed in decimal numbers using the excel formula:

`TEXT (ROUND (LEFT (F5, 3) + (MID (F5, 5,2) + RIGHT (F5, 5) / 60) / 60.6), "00.000000")`

So we created a new table with decimal numbers based on which we made a graph that illustrates all selected cities.

Figure 4: Spatial distribution of 100 selected cities in Romania



Source: by the author

To determine the geographic coordinates of the gravity center, we used the formula:

$$Lat_{cg} = \frac{\sum Lat_i * P_i}{\sum P_i} \quad Long_{cg} = \frac{\sum Long_i * P_i}{\sum P_i}$$

Lat_{cg} – latitude of the optimal gravitational point

$Long_{cg}$ – longitude of the optimal gravitational point

P_i – population of the city i

To exemplify, we present a sample of the excel table used, representing the top 5 cities listed in alphabetical order.

Table 1:

| City | Longitude | Latitude | Population |
|-------------------|-----------|----------|------------|
| Abrud | 23.0833 | 46.3167 | 6803 |
| Aiud | 23.7333 | 46.3167 | 28909 |
| Alba-Iulia | 23.6500 | 46.1333 | 66369 |
| Alexandria | 25.4000 | 43.9500 | 50591 |
| Arad | 21.3333 | 46.1667 | 172827 |

Source: realized by the author based on data available on www.wikipedia.com

The city's population was taken from the data made available according to the latest census in Romania.

After calculations, we have identified the point coordinates (lat 45.469408 N, 25.630817 E long), which represents the optimal location for placing a single central warehouse that provides lower costs for product distribution in the 100 selected cities from Romania.

Figure 5: Location of the gravity center (the optimal location for a central warehouse)



Source: Google Maps

5. Research results and conclusions

We can observe that the nearest villages are: Sinaia, Predeal, Brasov.

In order to determine the optimal location and distances of all other cities we used the following algorithm:

R = earth's radius (mean radius = 6,371km)

$\Delta lat = lat_2 - lat_1$ (latitude difference)

$\Delta long = long_2 - long_1$ (longitude difference)

$a = \sin^2(\Delta lat/2) + \cos(lat_1) * \cos(lat_2) * \sin^2(\Delta long/2)$

$c = 2 * \text{atan2}(\sqrt{a}, \sqrt{1-a})$, atan2 = excel function

$d = R * c$, the distance between two points, first with a long1 and lat1 and the second with long2 and lat2.

We choose only the top 10 cities, the closest to the location for a single central warehouse.

| City | Longitude | Latitude | Population | Estimated distance (km) |
|-------------------|-----------|----------|-------------|-------------------------|
| Sinaia | 25.5500 | 45.3500 | 14636.0000 | 16.0248 |
| Sacele | 25.6833 | 45.6167 | 29967.0000 | 17.3756 |
| Brasov | 25.5833 | 45.6333 | 283901.0000 | 18.9675 |
| Campina | 25.7500 | 45.1667 | 38758.0000 | 36.1595 |
| Campulung | 25.0500 | 45.2833 | 38285.0000 | 67.7832 |
| Ploiesti | 26.0833 | 44.9500 | 232452.0000 | 76.5609 |
| Fagaras | 24.9667 | 45.8000 | 35759.0000 | 82.4518 |
| Mioveni | 24.9333 | 44.9555 | 35849.0000 | 96.2896 |
| Mierucurea-Ciuc | 25.8000 | 46.3500 | 41852.0000 | 99.6575 |
| Odorheiu Secuiesc | 25.3500 | 46.3500 | 36948.0000 | 102.7237 |

Any of these cities can be chosen as location to build a central warehouse in Romania, because they represent a relatively good approximation for the gravitational center identified in the model applied.

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**SUB-SECTION: THE IMPACT OF FOREIGN LANGUAGES ON
THE BUSINESS ENVIRONMENT**

BUSINESS BUZZWORDS: RIGHTSIZING, DOWNSIZING, RE-ENGINEERING, DE-LAYERING

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The paper attempts to analyse the rise and use of a new vocabulary (economic buzzwords) related to staff dismissal in the new economy of the world. In this new economy, the organizational boundaries between states and firms become unclear and a new vocabulary has been conceived in order to express the changes the firms are undergoing. The new rhetoric includes buzzwords like privatization, de-regulation, re-engineering, rightsizing, downsizing, de-layering, quality service or global sourcing. The research is based on the conclusions of bibliographical and direct research of the literature relevant in the field, trying to emphasise the importance of strategic language when it comes to human resources management. Concepts like “freedom of speech”, “politically correct language” or “non-discriminatory language” are brought to attention and analysed focusing on their importance during periods of change and uncertainty characterising the economic environment nowadays. Two trends are depicted in the paper: the first is that of the supporters of political correctness who attempt to homogenize the language and thought to enhance the self-esteem of minorities. One approach to reaching this goal is to eliminate discriminatory or offensive words and phrases and the substitutions of harmless vocabulary at the expense of economy, clarity, and logic. Another approach is to deconstruct a word or phrase into its component parts, treat the component parts as wholes, and focus on secondary meanings of the component parts. On the other hand, reflecting upon the nature of large-scale organizational restructuring, there are the critics arguing that this type of language is a euphemistic form of phraseology. The analysis starts with the assumption that the economic lexis is not a rigid system of terms. Morphologically, there is a high degree of variety in productive types of compounding which exceeds the possibilities that exist in the common English vocabulary. In this view, four buzzwords (rightsizing, downsizing, re-engineering, de-layering) have been chosen as representative for this process and, also, due to the difficulty of translating them into Romanian. Also, the etymology of these buzzwords is analysed and by this the paper attempts to find why managers have adopted these as their favourite terms when discussing large-scale organizational restructuring.

Keywords: buzzwords, rightsizing, downsizing, re-engineering, de-layering.

JEL Code: Y90.

1. Introduction

There are numerous researchers in the sociology of organizations and the study of social movements who have examined the strategic use of language. Whether it is called rhetoric (Suddaby and Greenwood 2005:35-67), or framing (Benford and Snow 2000:409-430), these studies have shown how language can be used to influence perceptions of events or practices, and that these perceptions can influence behaviour and actions. Metaphors especially are considered to be a very powerful tool in this process. Lakoff and Johnson (1980) stated: “The essence of a metaphor is understanding and experiencing one kind of thing in terms of another” (Lakoff and Johnson 1980:5). Metaphors are used to elucidate an abstract or difficult concept by stating it in terms of a concept which is easier to relate to. The two authors go on showing how metaphors are used in everyday language to the point that they go undetected in people’s basic understanding of concepts. In all aspects of life, people define reality in terms of metaphors and then proceed to act on the basis of the metaphors. They draw inferences, set goals, make

commitments, and execute plans, all on the basis of how they in part structure their experience, consciously and unconsciously, by means of a metaphor (Lakoff and Johnson 1980:158).

Matissa Hollister considers that, in a related process, perceptions are influenced by the practice of naming or labelling, quoting Safford (2009): “People rely on these labels to figure out how to behave toward one another. So the power to shape the meaning and application of such labels lies at the heart of politics in both organizations and society more broadly. It’s something to be taken seriously”. (1)

The literature in the field shows that the use of strategic language is especially important during periods of change and uncertainty, when the new conditions and environment require new non-routine practices (Fiss and Hirsch 2005:29-52). In these conditions, strategic language can be used in order to accomplish the tasks associated to the job.

2. Non-discriminatory language or “politically correct” language

No society has ever permitted total freedom of speech without any restrictions whatsoever and it is hard to see how it could. In contemporary America and Britain there are a multitude of restraints on free speech. A large number of employers place restrictions on their employees’ freedom to speak about their work or to go to the press. These restrictions are usually presented as matters of respect for authority, or not bringing the company into dispute or just good manners, but they remain restrictions on freedom of speech nonetheless.

Recently, there have been attempts to broaden the concept of *non-discriminatory language* beyond its application to gender to consider traditional language that discriminates against people on the grounds of: race, ethnicity, religion, age, sexual orientation, physical ability or physical appearance. Hence, the phrase “politically correct” language was coined. The term “politically correct” appears to have originated within the left. Paul Berman states that: “‘Politically Correct’ was originally a phrase on the Leninist left to denote someone who steadfastly toed the party line. Then it evolved into ‘PC’, an ironic phrase among wised up leftists to denote someone whose line-toeing fervour was too much to bear. Only in connection with the PC debate itself did the phrase get picked up by people who had no fidelity to radicalism at all, but who relished the nasty syllables for their twist of irony” (Berman 1992:5).

In some critics’ opinion “political correctness” becomes ludicrous and self-parodying. For example, Beard and Cerf (1992) analyse terms such as *differently abled* (of a person confined to a wheelchair), *nonwaged* (unemployed), *physically challenged* (disabled), *vertically challenged* (short), *horizontally challenged*, *differently-sized*, *sizeism survivor* (fat), *cattle murderer* (grazier or rancher), *melanin-impooverished* (white), *sex worker* (prostitute), *unpaid sex worker* (wife), *achieve a deficiency* (fail), *member of a career-offender cartel* (mafioso), and *substance-abuse survivor with difficult-to-meet needs* (alcoholic serial killer) (Cerf and Beard 1992).

Modern dictionaries of euphemism like Ayto (1993) include politically correct expressions among their entries, considering that the phrase *politically correct* is completely mixed up with euphemism and jargon. In *Copy Editing for Professionals* (2000), Edmund Rooney and Oliver Witte define euphemisms as a “polite expression for an impolite idea.” They state: “Euphemisms are offenses against plain speech and clear communication, which is why bureaucrats and the politically correct love them... Perhaps those who have been fired from their jobs would be more accepting if they understood that they participated in the corporate *downsizing*. It didn’t take long for *downsizing* to acquire a bad name (*down* has an unfavourable connotation), so the term became *rightsizing*” (Apud Knight 2003:129).

Yet, contemporary studies on non-discriminatory language deny that the use of politically correct terms is euphemistic. They consider that the use of politically correct language calls for a more precise and accurate use of language.

3. Buzzwords

The word buzzword is a neologism coined in the 1960's. A buzzword is "a word or phrase... often authoritative or technical that is a vogue term in a particular profession, field study, [or] popular culture (Random House Dictionary). Yet, this definition essentially collapses buzzwords into jargon or argot. "Jargon" is a medieval word meaning gibberish. "Argot" means the languages of thieves and rogues. Nowadays, both terms have retained the pejorative meaning and they are used to criticize the secret codes of particular groups, especially of professions. According to Kaufer and Carley (1984), buzzwords cannot provide detailed elaboration of what the buzzword strictly means. Unlike argot, a buzzword is "never a dense reference. A buzzword functions rather as an instrumental reference to topics that are only loosely connected to it" (Kaufer and Carley 1984:178). Buzzwords are the reality of the impact a specialised group has on the larger culture. Buzzwords are coined when the words of an inside community have implications for a larger community of outsiders, even when the outsiders cannot fully grasp the precise meanings of the words.

Specialised language is not a fixed set of terms. It evolves and renews itself according to the changing interests within communities of practice. According to Roos (1987), "the lexis of business and economics is characterised by a high degree of freedom, productivity, creativity and imagination" (Apud Crawford Camiciottoli 2007:138).

Redundancy and dismissal are one area of management practice that particularly suffers from euphemistic jargon. According to Redman and Wilkinson (2005), some of the terms managers use include: *building down, career alternative, enhancement program, career, re-appraisal, compressing, decruiting, de-hiring, dejobbing, de-layering, demassing, de-selection, disemploying, downsizing, involuntary quit, lay-off, letting-go, non-retaining, outplacing, payroll adjustment, previously unrecognized recruitment errors, rationalizing, rebalancing, re-engineering, releasing, resizing, re-structuring, retrenchment, rightsizing, separation program, severance, slimming, streamlining, termination, volume-related production schedule, adjustment, wastage.* (2)

3.1 Business buzzwords: rightsizing, downsizing, re-engineering, de-layering

Rightsizing, downsizing, re-engineering or de-layering are "politically correct" terms relating to the planned reduction of programs or staff.

- My uncle was "dehired".
- John Taylor was "involuntarily separated" from the company.
- Alec Smith was "downsized".
- Jane Alexander was "de-recruited".

Yet, regardless of the name, these words should be thought of as a change process, to be implemented with the same thoughtful, systems approach as any other major organizational development initiative. Authors like Collins (2000) noted the damage that these words had upon lives and communities, bringing into attention the comparison that Moore (1997) made between radical, organizational restructuring initiatives and terrorism (Collins 2000:312).

Whatever the label, the tendency of companies to reduce their staff in response to an economic disaster affects their employees at all levels. It has been seen that "from banking to home appliances, industries are shedding jobs and eliminating excess capacity. And even when companies bulk up to compete globally, they're paring their work forces to hold down costs" (*Business Week* 1991: 88-89). *Business Week* (1992) also reported that "Since the mid-1980s, as corporations have responded to global competition and technological change by merging and consolidating, downsizing and de-layering, some 2 million middle management positions have been permanently eliminated" (*Business Week* 1992: 56-63).

"Downsizing," "rightsizing," or "re-engineering" represents the lean philosophy of American business today. An important indicator of the high degree of freedom characterising the lexis of

economics is word compounding, or the process of forming new words from two or more independent words. The words analysed in this paper are formed by extensive compounding:

- a. adjective + *ing*-verb: *right-sizing*, *down-sizing*
- b. prefix + *ing*-verb: *de-layering*, *re-engineering*.

a. Rightsizing

The first popular buzzword was *rightsizing*. It refers to reducing the total size of the people employed by the company to cut down on costs. Implicitly, there is the assumption that the company being downsized is essentially over-staffed and that performance levels can be maintained or even improved by reducing the number of the employees. *Rightsizing* is often used as a euphemism for *downsizing*, or *de-layering*, with the suggestion that it is not as far-reaching. This term was coined because many companies discovered that the people given voluntary retirement were performing useful functions which cannot be handled effectively by the remaining staff. Theoretically speaking, the term *rightsizing* implied that companies should determine and maintain only right employment for its requirements and increase their efficiency and reputation. (3)

b. Downsizing

The practice of downsizing and the use of the term *downsize* emerged in response to the economic crisis of the early 1980's. It marked an end to the social contract of long-term commitment between employers and workers and downsizing continues today, as showed by daily announcements of job reductions. Downsizing refers to the reduction of employment in an organization (McKinley, Zhao and Rust 2000:227-243). The label of "*downsizing*" played a role in the process in which the corporate players had to convince themselves and others that the practice was both effective and ethical. Using an implied metaphor helps both explain why the practice would work and reduce concerns about the moral questions. This buzzword is a "convenient, shorthand form of phrasing deployed to disguise the meaning and effects of recent organizational restructuring activities, which acts to distance management from responsibility for mass dismissal associated with organizational restructuring since the 1980s" (Collins 2000:282).

Downsizing is also commonly called *reorganizing*, *re-engineering*, *restructuring*, or *rightsizing*. Regardless of the label applied, however, downsizing essentially refers to layoffs that may or may not be accompanied by systematic restructuring programs, such as staff reductions, departmental consolidations, plant or office closings, or other forms of reducing payroll expenses. Matissa Hollister suggests three possible dimensions along which "downsizing" could differ from "lay off". The first dimension is related to people arguing that layoffs are just one of several tools used in downsizing for job reductions may also be achieved voluntary retirement. A second distinction between "downsizing" and "layoffs" refers to whether the job losses are temporary or permanent. Previously, layoffs used to refer to temporary dismissal from work because these were the most common types of job reductions. In what downsizing is concerned, when it was first introduced, the job losses were permanent. The third possible dimension is related to the fact that downsizing must involve specific intentions. (4)

Commonly, "downsizing" and "redundancy" are considered synonyms, linguistic alternatives conveying the same meaning. According to Collins (2000), this is not "quite accurate since where redundancy situations are associated with a decline in both employment and work, downsizing is associated with a reduction only in former" (Collins 2000:286). The same author argues that while the term "downsizing" is used to describe factors associated with the radical restructuring of the organization, the etymological origins of the term suggest a qualitatively different type of concern with "structures" and their "restructuring": "The term downsizing has its origins in the US automobile industry – particularly in Detroit – where it was used to encapsulate the driver to reduce car size and engine capacity in response to the oil crisis and the growth of environmental concerns during the early 1970's" (Collins 2000:286). In this view, the term "downsizing" might be considered as an effort, facilitated by euphemism, to accentuate key moments of downsizing,

moments of planning, strategy and the inevitable business outcomes of competitive imperatives, while downplaying other negative moments, months of uncertainty, hardship and enforced mobility within a changing system of work (Apud Collins, 2000:288).

c. Re-engineering

Re-engineering is the process of removing levels in the hierarchy. The purpose is to give the organization a flatter structure and thus the decision-making process is pushed down to lower managerial levels. The assumption is that this will produce quicker decision-making by managers who are closer to their customers and more in touch with their competitive environment. The studies show that the re-engineering concept is built on a previous eclectic collection of terms relating to competitive advantage. The metonym of the 1990's, "re-engineering" (Hammer and Champy 1993:32) or "strategic core re-organization" (Fairbrother 1991:69) has become executive rhetoric in both private and public organizations. At the end of the 20th century, the term *re-engineering* lost its appeal and the new terminology of *global sourcing* emerged (Kakabadse and Kakabadse 2000).

d. De-layering

The reasoning behind *de-layering* lies in the belief that as organizations grow, they become unmanageable, bureaucratic, and inflexible. More than that, they can be suffocated by rules and procedures, slow decision-making processes, and a lack of creativity. The solution is to flatten the structure (*de-layer*) to streamline the operations and increase flexibility and responsiveness to customers and competitors. *De-layering* is normally associated with other management initiatives, such as *Total Quality Management*, *business process re-engineering*, or *continuous improvement*. (5) *De-layering* has important consequences for managers because it invariably leads to job losses and, also, increases the number of tasks at work and responsibilities of lower-level managers. Even if it is accepted that some of the activities of middle management add little or no value and can be eliminated or contracted out, there are inevitably many aspects that will be passed down the hierarchy, which leads some commentators to suggest that many contemporary managers are now seriously overworked, although they may also be better paid.

4. Conclusions

Words are the primary means by which people communicate. Broadly conceived, political correctness includes a number of initiatives such as: altering vocabularies in order not to offend particular groups, affirmative action in admissions and hiring, and broadening the aim of classical texts to include those written by minority authors and women, not because of the quality of these texts but because they reflect minority realities. When words are eliminated from use due to political incorrectness, the options for conveying messages in the clearest and most accurate form are reduced. For the most part, the larger the vocabulary used by a sender and a receiver, the greater the opportunity to accurately transmit messages. Also, when certain terms are replaced with new words whose meanings are less well understood, the probability that the messages will be received as intended is reduced. Business relations in the new economy are completely different, therefore, the new rhetoric of organizations has included *flexibility*, *responsiveness*, *privatization*, *de-regulation*, *re-engineering*, *restructuring*, *de-layering*, *agility*, *quality service* and *global sourcing*, a rhetoric which reflects the rise of the network society, multi-layered governance and the new production of knowledge.

For a native speaker of Romanian who has acquired a partial command of English it might sometimes be difficult to judge whether a given politically correct expression is appropriate or not, or whether a given expression is funny or not. From a linguistic point of view political correctness seems to have no future either in English or in any other language because in spite of its highly inflective character in the past, in the last century English has shown a remarkable tendency towards economy.

Notes:

- (1) Apud Hollister, M., "Speaking of Downsizing. The use of the term 'downsizing' in American news media 1975-200", available at <http://www.dartmouth.edu/~socy/pdfs/HollisterSpeakingDownsizing.pdf>
- (2) *Idem, ibidem.*
- (3) "What is the difference between rightsizing and downsizing?" available at <http://www.enotes.com/business/q-and-a/rightsizing-downsizing-understanding-difference-114065>.
- (4) Hollister, M., "Speaking of Downsizing. The use of the term 'downsizing' in American news media 1975-200", available at <http://www.dartmouth.edu/~socy/pdfs/HollisterSpeakingDownsizing.pdf>
- (5) "Total Quality Management, business process re-engineering." Available at <http://www.jrank.org/business/pages/359/delaying.html>.

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VOICE PROBLEMS IN TRANSLATIONS OF ROMANIAN AND ENGLISH ECONOMIC TEXTS

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The difficulties brought about by the passive constructions have been an issue to debate for many linguists and scientist. Translations become ever more important in an increasingly global marketplace, and they are sometimes taken too lightly, when in fact it is a serious business that should be approached sensibly in order to avoid poor results.

Business translation is a specialised branch of translation, which requires specific skills and also methodology, theme as well as terminology competences.

Without being exhaustive the aim of our paper is to focus on the types of the passive constructions specific to the scientific discourse, the economic one, in particular. It also tackles the translation difficulties that may come along when dealing with scientific papers and rendering texts from Romanian into English. Passive constructions are frequently used both in English and Romanian. However, active forms are more common in literary writing or where the focus is on the people who make things happen. In contrast, passives are mainly specific to texts where the focus is on events and processes, in things that happen.

The most common problem in writing economic texts is overusing the passive voice. Specialists recommend or even require the passive voice in scientific, technical writing; motivating that by using the passive voice in scientific writing it achieves an objective tone whereas, sometimes it only obscures the text.

The scientific discourse and the economic one in particular, basically mean presenting ideas, descriptions, definitions, classifications, instructions, etc. The speech is brief, the technical person, and the scientist managing to say things which in ordinary language would require a vast amount of talk. Therefore, speakers or writers use the passive constructions in the scientific discourse for the following reasons: a) when there is no use of identifying the agent of the action, being unimportant or obvious from the context; b) to avoid repetition of the subject; c) to put emphasis on the action or the process; d) to convey objectivity; e) to avoid a long active subject.

Keywords: translation, passive voice, Romanian language, English language, difficulties

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1. Introduction

The general tendency is to consider translation as something that anybody can do with the help of an adequate dictionary. In fact, producing a written text using another text as a basis is a much more complex phenomenon than what is commonly believed. This difficulty becomes even more evident when the text in question deals with specialized, technical subjects such as finance, banking, or the like. Specialists have argued that the main difficulty of scientific English in general, business or economic English in particular, lies more with the grammar than with the vocabulary. In this particular case, when words belonging to the so-called General English appear next to specific terms and within a specific context, they contain nuances that must be accounted for in the final translation.

It is common sense that translators are responsible for and faithful to source texts. Professional translators should be expert linguists who know quite well the correct grammar of both the source language and the target language.

2. Definitions

The scientific rigor of this paper cannot be without previously dealing with the fundamental concepts of passive voice on one hand, and the scientific or specialized text on the other hand. First, let us review what passive voice is.

2.1. The passive voice is a grammatical construction in which the subject of a sentence or clause denotes the recipient of the action rather than the performer, that is, a category of verbs that is related to what thing or person is acting and what thing or person is being acted upon (Crystal 1997). It should be noted here that both active and passive constructions exist in English as well as in Romanian. In the English language, the English passive voice is formed with an auxiliary verb (usually be or get) plus a participle (usually the past participle) of a transitive verb. In Romanian the passive voice is formed with the auxiliary a fi and the past participle of the verb to be conjugated, the participle behaving like adjectives, and thus agreeing in number and gender with the subject.

e.g. *The contract **was signed** by all the members of the Board.*

*Contractul **a fost semnat** de către toți membrii Consiliului.*

Not all verbs can be expressed in the passive voice either in English or in Romanian for example *die*, *arrive* and *have* are all inherently active. According to Greenbaum and Quirk, the distinction between active and passive applies only to sentences where the verb is transitive (Greenbaum and Quirk 1990:44; Popescu 2001:107).

2.2. Specialised language. The concept of technical or specialized language bears several features, among them, according to (Bakr-Serex 1997: 54):

- a) logical order of statements with clear indication of their interrelations and interdependence;
- b) the use of specific terms to each given branch of science;
- c) the frequent use of specific pattern-sentence, the impersonality of this type of writing being mostly revealed in the use of *passive voice constructions* with which scientific experiments are generally described;
- d) the use of its own terminology, besides the specific syntax.

Specialists recommend or even require the passive voice in scientific, technical writing; motivating that by using the passive voice in scientific writing it achieves an objective tone. The scientist's use of language is "specialized" and "peculiar", the speech brief and the language effective and powerful. (Bloomfield 1933:74).

Scientific discourse basically implies written scientific English. It mainly concentrates on presenting ideas, descriptions, definitions, classifications, instructions, etc. The fundamental characteristic of the scientific discourse is conciseness. As J. Swales discusses, the passive is generally used "to give the information in the best possible way: impersonally, concisely, objectively and giving importance to the most important facts" (apud Croitoru 1996:138).

In the scientific texts, the passive is mainly used for rhetorical purposes. The most common uses of the passives is when the action is more important than the agent, as in formal notices, instructions, processes, etc, which are specific to the scientific discourse.

e.g. *The employee **has been given** instructions to review the balance sheet. (by the employer).*

This passive sentence is about the employee.

In an active sentence, the agent, the doer of the action usually comes first:

e.g. *The employer **has given** the employee instructions to review the balance-sheet.*

Thus, the sentence in active voice is about the employer, not the employee.

3. The Use of the Passive Voice: when, why, how.

The scientific discourse abounds in passive construction; the emphasis is usually put on the action itself, on the person or thing that "suffers" from the action or on the results of the action.

There are some cases when the agent is not even mentioned the so-called agentless sentences such as:

- the agent is not important, the emphasis being on the object
e.g. *The solution **has been discussed** for more than two hours.*
*25 votes **are required** to pass the bill.*
*The delivery notes **are being written** (by Mr. Smith).*
*The goods **will be delivered** immediately.*
- the agent is unknown
e.g. *The credit card **has been stolen**.*
*Our letter **hasn't been answered** yet.*
*Over 120 different contaminants **have been dumped** into the river.*
- The speaker or writer intends to make a statement impersonal:
e.g. *The invoice **should have been** thoroughly **checked** 20 minutes ago!*
*Appointments **are required** in such cases.*
- the agent is obvious:
e.g. *Many cases of fraud **have been solved** nowadays.*
- the agent is a long phrase:
e.g. active: *The union leaders as well as the management **concluded** the agreement.*
passive: *The agreement **was concluded**. (both by the union leaders and the management).*
- in the scientific genre that traditionally relies on passive voice when the focus is usually on events or achievements, rather than on agents:
e.g. *This cost-effective method **has been applied** in many computer companies.*
*Contracts **can be cancelled** within five business days.*
- When deliberately you do not wish to name the agent, i.e. you want to be vague about who is responsible. According to Emery (2005), “the passive voice is often used as a strategy that allows language users to avoid mentioning the agent”, and in majority of cases, the subject of the active verb – the agent - is not expressed in the passive.
e.g. *One thousand dollars **has been contributed**.*
*The net benefits of subsidiary divestiture **were** grossly **overestimated***

However, the passive voice is especially used when there is a need to *be diplomatic* or want to avoid personal pronouns to create an *objective* tone.

- e.g. *I **recruited** seven programmers last month.*
*Seven programmers **were recruited**.*
*You **lost** the shipment.*
*The shipment **was lost**.*

Here we actually have to do with one of the most famous political uses of the passive: to hide blame or obscure responsibility. *You* wouldn't do this, but you can learn how to become a critic of those who exhibit what George Orwell included among the "swindles and perversions" of writing (apud

<http://www.unc.edu/depts/wcweb/handouts/passivevoice.html>).

e.g. *Mistakes **were made**.*

*The Exxon Company accepts that a few gallons **might have been spilled**.*

*It costs so much money to pay for these campaigns that mistakes **were made** here by people who either did it deliberately or inadvertently. Now, others—it's up to others to decide whether those mistakes **were made** deliberately or inadvertently. (Bill Clinton, January 28, 1997)*

4. Passive versus Active Voice.

There is always a strive to achieve a style that is so clear that their messages cannot be misunderstood. One way to render a clear style is to minimize the use of the passive voice. Although the passive voice is sometimes necessary, often it not only makes the writing dull but

also can be ambiguous or overly impersonal. Here's an example of the same idea expressed both passive and active voice:

e.g. *The net benefits of the subsidiary divestiture were grossly overestimated.* (passive: Who did the overestimating?);
The Global Finance Team grossly overestimated the benefits. (The second version is clearer and thus preferable).

Another reason for this shift in our psychological thinking about science: nowadays there is a growing demand for greater transparency in science by requiring that published scientific and specialised papers in general, and economics texts in particular. Active voice proves a better choice when emphasizing the agent of the action. The other good reason behind this growing preference for active voice is stylistic: often passive voice is simply more awkward, less direct, and less clear and this will be later tackled in the paper.

But historically the sciences have encouraged the use of passive voice. And the reason for this tradition was that passive voice helped emphasize the objectivity of the sciences better:

e.g. *Microsoft was founded in 1975.*

The employee was last seen entering the warehouse two hours ago.

The passive voice can also prove useful if you want to put the doer of the action at the end of the sentence in order to create a bridge to the next sentence:

e.g. *Saturn was created in 1985 by General Motors. GM, the world's largest auto maker, was trying to learn a new way to build and market cars.*

5. Difficulties in Translating Passive Constructions

Technical translation has been considered as part of specialized translation; consequently being non-cultural, it is universal, as the benefits of technology are not limited to one speech community. (Ionescu 2000:217). The most common problem in writing and then translating economic texts is overusing the passive voice but it is seldom easy to cut down on the *passive* just to avoid any misunderstanding or ambiguity. All that is required in fact is the accuracy and clarity of expression achieved also by verbal expressions. Scientific translations differ from ordinary and literary ones as they do not accumulate emotional associations and implications.

Specialists advise the use of active voice in such texts, as much as possible as it is agreed that active voice adds value to the force and strengths of the texts.

There are situations when the use of voices does not coincide in Romanian and English. Some technical novice translators display a tendency to translate English passive sentences literally into Romanian and vice versa:

a. A common mistake in translating a passive construction is due to English **wording** which differs from the Romanian one: in a passive sentence the subject takes front position as compared to the Romanian one beginning with the predicate:

e.g. *The Memorandum of Association is normally signed by at least two subscribers.*

Contractul de asociere se semnează în mod normal de cel puțin doi dintre asociați.

A company is formed by the issue of a certificate of registration by the Registrar.

Pentru a înființa o firmă se depune certificatul de înregistrare la Registrul Comerțului.

The Certificate of Incorporation will be issued in a few days.

Se va emite certificatul de înmatriculare în câteva zile. (Pop and Sim, 2005: 20-23).

b. The so-called **report verbs** (verbs that report people's opinion) like: *request, believe, think, claim, mention, etc.*, are commonly used with impersonal passive constructions like infinitive followed by verbs of saying or thinking. The passive construction is employed to avoid a weak subject or to give an opinion that is shared by a large number of people. It is another difficult construction pattern to be rendered from Romanian into English or vice versa: Examples in case are the following:

e.g. *These accountants are known to be very thorough.*

Se știe / se cunoaște faptul că și contabilii sunt foarte minuțioși.

It is believed by the company staff that the current chief accountant will be appointed manager.

Personalul firmei crede că actualul contabil șef va fi numit director.

It is believed that the stocks will go up within the next five days.

Se crede că acțiunile vor crește în următoarele cinci zile.

c. Causative **get** and **have structures**, which can be used in both active and passive patterns may create difficulties of translation. Mention must be made that *get* passives only occur in dynamic events, *be* passives are not sensitive to dynamicity, and therefore can be used in both dynamic and static events, which explains why *be* passives are more common. These structures are more commonly used in spoken English rather than in written English. Thus, the active patterns **get + person +to-infinitive**, or **have + person + bare-infinitive**, have the meaning “cause or order somebody to do something”. (Maftei and Dobrota, 2009: 318)

e.g. The President will get the trustees to sign the agreement.

The President will have the trustees sign the agreement.

The boss will have/get the computer fixed in half an hour.

d. **Phrasal verbs** are commonly used in the passive. The main difficulty caused by phrasal verbs, either in active or in passive is that they have different meanings and when used in the passive its meaning may be even more problematic.

e.g. The meeting was called off by the Chairman. Întâlnirea a fost anulată de Președinte.

The red invoice will be handed in three days. Factura în roșu va fi predată în trei zile.

The agenda for the next meeting is being whipped up. Se discută ordinea de zi pentru ședința următoare.

There are instances when it is possible to end a sentence with the preposition of the phrasal verb that was made passive:

Active: A high price might weigh our product marketing down.

Passive: Our product might be weighed down (by a high price.)

Active: Un preț prea mare ar putea împiedica vânzarea rapidă a produsului nostru.

Passive: Vânzarea produsului nostru ar putea fi încetinită de un preț prea ridicat.

e. **Collocations** are two or more words that often go together just because they sound "right" to native English speakers, who use them all the time such as: *deal with, head for, insist on, prevent from, rely on, save from, reply to, to run out of, start up* etc. Sometimes grasping the exact meaning of a collocation and rendering it into the target language may be a real challenge.

e.g. He must be prevented from leaving the company. (Pop and Sim, 2005:12)

Trebuie să fie împiedicat să părăsească firma.

The company has been saved from bankruptcy.

Compania a fost salvată de la faliment.

The goods have been paid for by cash and not by Bills of Exchange.

Plata pentru bunuri s-a făcut în numerar și nu prin cambii.

5. Conclusions

As it has been demonstrated, passive constructions are frequently used both in English and Romanian. However, active voice is mainly employed in literary, creative text whereas passives are very common with exact, scientific, specialised pieces of writing.

To conclude, passive constructions in the scientific discourse are used for the following reasons:

1. when there is no use of identifying the agent of the action, being unimportant or obvious from the context;
2. to avoid repetition of the subject;
3. to put emphasis on the action or the process;
4. to convey objectivity;
5. to avoid a long active subject.

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SECTION: ECONOMICS AND BUSINESS ADMINISTRATION

SUB-SECTION: ECONOMICS

A NEW PARADIGM FOR THE RATING MARKET – A GEOPOLITICAL PERSPECTIVE ON RATING

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The oligopolistic structure of the global rating market formed by the "Big Three" and doubled by their incapacity to solve problems related to correctly evaluating some of the world's largest economic entities have both set a serious challenge on the rating industry after the onset of the contemporary economic crisis. If both in the E.U. and the U.S. rating agencies are subject to public debate and reform acts, China has defined a particular position by setting up its own rating agency, Dagong Global Credit Rating Co. This article reveals evidence of a geopolitical behavior in a quasi-official domain, which is more a necessity under the current paradigm of the world's economy.

Keywords: rating, rating agency, geopolitics, China

JEL: F02, F52

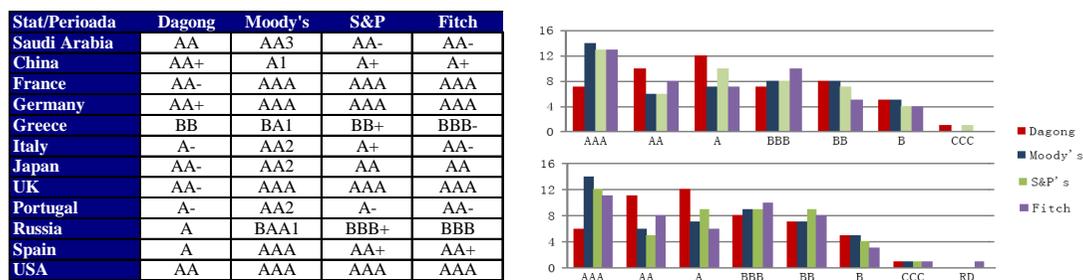
Dagong is a rating agency controlled to some extent by the Chinese government. Its purpose emphasizes an alternative for the "Big 3" global rating agencies. The reason for creating such an organization was primarily triggered by the need of having a clear investment rating processes. However, China's economic ascend over the last years has determined a powerful recalibration of this hypothesis to fit geopolitical issues. The pronounced economical growth rates, based upon China's export oriented economic model, have brought the Asian economy to rank three in the world and have imposed the need for a major rating agency. This latter aspect is common between powerful nations as most developed countries are homes for the most important rating entities. Therefore, the world can be divided into regions associated to different dominant players which come to complete the gap left by the "Big Three" on the markets. Most of those local players are controlled by governments whose influence sphere is located in that particular region.

China has not had a rating agency until 1994, when Dagong was founded. At first Dagong's main purpose was to represent Chinese economic interests in other parts of the Globe and to make sure that the Chinese investments were safe. China's vocation as a major player on the global economy and its aspiration towards a superpower status are the elements which have mobilized the need for such an institution. A rating agency has the advantage of converting general public data into information that can be used both for economic and political purposes. The contemporary context proved that rating agencies are absolutely necessary for international investments, as they are nothing but a common language to deal when assessing business opportunities. Beyond these technical perspectives, the rating activity brings significant returns and holds a stable market. Both arguments are strong incentives towards the formation of a Chinese rating agency. Through basic rating activity Dagong has managed to ensure amounts of money for China that, in the absence of an own agency, would have left the country, respecting in the same time the international rules of evaluating securities. Even though the reasons that determined China to establish a rating agency were mobilized by the intentions of country investors to benefit from local ratings, Dagong's core activity propels it into the interest area of the government as a way to express a Chinese position on certain international issues.

Suspicious on sovereign risk assessments

A statement made in the mid-2010, accompanying the publication of results of a sovereign risk evaluation for 50 countries, described Dagongs's action as being "the first sovereign credit risk assessment in the world conducted by a non-Western agency". On those premises Dagong started to offer an explanation to why it had lowered the ratings of some Western countries, whilst others were increased. Even though there is a clear propagandistic orientation in Dagong's claim, there is also a possibility that the rating agency could have objectively evaluated the environments of the 50 states. Dagong's analysis covered 90% of the total world economy. The geographical distribution of the assessment focused on 20 European, 17 Asian, 2 North American, 6 South American, 3 African, and 2 Pacific countries. The shock associated caused by the release of the report resides in the fact that it has attracted considerable attention in various political and economic circles. Dagong had degraded many Western countries in relation to the position they normally would occupy in the evaluations of Moody's, S&P's or Fitch. The 50 countries analysis report was published in June 2010 and reflected 18 more pessimistic views over sovereign risk than the ones indicated by the "Big Three". The Chinese report had downgraded USA, UK, France, Germany, Italy, Canada, Netherlands, Belgium, Spain, Israel, UAE, Thailand, Mexico, Romania, Iceland, Greece, Philippines, and Ecuador. However, there were certain countries, which according to the situation perceived by Dagong, benefited of improved grades compared to the ones provided by the Western agencies. This situation was reflected in the ratings of China, Saudi Arabia, Russia, Brazil, India, Indonesia, Venezuela, Nigeria and Argentina.

Fig. 1: Comparison table between the grades associated to sovereign debt denominated in local currency and foreign currency



Source: DAGONG, Moody's, S&P, Fitch Ratings

The problem associated with Dagong's assessment, which reverses about 50% of the commonly known global ratings, is that it has a profound geopolitical orientation. Because of this the assessment report seems to support theories that accuse the government in Beijing of pursuing its own interests and resulting in less accurate rating suspicions on data published by an rating agency "whose ownership was not made public [...] but has undeniable links with the government."

The countries that Dagong has downgraded are either declared U.S. allies (Canada, UK, Greece, Philippines, Romania, Israel, etc.) or countries that have important competitive roles along Chinese products (France, Germany). By downgrading the ratings of these countries Dagong has raised some questions about the honesty of its rating processes, as large budgetary deficits theories under which most decisions were based upon are not uniformly applied to all countries. For example, Japan, a country with a deficit of 225% of GDP (y. 2009) was not classified at a lower level to U.K. which have received the same leniency despite the deficit amounted to 50% of GDP (y. 2009). Israel is another example of a country opposing to some of China's current allies. This could explain the somehow surprising presence of Israel on the list of declining ratings. When discussing about economic arguments for lowering ratings, Israel's case is

interesting to observe as the same motivations were not extrapolated to its Egyptian, Syrian or Jordanian neighbors, each facing their own challenges in political and social environments. It is not difficult to notice that the better appreciated countries are non-Western and, moreover, they are countries with which China seeks to cultivate strategic alliances with in order to counterbalance the power of the U.S. hegemony. If not the case, they are for sure key suppliers of raw materials that support China's constant growth. For the countries whose grades had an upward perspective, a possible interference in the assessment of geopolitical strategies can also be easily noted. For example Russia is in a close cooperative relationship with China on several fields, while regional powers like India and Brazil are fundamental variables in China's international plans. In addition to this, both Brazil and Russia are suppliers of raw materials particularly for Chinese agricultural and energetic products. China's interest in these three states is explained by their geographical and demographic sizes, each having the capacity to become a very large outlet market for Chinese products. The best evidence to support such an idea is based on investments made by China in recent years in South America, which are designed to give Brazil an opening to the Pacific Ocean and a direct trade route to China via Peru. Other countries are important suppliers of energetic resources, like Saudi Arabia, Indonesia, Venezuela, Nigeria, or food, like Argentina. There are also other geopolitical ideas that are equally important when considering this group. Nigeria, for example, lies in the heart of the Chinese colonized Africa, which holds around \$100 billion in foreign investments, while Venezuela is a strong critic of the U.S. administration and therefore plays an important role in China's ascending to an important global superpower status.

Dagong's statement: between a sensitive truth and political demagoguery

While issuing its own rating report, the head of China's largest rating agency challenged the Western institutions by blaming them for their contribution to the onset and deepening of the global financial crisis. During a nationalist speech, Dagong's CEO emphasized that the largest nation in the world and the most important lender should have a greater influence on how governments' and nations' liabilities are valued. "Western credit rating agencies are highly ideological, politicized and do not adhere to objective standards. All this is fully supported by evidence which show that the big Western agencies are too close to their customers". Indeed, the phenomenon of "rating bidding", whereby a client provides the valuation of its titles to rating agency that offers the most favorable assessment, is not a new practice. The U.S. subprime crises has been generated and fueled by major rating companies, who competed in giving higher grades to risky investments.

Dagong's methodology was developed in the last five years and reflects an assessment of the economic sector of a state where the main concerns are directed towards the tax position of authorities, the ability to govern, the economic strength, the financial reserves, the debt burden and the ability to make profitable investments. Although, from the methodological point of view there is no difference from what other agencies have already developed, Dagong uses laudatory words to describe its rating model. Dagong worked until 1999 in cooperation with Moody's to form all necessary skills in the assessment processes. As a consequence, Dagong's methodology does not differ as much as it denounces versus its Western counterparts. Beyond this idea of methodology similarity, there is no marking difference in terms of competition, as Dagong has a privileged position in the Chinese market. The "Big Three" control about 75% of China's rating market, while Dagong holds almost the entire 25% left. Tripartite domination of the market was changed to one that involves four major competitors. There is little doubt that Dagong's statements are meant to please Chinese authorities, who are also the main client of the agency as management reports reveal. Cataloguing the U.S. as "a bankrupt nation into insolvency, willing to conquer the world by force" is but one example of a speech designed to meet China's allies and serve the country's geopolitical interests.

Dagong: a possible key to China's geopolitical aspirations

Although the U.S. are currently the only global superpower, China's goals are so high that many voices are already referring to it as the second pole of world power. China fully assumes this role and tries to create its own influence group in this competition with the U.S. and their allies. During past decades the Asian country was converted into a global power, while further replicas are expected to be seen more often as part of the competition between East and West. The analyses performed by the Chinese agency on different countries' sovereign risk are mainly based on geopolitical interests. The fact that the Chinese agency has failed to identify the problems that occurred in Egypt, Tunisia and Libya in 2011 merely have strengthened such an opinion. It appears that the agency does not use any different methodology compared to other institutions for its ratings, the differences being simply the result of an emotional approach directed by ideological interests of those who control it.

Dagong's uncontested merit is that it provides an alternative to Western views over ratings and this can only bring a reinforcement of a troubled area. The influence of the Chinese government is undeniable and can affect the rating agency's role in shaping long-term market trends. If Chinese companies would pay more attention to Dagong than to Moody's, S & P or Fitch, this agency would certainly have a major impact on the world's economic future. However, an unexpected strengthening of Dagong is implausible at this point because there is an extremely low possibility that Western companies would abandon the "Big Three" too soon. Also, given the fact that Chinese companies will certainly want to invest in Western countries, Dagong will probably be reluctant to cut too much of their ratings only based on political considerations. The sum of these elements indicates that Dagong's position will at some point be aligned with that of Western agencies, even though a distinct speech will be detected.

Dagong's perspectives: the option of servitude versus correct ratings

Despite the critical tone, Dagong aims to internationalize its business by penetrating foreign markets, especially the U.S. The pretext invoked by the agency is that it must protect the interests of Chinese investors no matter of their location. This argument is justified by the exposure that Chinese investors have on the world's largest economy. U.S. Treasury Department data indicate an amount of \$ 1.1547 trillion worth of government bonds held by Chinese residents only at federal government level, on the date of the issuing the report. The challenges faced by Dagong are to overcome the possible skepticism coming from the U.S. regulatory authorities and the issues related to its rating objectivity. Those two major issues are due to the fact that Dagong uses a nationalist speech and because of suspicions related to the accuracy of its ratings.

The future of the Chinese rating agency seems to be marked by country and sovereign risk analyses as the "Big Three" have focused more on corporate securities ratings, because they are better paid and abundant on the market. This leaves an unexplored niche on sovereign assessments. Channeling its attention towards sovereign debt evaluation, the only Chinese owned rating agency has become a central element in China's global ambitions.

Dagong tried to enter the U.S. market in 2010, but SEC declined its accreditation under the pretext that the Chinese agency "does not meet the standards [...] required by federal law". This refusal received by Dagong for its registration as a NRSRO was the first time SEC rejected any rating institution after the implementation of the new rules regarding the approval and control over rating agencies. This decision has increased the tensions between the parties and even between the two countries. The invalidation received by Dagong was treated by China as a discriminatory treatment towards its most important rating agency. In a similar manner, Dagong's press release criticized SEC's decision through attacks directed towards the American regulatory organism.

Dagong's frustrations are explainable as the credit rating services in China are far from the growth process that were defined for other sectors. The paradox of the Chinese rating services is that this domain has not benefited from the worldwide expansion as energy, mining, and banking

did. From this perspective, the Chinese authorities are eager to obtain an advantage in the area of risk assessment and Dagong is the only domestic agency through which this can be achieved. The future of China's largest agency depends on the actions of the "Big Three" and the country risk evolution. A confirmation of such radical assumptions can only bring a fearsome reputation and open the institution's path to an international rating player, even though they are based on geopolitical premises. Meanwhile, the perspective of a failure would have little impact on the institution, based upon the already tested cases of "Big Three", whose errors have little been sanctioned by the markets.

Dagong's case reveals a new paradigm for rating agencies and possibly a different future evolution for such institutions. Being so powerful that they can project trends and determine evolutions, rating agencies have become a central focal and support point in government actions. The challenge for such institutions is to choose a path between correct ratings and geopolitical interest of their owners. The success or failure of such an agency is strictly correlated to its capacity to provide accurate analyses.

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AMERICAN AND ITALIAN PERSPECTIVES ON PUBLIC AND PRIVATE EDUCATION CHOICES

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This work is based on the analysis of the public and private support to education and human capital development in two specific national contexts: the U.S. and Italy. Recent researches have firmly demonstrated the value of higher levels of education for socio-economic development, poverty reduction, higher incomes, employment and eliminating child labour, gender equality. The increased competition and globalization of economic activity, acceleration in technological and scientific knowledge, information revolution and more recently the worldwide economic recession continue to raise the value of education and training in preparing individuals for future employment, upgrading skills for greater workplace mobility, and underpinning wealth creation and economic development through human capital formation. The International Labour Organization (2010) has pointed out the key role played by higher levels of education and skills training in employment and social protection policies. In the Western world, the education industry is complex and diverse. It combines a dominant public sector of schools and universities and community colleges which educate the majority of students; a varied private sector mainly consists of nonprofit organizations that encompass some of the world's most elite education and scientific institutes. The importance of education for economic growth and development is well documented from a historical and economic standpoints. In this research we examine some evolving relationships between the marketplace, the state, and education institutions, knowing that the context of these relations has evolved strikingly in recent years, which have seen three major developments: a growing system differentiation, changing governance patterns, and a diminished direct involvement of governments in the funding and provision of education. Therefore, we are interested in understanding on one hand the possible evolution of the studied phenomenon, and on the other if the experience of a leading country as the U.S. may represent a useful starting point of imitation. So that, our analysis is focused on the investigation, through a period of ten years, of students enrollment according to the willingness to invest in education, independently of the resources needed. In particular, we use the Box-Jenkins methodology to fit data by using an ARIMA model and in order to achieve more information about the phenomenon. Our findings show a similar trend over time both for public and private enrollments although backgrounds and rules are very different in the two nations considered.

Keywords: human capital, public and private education, time series analysis.

JEL code: C23, E24, I25.

1. Introduction

Although not a pure public good, public provision of education is widely viewed as a primary function of government and it satisfies a natural commitment to the welfare of people. In many of developed countries public spending on education accounts for as much as 10% of government expenditures and as much as 5% of GNP. At the same time, the private sector of education has

been growing in importance over the past decades, and public education has been commonly supplemented by private education, since there are few technical barriers to its private provision (Stiglitz 1974). The processes of education and training, by supporting the formation of human capital, acquire a meaningful relevance especially in the more advanced socio-economic contexts, such as those belong to EU or OECD. In our analysis we consider two advanced countries, the U.S. and Italy, which were both in the former G8 group. The aim is to recognize a similar path in choosing to invest in public or private education, mainly the higher one. We focus on college or university registration, trying to find a trend by which this economic point could be explained. The differences in scholastic achievement of public and private schools have been the topic of a large number of studies in the educational sciences, economics and sociology, mostly in the U.S. but also to some extent in Europe. Within this literature, a significant distinction emerges inside the private sector, namely between publicly financed and private independent schools (Godwin and Kemerer 2002).

2. Related literature and other resources

As a few other Western countries, the U.S. have a system of education and training which enables not only widespread knowledge and lifelong learning, but also the possibility to establish very advanced educational paths. This purpose is shared by central institutions and by peripheral ones, with obvious differences which can arise in a country with a typical federal character. This so highly competitive socio-economic context leads the national system to seek and use especially that part of the workforce with high efficiency. On the other side, Italy has the same American public purpose, but differently its centralized institutional structure denotes that the selection of goals only depends by central government, without any peripheral institution directly involved in development of human capital. So that it is necessary to examine the possible motives for households or individuals to choose a type of public or private education. Certainly, this choice covers issues related to the quality of educational institutions, which reflects better preparation for students, who gain more experience and skills in specific perspectives. These differences in educational systems should be stronger in countries where wider space is left to private, and the State chooses not to provide significant resources to public education. In a complex economic system such as that of the U.S. there are additional conditions in order to choose, and the study of choices is a separate field of scientific inquiry (*e.g.* Murnane *et al.* 1985, on the quality of schools in the U.S. and the differences for various ethnic groups). Focusing on the private school, Cheslock's work (2005) examines the share of transfers which constitute the total number of students in public and private schools, noting that the percentage for the latter is lower if compared to the other. This would not occur for less attractive institutions, but only for the most selective, and consequently the role of transfers become critical in the U.S. higher education system. From such studies it is clear that both types of education require additional features, such as the selection, fees, and financial resources. This can also lead to transfers between different private institutions, more or less "selective". However, over time there has been a quantitative advantage in terms of transfers to the public part, certainly influenced by the fact that there are more opportunities to enroll. There are also differences in autonomy, and consequences of selection decisions to human resources and programs, which of course has always been higher in the U.S., compared to the European experience. Before examining the influence of education on the future well-being of individuals, it is necessary to consider how, today, we can estimate a different level of quality for the various training courses. Certainly there is no a single method, and we can mention some of those who are close to our case studies. For the U.S. case, Cherchye *et al.* (2010) uses a nonparametric approach for the evaluation of public and private education. In fact, even in contexts where private education is widespread, public funds should still be used in an effective and useful way through education programs. Another approach is instead to test the results on the next level of education (see for example Horowitz and Spector 2005). In this work the authors in comparing students who attended public, private

and religious schools, notice that they seem to get the best performance once in college. However, if it is possible to demonstrate the superiority of one of the possible better education, it should have general benefits, and therefore should be supported with public funds. In terms of benefits, there are also studies dedicated to estimating the contribution of public and private investment in education on economic growth. These include, for example, de la Croix and Doepke (2004), who estimate a greater contribution to the economic growth of private education when it is present in a low level of inequality in human capital, taking into account levels of fertility and the trade-off between quantity and cost of education of children. Finally, Arcalean and Schiopu (2010) study the interaction between public and private spending in a two-stage education framework (K-12 and tertiary education) and their effects on economic growth. Obviously, economic theory highlights positively the contribution of specific investments, both public and private, when they support an increase in the average human capital. In this sense, in a balanced socio-economic system the public spending should encourage private investments, also understood as the costs of households for their children. For this reason, in a highly competitive and multifaceted system, as in a Western country, it is necessary to create a harmonious and mutual support among the various education levels, integrating where appropriate public and private institutions. This may happen for example when only a certain type of private institutions, having more autonomy, can create specific courses of study, identified as useful to the global national context.

3. Analysis and findings

Starting from U.S. Census Bureau and OECD databases concerning education, we find a ten years data, 1998-2008, related to registration in higher schools, divided into public and private institutions. According a time-series analysis, this could allow us to describe the behavior of institutions and people on choosing their type of investment in schooling. Preliminary, we consider a simple axiom, which we could summary as following: people in a moment of their life decide to spend money to assure themselves to pursue their educational path; this amount of money is given and the same is for the private and public profiles, and people do not have benefits to acquire more education than the minimum required to enter in the workforce. At least, the only people problem is in which institution they want to learn. According to this statement, we follow the evolution of data, and at the end we try to predict them, according to the Box-Jenkins approach and applying an ARIMA model to find the best fits of a time-series to past values, and to make forecasts and verifying, where possible, if forecasts are closer to data. The method applied consists in an iterative three-stage modeling methodology:

- *model identification and model selection* making sure that the variables are stationary using plots of the autocorrelation and partial autocorrelation functions of the time-series to decide which, if any, autoregressive or moving average component should be used in the model;
- *parameter estimation* using computation algorithms to arrive at coefficients which best fit the selected ARIMA model, and we use the most common method of maximum likelihood estimation;
- *model checking* by testing whether the estimated model conforms to the specifications of a stationary univariate process, verifying that the residuals are independent of each other.

Moreover, in our analysis we consider four time-series with the same temporal scheduling and annually frequencies started in 1998 and ended in 2008, covering a period of ten years. In a first moment we can see, because the fact that economically the two countries are very similar, that the curve hits the value and it seems to have the same shape and underlying trend for the public institutions (see Fig. no. 1)

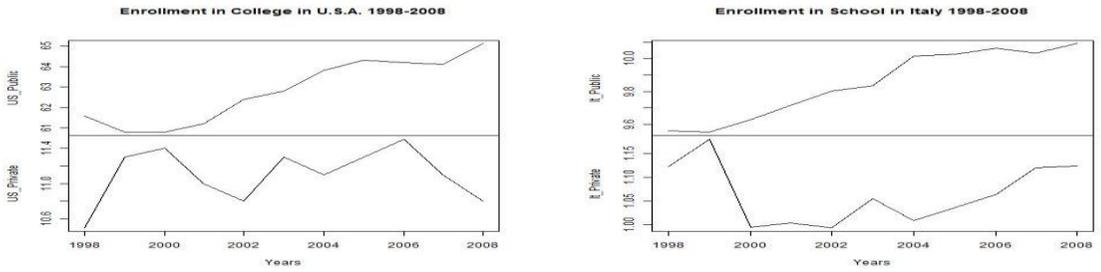


Figure no 1 - Enrollments (made by the authors)

Hence, we determine if the time-series is stationary and if there is any significant seasonality that needs to be modeled. As our time-series have annually frequency we are not able to have a significant seasonality to break up, so we can focus on stationarity which could be assessed from the sequence of plots above (see Fig. no. 1). We can also detect it from the autocorrelation plot, specifically, in our case, stationarity is indicated by an autocorrelation plot with a quick decay, as shown in the following figure. Indeed, for public institutions, both in the U.S. and Italy, the autocorrelation function decays after lag 3, while for private institution it takes place immediately after lag 2 (see Fig. no. 2).

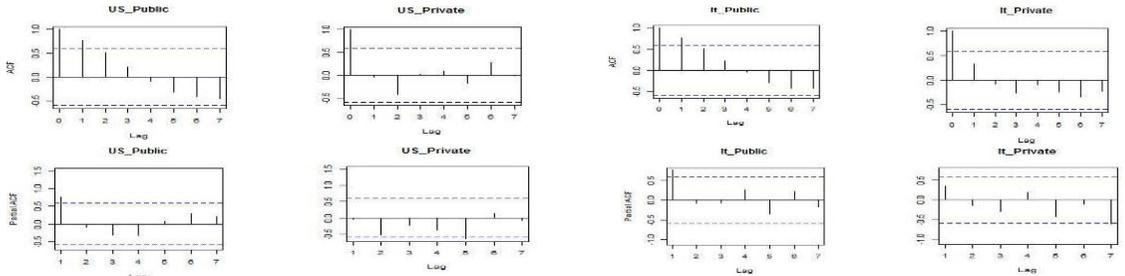


Figure no 2 - ACFs and PACFs (time series) made by the authors

The next step is to identify the order (p, d, q) of the autoregressive and moving average function and the order of the differences at which lag it will be computed. In practice, the autocorrelation and partial autocorrelation functions are random variables and sometimes will not give the same results as the theoretical functions. This could make the model identification more intricate, in particular, if we will find out a mixed models particularly difficult to identify. Thus, we already establish that our time-series are stationary, although the index of the partial autocorrelation function could suggest a cyclical period. We use statistical software R to determine that our time-series regarding the U.S. could be modeled by ARIMA process (2,0,0) with non zero mean, while the others two regarding Italy could be modeled by ARIMA (1,0,0) with non zero mean, supported in our choice by information-based criteria Akaike Information Criterion (AIC), technique that could help in the process of identification of the model. This model could be summarized by the following table (Table no 1):

Table no 1 - ARIMA coefficients

| | AR(1) | AR(2) | Intercept | Est. σ^2 | Log-ML | AIC |
|--------------|---------|---------|-----------|-----------------|--------|--------|
| U.S. Public | 1.4499 | -0.6016 | 63.4474 | 0.3165 | -10.59 | 29.17 |
| U.S. Private | -0.0789 | -0.6865 | 11.1334 | 0.05091 | 0.13 | 7.74 |
| IT Public | 0.9485 | | 9.8296 | 0.005956 | 11.42 | -16.84 |
| IT Private | 0.3655 | | 1.0695 | 0.003185 | 15.94 | -25.88 |

made by the authors

The model diagnostic is similar to the validation for non-linear least squares fitting, where the error terms are assumed to follow the assumptions for a stationary univariate process. The

residuals should be white noise drawings from a fixed distribution with a constant mean and variance. If the Box–Jenkins model is a good model for the data, the residuals should satisfy these assumptions. The plot of the mean and variance of residuals analyzed over time and that of autocorrelation of residuals help us to identify to select the model. As in the plot (see Fig. no. 3), our data assure the respect of those assumptions so the model is checked and validated.

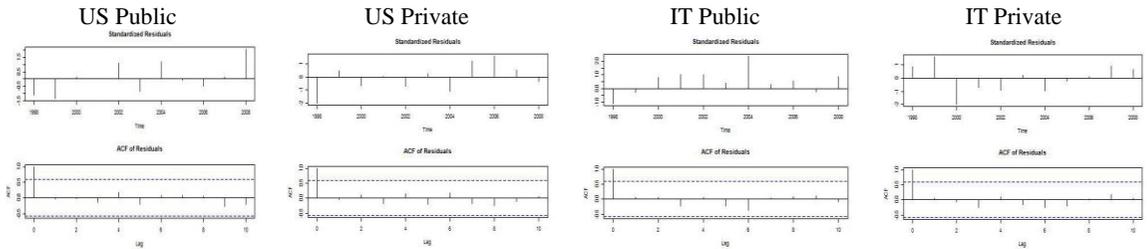


Figure no 3 - Residuals of the model (made by the authors)

After those steps, our model is checked, and it fits well the data since well itemized, so that we can use it to forecast the global behavior of enrollments. In the graphics below (see Fig. no. 4), we can observe that the forecast about American enrollments in public college decays slowly describing an exponential decreasing curve, while the forecast for private college is more erratic and not easily to interpreter. This lack of a continuous and increasing curve may be attributed to a casual elements, different from statistical errors, which affect the total amount independently from the householders’ decision. Forecasts for Italy show a quite stationary values, indicating that decisions to enroll at schools do not suffer unintended effects due to critical situation and the level of enrolments, therefore, are stable over time with unimportant, compared to past, fluctuations in the levels.

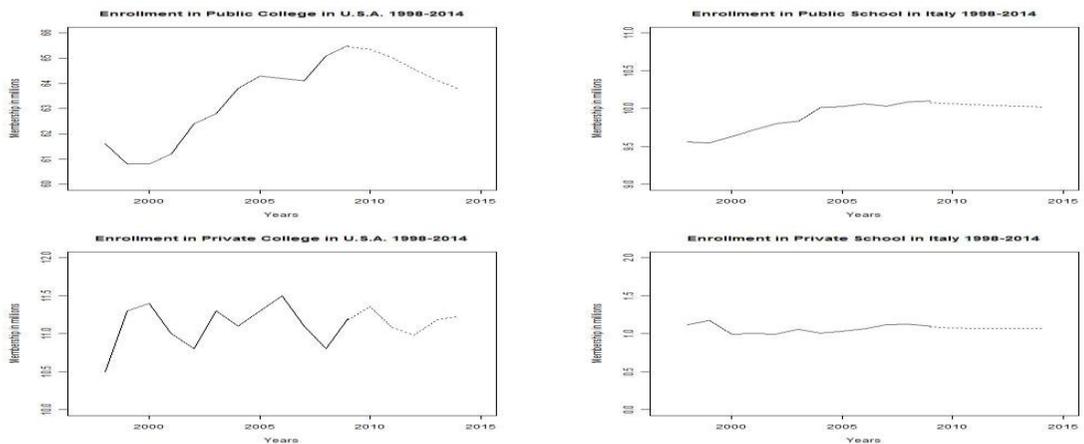


Figure no 4 - Forecasts (made by the authors)

4. Conclusive remarks

This paper show empirically the increasing importance that public and private education assume in two socio-economic systems. In particular, our research is focused in comparison with two countries, the U.S. and Italy, which differ for many things such as the choices of public and private investments, the population, the national financial debt and government expenditures. The preliminary analysis of the curve of enrolments at public school shows a similarity between the U.S. and Italy in their shapes, but not in the values of the curves, while we cannot reflect the same for private schools. This could be interpreted as a proportional ratio in government expenditure in education or, as we believe, in the preference of public education system *coeteris paribus*. Nevertheless, the proportionality of the expenditure is only a quantitative representation. Actually, the reasons for the apparent contradictions should be required in the existence of at

least two different views, in many ways divergent, about the ideological role of the university, and more generally education, in those countries. In the U.S., education organization is considered a private investment than an individual or his family voluntarily support, if can afford it, to be capitalize as a result by means of the major income received. In this country, a request for a private education responds also a private offer, where even the public schools and universities operate, with the private ones, in a market logic. Hence, this logic leads to a sort of competition between institutions to be seen as the most suitable not for the quality of education provided but only for the value which people received by attending one noticeable college rather than an unknown one. This kind of competition is carried on only by institutions which have the opportunity, or in most cases the resources, to attract famous professors, researchers or benefactors. Otherwise, in Italy, education is still ensured by national Constitution and it is seen as a right by citizens, often with a financial aid provided by government. This gives rise to a misunderstanding about higher education institutions, so that people do not perceive the need for attending a private schools instead of public one. In conclusion, while data shows a closer paragon between the U.S. and Italy, the realistic representation is far from it. Indeed, the U.S. education becomes a real commodity and it is forced to follow market rules, whereas in Italy it is still a right and our goal is reached and it could be summarized as follow: people choose always the quality, *coeteris paribus*.

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HUMAN CAPITAL AND DEVELOPMENT: SOME EVIDENCE FROM EASTERN EUROPE

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The concept of development is not only referred to the level or to the growth rate of GDP of a country, but it concerns different aspects of individual life. Development leads to a changing of values, behaviours and attitudes of people interested in it and in the well-being of the whole society.

Since the second part of the last century, more and more economists always assert that human capital is a fundamental asset to promote economic growth and development. Health and education are the two principal ingredients of human capital. There is a strong positive bidirectional relationship between education and health; in fact, it is statistically supported that the two variables move together, so healthy people are more likely to achieve an higher level of education rather than sick people and, vice-versa, more educated people are more likely to enjoy good health status. This generates a virtuous cycle that can lead to greater development. Indeed, health increases people's capabilities allowing achievement in their well-beings, since healthy people can work longer and with higher productivity than poor health people. For this reason individuals' income rises allowing them major choices in terms of consumption, savings and investments. Considering the economic benefits that start from health and education, not only at microeconomic level but also for a country, it is important to pay attention to the role of this two variables in the economic development process. There are several channels through which health and education can be associated with better enhancement in economic results. They can be find in the labour market and in the participation in the labour market; worker productivity; human capital investments; saving capacity; availability of save to invest in physical and intellectual capital; fertility choices and structure of population.

The present paper analyzes the two-way linkage between education and health and their relationship with economic development identifying the conditions of some Eastern European countries. The methodology through which the results are obtained is the multidimensional scaling method which allows to define relations between countries in terms of proximity/distance with respect to the considered indicators, providing a spatial representation of them.

Keywords: human capital, education, health, economic development, multidimensional scaling.

JEL code: I15, O15, P46

1. Introduction

Increasing attention is been paid by researchers to the discussion on what are the principal determinants of economic growth but first of all on what are the most important drivers to achieve a growing level of development.

There are two different approaches to development. On one hand there is the income-centered approach that asserts that investments in human capital, including health and education, have to be promoted if the rate of return of the investment exceeds the capital

cost. On the other hand there is the capabilities approach (Sen: 1999) that argues that the enhancements of people's ability to read and write, or to be well-nourished and healthy, have to be encouraged even if the conventionally measured economic return to investment in literacy, or improved food intake and health care, is zero (Anand and Ravallion: 1993). This second approach is supported by the greater part of the literature on economic development that claims that investments in human capital are the main instrument to promote it. This evidence is concentrated on the role of health and education, and especially on the strong two-way link that occurs between these two determinants of human capital and why it is so important for development.

The major objective of this work is to examine the existence of relations among indicators of economic development, education and health in some Eastern European countries, with the aim of producing a clustering of them in terms of proximity/distance with respect to the examined indicators. The paper starts with a brief overview of the relevant literature on the topic of human capital and economic development (see par. 2). In the second section, it is provided a data analysis using a Multidimensional Scaling methodology, in order to identify groups of countries that show similar characteristics in relation to the chosen indicators (see par. 3). At the end, some brief concluding remarks, that summarize the results achieved by the analysis, are given (see par. 4).

2. Literature overview

The interest of economists towards non-economic dimensions of economic growth (such as education and health) becomes strong since the Sixties of the last century, when some researchers have noticed, contrary to what they believed, that economic growth was not only dependent on economic and quantitative factors, but it was also due to more complex and intangible factors, the first of which is human capital. As a form of human capital, health is increasingly considered as the driver of economic growth, of development and poverty reduction. Health is defined more generally as the income that can be received if you have the ability to employ your time at work rather than in care in case of illness. Grossman (1972) claims that health is viewed not only as a consumer good but also as an investment good and for this reason an investment in human capital and an output of household production processes. In fact, Grossman, who provided the first formal contribution to the objective study of the determinants of individual health status, argues that it is possible to observe a positive relationship between education and health; in particular, he supports the explanation of the link between education and health which claims that education has a positive impact on the likelihood of enjoying a good health because it increases the production of health technology, altering both productive efficiency and allocative efficiency. In addition, more educated people are more awareness in terms of adopting prudent use of medical care, healthy responsible behaviours and conscience in the choice of work. In the same way, people that enjoy good health conditions are more interested to invest in education because they have greater cognitive capabilities that allow them to achieve good results. Furthermore, they have more time to spend in study rather than in care in case of illness. So, more educated people have great probability to have a good health status and to be more productive contributing to economic development of one nation.

The importance of education and health for the economic growth and development is due to the returns from investments in the two variables. These are two forms of human capital, the improvement of which should enhance worker's productivity. Several studies show that better health, special early in life, is associated with higher educational attainment. Conti et al. (2010) argue that more educated individuals, in turn, have better health later in life and better market prospects. According to the authors, education has an important causal effect in explaining differences in many adult outcomes and health behaviours (Conti, Heckman and Urzua: 2010).

An improvement of living conditions of an individual, and therefore an increase in the level of health, has effects both at a microeconomic level, thereby improving his welfare and that of the

communities in which he lives, and also at a macroeconomic level, allowing a further development of a country. The micro-level evidences are those that support the contribution of health on economic outcomes, like as wages and earnings, amount of hours worked, labour force participation and so on, analyzing for example the link between nutrition and productivity. Fogel (1997), in his analysis on distribution of the height and weight and on food supply and calorie intake across the population in Great Britain and France, estimates that improvements in health and nutrition contribute to about one-third of income growth in Great Britain between 1790 and 1980. The macro evidences concern the effect of population health on economic growth. However, the effects are different and they depend on the initial level of income. For example, Bhargava et al. (2001) believe that a better health is more important for wages, economic indicator of workers' productivity, in low-income countries than in high income ones. Indeed, in low and middle income countries a 1% increase in survival rate in adulthood is positively associated with the increase of 0.05% in the rate of economic growth, while above a certain income the adult survival rate has a negligible effect and in some cases a negative growth rate. Also Weil (2007) suggests that the positive effect of health on GDP is stronger among poor countries.

3. Data, methodology and results

To reach our purpose, which consists in identifying conditions of some Eastern European countries with respect to economic development, health and education, in testing the existence of correlations between the different aspects and in providing a classification of countries, we use the multidimensional scaling method.

Multidimensional scaling is a useful tool through which it is possible to produce a graphical representation of a pattern of objects, in this case the twelve Eastern European countries, based on the degree of similarity/dissimilarity between them.

The goal is to provide a representative map that best approximates the distances observed between countries, concerning economic development, health and education.

This statistical method attempts to build a configuration of the various entities, merged in a small number of dimensions. This is done by defining relations between countries in terms of proximity/distance with respect to the considered indicators. The resulting positioning map has the property to partition the countries into homogeneous groups, so as that the degree of association between two countries is maximal if they belong to the same group and minimal otherwise.

We considered a matrix of twelve Eastern European countries and nine indicators, representing three sets of variables: economic development, education and health. In particular, we have selected three indicators for each topic (Table no 1).

Data refer to the most recent period of five years for which we can find available data; specifically, the considered period usually runs from 2005 to 2009. In the analysis, we use the average value of each indicator over the considered period for each country (Table no 1).

Table 1. Data set

| | GDP per capita (current US\$) (a) | Exports of goods and services (% of GDP) (a) | Unemployment (% of total labor force) (a) | Public spending on education (% of government expenditure) (b) | Pupil-teacher ratio, primary (c) | School enrollment, tertiary (% gross) (c) | Health expenditure (% of GDP) (a) | Life expectancy at birth (years) (a) | Mortality rate, infant (per 1000 live births) (a) |
|----------|--|---|--|---|---|--|--|---|--|
| Bulgaria | 5353,2 | 53,5 | 7,7 | 9,3 | 16,1 | 46,2 | 7,0 | 72,8 | 9,7 |

| | | | | | | | | | |
|-----------------|---------|------|------|------|------|------|-----|------|------|
| Cyprus | 27480,2 | 47,6 | 4,6 | 13,4 | 16,4 | 36,3 | 6,1 | 79,6 | 3,6 |
| Czech Republic | 16356,2 | 75,1 | 6,3 | 9,9 | 17,1 | 50,8 | 7,1 | 76,6 | 3,1 |
| Estonia | 14081,0 | 75,4 | 7,5 | 14,7 | 11,9 | 65,0 | 5,7 | 73,3 | 5,0 |
| Hungary | 12843,9 | 76,2 | 8,0 | 11,0 | 10,3 | 64,4 | 7,7 | 73,3 | 5,7 |
| Latvia | 10975,5 | 43,8 | 9,3 | 14,2 | 12,0 | 72,8 | 6,3 | 71,7 | 7,7 |
| Lithuania | 10645,7 | 57,7 | 7,5 | 14,8 | 13,7 | 75,8 | 6,3 | 71,6 | 5,9 |
| Malta | 17758,8 | 82,5 | 6,7 | 12,7 | 13,6 | 30,7 | 7,8 | 79,4 | 5,8 |
| Poland | 10641,8 | 39,4 | 11,3 | 12,1 | 10,8 | 65,5 | 6,6 | 75,3 | 6,0 |
| Romania | 6981,8 | 31,5 | 6,7 | 11,5 | 16,7 | 52,3 | 5,3 | 72,5 | 12,6 |
| Slovak Republic | 14836,1 | 86,0 | 12,4 | 10,6 | 16,9 | 44,9 | 7,7 | 74,4 | 6,3 |
| Slovenia | 22272,4 | 65,0 | 5,5 | 12,6 | 16,1 | 81,4 | 8,4 | 78,4 | 2,9 |

Source: World Bank. (a) Average values refer to the period from 2005 to 2009. (b) Average values refer to the period from 2003 to 2007. (c) Average values refer to the period from 2004 to 2008.

The model's goodness of fit was assessed via the RSQ (0.89), that indicates the proportion of variability explained by the corresponding dissimilarity distances, and the Stress Index (0.14). 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 Stress Index. Further investigation provided additional basis for choosing the two-dimensional solution: the "elbow" rule suggests to choose the number of dimensions in correspondence to where the diagram yields an "elbow", beyond which the broken line flattens (Fig. no 1).

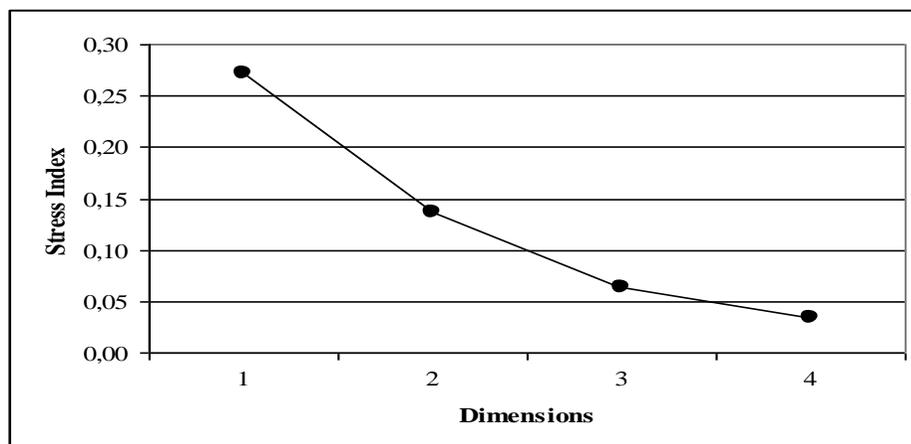


Figure 1. Scree plot

The correlations between dimensions and variables (Table no 2) were useful for naming the axes. The resulting two-dimensional image is shown in Fig. no 2. The horizontal axis represents the variables concerning economic and health indicators (so named Human Development); the vertical one is related to education indicators (so named Education Development).

Table 2. Correlations between variables and dimensions

| Variables | Dimension 1 | Dimension 2 |
|--|-------------|-------------|
| GDP per capita (current US\$) | 0,89 | |
| Exports of goods and services (% of GDP) | 0,54 | |
| Unemployment (% of total labor force) | | |
| Public spending on education (% of government expenditure) | | 0,85 |

| | |
|---|-------|
| Pupil-teacher ratio, primary | -0,63 |
| School enrolment, tertiary (% gross) | 0,50 |
| Health expenditure (% of GDP) | 0,63 |
| Life expectancy at birth, total (years) | 0,90 |
| Mortality rate, infant (per 1000 live births) | -0,78 |

Through the multidimensional scaling method we summarize the nine considered indicators by only two dimensions. Specifically, in such a way we are able to obtain a graphical representation of the twelve Eastern European countries object of study, based on the degree of similarity/dissimilarity between them with respect to the value that they assume for the two considered dimensions. Countries are classified into different groups, which are more homogeneous into them and more heterogeneous among them (Fig. no 2).

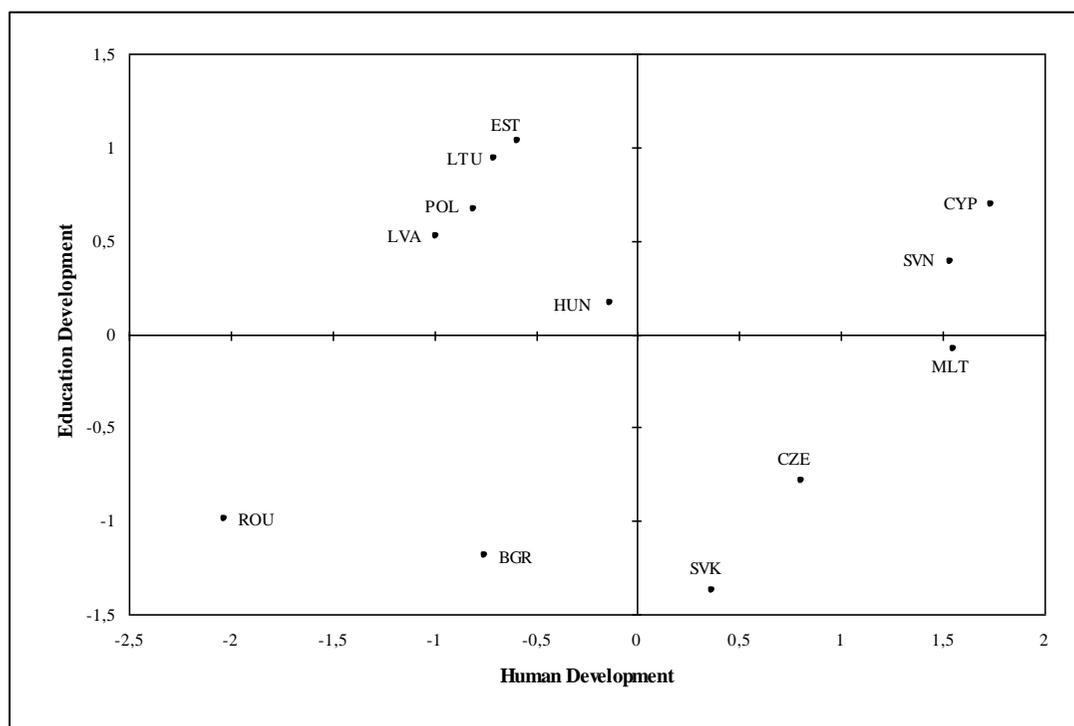


Figure 2. Cluster of countries in a two-dimensional space

Exactly, looking at Fig. no 2, we can see that countries that show a better status related to education, health and economic condition are positioned in the first quadrant (Slovenia and Cyprus). Countries that are located in the third quadrant are those having a lower level of education, health and economic condition (Romania and Bulgaria).

The Baltic Countries, Poland and Hungary show satisfactory level of educational development, but low levels of human development. Finally, Czech Republic and Slovak Republic show relatively high level of human development, but low level with respect to the educational indicators.

4. Conclusions

Human capital is one of the most discussed topics in economics. The initial hypothesis that moves the aim of the present paper is that the two principal components of human capital,

education and health, have a positive impact on economic growth and development. Therefore, in this preliminary analysis on some Eastern European countries, we adopt the multidimensional scaling method that allows us to summarize the nine indicators about the levels of education, health and economic conditions in only two dimensions that we named Education Development and Human Development. In such a way, we have made an attempt to identify how the chosen Eastern European countries are positioned with respect to the two important dimensions. The results suggest a partition of countries in four clear groups, across which particularly Slovenia and Cyprus could be identified as benchmark for the others. It is important to underline that this analysis represents a preliminary analysis and it needs further examinations.

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THE INTEGRATION OF YOUNG ECONOMISTS ON THE LABOUR MARKET. THE PROFESSION OPTION – A DECISION FOR CAREER AND FOR A LIFESTYLE

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Knowing the importance of the integration process of graduates of higher economic studies on a labour market that is becoming more and more demanding, as well as the fact that professional objectives realistic defined represent an essential demand of performance, the present paper aims to determine the relevance of personal decision capacities as a favouring factor of a concrete career option for economist students.

Our research is based on information and statistical data obtained through applying tests and questionnaires on economist students from licence and master studies from three universities: University of Oradea, The West University of Timișoara and “Ștefan cel Mare” University of Suceava, in the project called PRACTeam „The practice of economist students. Inter-regional partnership on the labour market between universities and the business environment” Project co-financed through the Social European Fund, Through the Operational Program Human Resource Development 2007 – 2013 – „Invest in people!”.

In essence we leave from the premises that the professional option reflects a specific side of individual’s personality which does not choose only for a certain occupation but, implicitly for a certain lifestyle. As a diagnosis approach we assume axiomatic the thesis according to which the high level of congruence between the individual psychological availabilities and the occupational environment raises the satisfaction chance and professional success.

The approach that we submit is an interdisciplinary one, as well as the research team formed of two economists and a psychologist. Our study proposes to identify the correlation between the individual decision ability of the subject and the compatibility between a specific interests set of abilities identified on the basis of individual tests. Also, on the basis of processing the results obtained of economist students at the personality tests, we will try to argument explaining the option of some subjects for professions that demand individual qualities that their personality does not imply at the level asked.

Key words: labour market, profession option, economist students, career

JEL Codes: J01, A11, M50, A20

The psychological perspective over young people’s integration on labour market. Individual abilities, occupational environment and career decision

The compatibility between profession and person has been theorised according to some classical models leaving from some common elements of observation, that consider the fact that people are different and work environments are diverse, that the individual option is guided on the basis of determination of a specific set of abilities and interests with the help of some psychometric tests. The model of „matching” between the person and the work environment has been extended by the authors such Rodger (1952), in England or Holland (1959, 1973, 1985) in USA, who observed that between the occupation of a person’s and profession there are often differences that reflect equally a personal option and also the general state of the art of the society and especially

a certain economic conjuncture. The application of those models takes to the conclusion that it is normal that between the profession (qualification) that a person acquires through study and the occupation of that person exists a consistent continuity.

On the labour market, once ending the training, graduates of diverse educational cycles are confronted with the need of exploring the workplace offer. Generally speaking, the choice of a profession is made on the basis of some descriptions of the teaching system components and of the organizing ways. After the accumulate preparation and certificates students make personal career scenarios.

In order to acquire a best insertion of work force on the labour market the graduates and the holders of professional certificates must inform as exactly as possible regarding the occupational alternatives. Usually the occupational information allows individuals to affine the occupational alternatives congruent to the interests, values and abilities proved during the studies. Also, occupational information allows familiarisation to the labour market, the evaluation and identification of negative and positive aspects in order to mend the perceptions of stereotypes about certain occupations. In essence, the information about certain occupation refers to: educational requirements, needed competences and tasks, the nature and environment of the work place, work schedule, the wage standard, the statute offered, lifestyle imposed, promoting opportunities, diverse aspects regarding the professional ethics and respectively the current demand on the labour market (Lemeni & Negru, 2008).

Theoretically, we can consider the career decision as “the process that leads to the selection of a career alternative from the amount of choices available at a certain moment” (Lemeni, 2008). The literature in the field distinguishes three components that interact in the career decision: decision content, the decisional process and the context of the decision.

We can identify a series of individual differences regarding the way one chooses a career. Evaluating the alternatives we observe different decisional styles. There have been identified, on theoretical level, several classifications of the decisional styles. Therefore, we admit that we might have at least the following possibilities:

- rational style (logical and organised approach of decision on the basis of some sprung plans);
- dependent style (the choice is done leaving from advice and directions from closest people);
- avoiding style characterised through postponing;
- intuitive style based on impressions and moment impulses;
- spontaneous style (without deliberations, the decision is rather passionate).

It is obvious the fact that for decisions with long term implications, such as the career decisions, the rational style is the fair solution.

Methodological aspects. The analysis of individual capacities and career decisions of economist students

Baring in mind what we have shown earlier, our study tries to clarify the proportion that is born between the context of decision and its content. Regarding the context of the career decision, we look for explanations considering internal and external factors that influence the complex decisional process.

Internal factors represent the conditions that facilitate individual option for a certain educational and occupational trajectory. In our study, internal factors have been quantified on the base of *measuring the self knowledge of subjects* (interests, values, habits and personality characteristics), *the evaluation of decisional abilities* especially the capacity of correlating self knowledge with the professional and occupational offer. Also, the decisional abilities have been qualified through reporting to the individual’s capacity to analyse alternatives, to take into account and the certainty of the individual that he disposes of consistent means to choose the most appropriate option for himself or herself.

Regarding *the extern context*, we used as a theoretical modelling element a situation reflected by elements that have been identified on the labour market at the present moment. The structure of

opportunities has been modelled into the perspective of jobs in economic field that the labour market offers to students and graduates of economic studies.

As a research method we used questionnaire, applied to a number of 189 students and graduates of economics, participating in the PRACTeam project.

Our study aimed to measure for the tested subjects *the decisional capacity indicator* using a Likert scale from very weak to very good. In order to identify the items there have been used the following instruments:

- decisional ability test (evaluates the rationality of the decision maker, consists of 14 items that describe decisional situations and present alternatives for which the subjects choose, the items being formed as possible choice situations);
- Interest evaluation questionnaire (IEQ) (evaluates the preference of a person for a certain activity or area of knowledge, it is formed of 60 items, grouped in six correspondent scales, to the six groups of interests from Holland's theory: realistic, investigative, artistic, entrepreneurial and conventional).

The hypothesis that we need to statistically validate is that individuals with a high decisional capacity (good, very good), correlate significantly with the set of specific interests and aptitudes determined on the basis of individual tests and personal option for a professional track in economic or other field. In a first phase, the results obtained at the IEQ (objective measure of individual capacities), in terms of a combination of three characters according to the Holland's classification code, has been confronted with the manifested, clear, asserted professional option as a choice of one of the economic specializations: International businesses; The economy of commerce, tourism and services; Finances and banks; Accountancy and stock control informatics; Management and Marketing (to be seen *Table nr. 1 The distribution of subjects according to the preferences for certain economic fields*).

Table nr. 1. The distribution of subjects according to the preferences for certain economic fields

| Specialization | The first result on types of jobs according to Holland classification | | | | | | Total |
|---|---|--------------|-----------|-----------|---------------|----------|------------|
| | Entrepreneurial | Conventional | Social | Realistic | Investigative | Artistic | |
| International businesses | 8 | 9 | 11 | 0 | 0 | 0 | 28 |
| The economy of commerce, tourism and services | 9 | 7 | 15 | 1 | 1 | 1 | 34 |
| Accountancy and stock control informatics | 2 | 22 | 5 | 1 | 0 | 0 | 30 |
| Finances and banks | 4 | 18 | 7 | 0 | 2 | 3 | 34 |
| Management | 14 | 7 | 5 | 1 | 1 | 0 | 28 |
| Marketing | 10 | 10 | 10 | 1 | 1 | 3 | 35 |
| Total | 47 | 73 | 53 | 4 | 5 | 7 | 189 |

As it is shown in Table nr.1, the distribution of subjects is kept in the expectance horizon created on the basis of common perception over the competencies that are offered to graduates through the specialisations chosen. Students who have chosen International business are grouped in the area of social (11), entrepreneurial (8) and conventional (9) posts. They are aware of the fact that the specializations that they have chosen implies intense interpersonal relationships and communicating with people (descriptors of social post) managerial and organizing abilities, the

capacity to make decisions and assume risks (descriptors for the entrepreneurial post). The polarization in the area of conventional post might seem a paradox in this context, but their orientation towards success implies a realistic passing from working with ideas towards practical manipulation of some concrete data and details from an organised frame.

Management specialization has the options concentrated according to the expectancies in the area of entrepreneurial posts (14) while students in the Accountancy and stock control informatics as well as Finances and banks chose in majority (22 out of 30, respectively 18 out of 34) for conventional posts. Their preference for rigorous checking routines and their bent for organized work through procedures reflects a specific coherence between the subjective set of expectancies regarding own career and the nature of tasks that they are going to effectively fulfil.

Overall, we conclude that the distribution of the subjects confirms the existence of a common mentality *pattern*. We expect intellectual dynamism, advanced communication skills and good negotiation skills from an International businesses specialist. Accountancy implies rigour and inclination towards routine, availability to procedural acting and fulfilment of routine tasks. The specialization Economy of commerce, tourism and services takes the weight centre of preferences in the direction of social posts, where the accent falls on communication with people, helping people and providing services to them.

Table nr.2. Correspondence between the level of decisional capacity and the choices in favour of some professions associated to the field

| Specialization | Total respondents/ specialization | Scores at the decisional capacity GOOD and VERY GOOD | Holland codes/ professions associated to the field ⁵ |
|--|--------------------------------------|--|--|
| International businesses | 28 | 10 | ACR |
| The economy of commerce, tourism and services | 34 | 24 | ACS |
| Accountancy and stock control informatics | 30 | 19 | CIA |
| Finances and banks | 33 | 16 | ASC |
| Management | 27 | 7 | ISC |
| Marketing | 35 | 17 | AIC |

As we can see in Table nr.2 and Table nr.3 regarding the distribution of decisional capacity on specializations, the most relevant correlation between the decisional capacity, personal qualities and the specialization chosen appears in subjects enrolled at specialization Economy of commerce, tourism and services. Also, relevant figures appear for the specializations Accountancy and stock control informatics (19 out of 30 subjects proves good decisional abilities), Finances and banks (16 out of 33) and Marketing (17 out of 35). The students, who follow specializations in fields with a clearly defined occupational area, prove better decisional abilities, they choose following well defined objectives and their expectancies regarding their own career prove to be more realistic.

The low scores obtained in the case of specializations International businesses and Management, explain through the relative attractiveness of the areas with new opportunities of self development. The two fields are suitable to occupational areas much more diverse, fact that creates the general impression of large opportunity. In fact, on a real labour force, these specializations do not have a large opening. The possibility to employ economists in the field of

⁵ Holland Codes/professions associated to the field: ACR – entrepreneurial, conventional, realist; ACS – entrepreneurial, conventional, social; CIA –conventional, investigative, entrepreneurial ; ASC – entrepreneurial, social, conventional; ISC –investigative, social, conventional; AIC –entrepreneurial, investigative, conventional.

International businesses is in expansion, but the field still remains an exclusivist one and the chance to employ comes from an equation with quite many variables. The lowest score (7 out of 27) register students enrolled in Management, which is quite surprising. These scores can be attributed, in our opinion, to the obscure significance of management term at the level of common sense and in the context of managerial deficit that regional economy is confronted with. The candidates apply to these specializations on the basis of some choices determined by external factors (parent's wish, diverse preconceptions regarding what they think "a manager is") and under the pressure of a subjective "mythology" tagged of many preconceptions.

Table nr.3. Data regarding the decisional capacity distribution according to the specializations

| Specialization | Decisional capacity | | | | | Total |
|---|---------------------|------|--------|------|-----------|-------|
| | Very weak | Weak | Medium | Good | Very good | |
| International businesses | 4 | 5 | 13 | 5 | 1 | 28 |
| The economy of commerce, tourism and services | 3 | 6 | 19 | 4 | 2 | 34 |
| Accountancy and stock control informatics | 3 | 6 | 18 | 2 | 1 | 30 |
| Finances and banks | 8 | 7 | 15 | 4 | 0 | 34 |
| Management | 2 | 8 | 12 | 5 | 1 | 28 |
| Marketing | 5 | 8 | 13 | 7 | 2 | 35 |
| Total | 25 | 40 | 90 | 27 | 7 | 189 |

The statistical processing of results validates the hypothesis analysed. We can identify a significant correlation of high scores obtained by subjects at the decisional capacity test, and a relative correspondence on the area of correlations between the personal set of interests (determined on testing with the interests questionnaire - IEQ) respectively the option for a specialization or another. In a concrete way, students who have obtained high scores at the decisional capacity test (to be seen *Table nr.3. regarding the distribution of scores obtained at the decisional capacity tests according to specialisations*) are enrolled in specializations that imply interests and aptitudes in consonance with profession descriptors associated to the license that they are going to obtain.

Conclusions

As a conclusion, the difficulties encountered in the decisional process of subjects seem to be determined firstly by a series of irrational beliefs (myths) regarding the choice of a career and especially of the inconsistency of information about themselves or about opportunities. Obtaining some clear information and not contradictory about themselves can be partially realised with the help of specialists in human resources.

As the data processing reveals, a significant part of subjects obviously operate influenced by contextual pressures derived on one side from elements that regard economic realities (labour market offers important opportunities to fructify education in entrepreneurial field), as well as influenced by a common set of preconceptions. It persists the idea that economic studies offer an easy enclosure on the labour market and, often, individual option is determined by advices and incentives of some persons with presumptive authority (parents or close friends). Between those, dominates the preconceptions according to which occupation that they will have after graduating

from university will be in direct relation to the license obtained at graduation. But on the real market of workforce, the transition proved by the power of evidence that several diplomas does not automatically mean more competence. The tendency to value exclusively and in a narrow field academic education is a not adjusting belief: we must admit and take decisions remembering the fact that the relation between educational programmes and workforce market is not clearly and univocal determined in all fields.

Entrepreneurial occupations, as it results from our data are marked by a relative difference of phase between the university specialization chosen by the subject and the type of occupational interests that resulted after testing. These discrepancies, associated with a low decisional capacity take to choices influenced by conjuncture. The subject chooses the specialization ignoring the personal set of qualities and real interests as he is confronted with a severe need to maximise chances to occupy quickly a place on the an extremely restrictive labour market. The identification of a groove, the opportunism and the failure fear (specific data of an unfavourable economic context) determine the subjects to primary take into account external factors. The global economic crisis and post-transition effects that manifest on the Romanian labour market are arguments that allow interposing conjuncture options in the horizon of normality. Even more, the dynamics of workforce demand represent an important signal for higher economic education regarding the large dispersal of the fundamental field Economic Sciences in too many specializations, in our opinion, at level of BA programs in the conditions in which general economic education and interdisciplinary education seem to be more appropriate formulas in the context of the labour market dynamism.

The current paper presents the preliminary research results in a field that we discover and consider as being fascinating and of real importance and actuality. Our future approaches will be headed to define a set of proposals of measures, strategies, politics destined to higher economic education in order to facilitate the integration of young graduate economists on the workforce market and monitoring the entrepreneurial professional track of economist graduates.

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ANALYSIS OF ECONOMIC GAPS BETWEEN URBAN AND RURAL ROMANIAN AREAS

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In this paper the authors will perform a comparative analysis of the impact that the population residential areas have on the economic and social activity from Romania. Our analysis will be carried out for a time span of 10 years, between 2000 and 2009. The main purposes are to emphasize the economic gaps between the residential areas (urban and rural) and to identify the factors that determine these gaps.

The economic differences between rural and urban areas and their impact on the peoples' standard of living represent an important issue for international institutions like IFRC, UNICEF or OECD. Also, this topic represents a frequent subject in the economic literature from poor and developing countries. Studies conducted by Huong and Booth (2010), Alister, Alana and Ayele (2007), Chao, Zhidong and Mingxing (2008), Mateoc-Sîrb, Mateoc, Darvași and Mănescu (2008) or Sahn and Stifel (2002) are representative examples. Most of these papers focus on the living standards differences generated by the differences between income and expenditures between urban and rural areas.

To achieve our goals, we will use the statistical methods to analyze the data released by the National Institute of Statistics. We will try to find some correlations between the economic indicators – household incomes, value and structure of household expenditures, structure of household expenditures – the social indicators – residential area, education level, age and occupation. The highlight of the gaps between the rural and urban areas will be the main objective during this analysis.

We conclude that in Romania there are substantial differences between rural and urban areas. The income differences are determining different consumption patterns between rural and urban persons. In rural areas, the population is spending less in all goods and services aspect that reduce their standard of living. Anyway, the results obtained are the subject of at least two possible limits. The fact that the data series are too short may affect the results we have obtained. Also, the economic gaps analyzed represent an average for the whole country, what means that in some regions these differences may be even higher.

Keywords: economic gaps, households' incomes, households' expenditures, consumption, social indicators

JEL classification: E21, E24

Introduction

Since 2000, the macroeconomic evolutions led to an increase in the level of income per capita. Unfortunately, the differences between rural and urban area continue to be high. In Romania the population below the poverty line is about 15%, the level of rural poverty being double than the level of urban poverty. More than that, “75 per cent of poor children live in rural areas, where the poverty risk is three times higher than for children living in urban areas. Moreover, one third of these poor children live in agricultural families, with a poverty ratio seven times higher than for children living in families with at least one employee” (IFRC 2010:1). The problem of widening disparities between regions in the case of Romania is also identified by UNICEF.

The gap between rural and urban area is a concern for the European Union policy, because rural areas must exploit their potential or risk falling further behind urban areas (OECD). Member States can use their rural development programs to deliver the priorities of knowledge transfer, modernization, innovation and quality in the food chain, investment in human capital and the creation of employment opportunities (Programul Național de Dezvoltare Rurală, 2007 – 2013). The Transnational Co-operation Programme for a European area in transition on the way to integration "South East Europe (SEE)" 2007-2013 under the European Territorial Cooperation is significant for the regional disparities in terms of economic power, innovation, competitiveness and accessibility between urban areas and rural areas.

For Romania, within the "Operational Programme Increase of Economic Competitiveness" Programme under Convergence objective co-funded by European Regional Development Fund (ERDF), the general objective is the increase of Romanian companies' productivity, in compliance with the principles of sustainable development, and reducing the disparities between rural and urban areas.

Through the Millennium Development Goals are eradicate extreme poverty and hunger, achieve universal primary education, ensure an environmental sustainability by reducing discrepancies between rural and urban areas (UNDP).

The paper is structured as follows: the literature review chapter presents the results obtained in some representative papers on this subject, in the methodology we describe the analysis and the data used in the study, while the part with results and discussions enhances the results we obtained during our analysis.

Literature review

Using data from Household Living Standard Survey, most of articles are presenting analysis of significant urban-rural discrepancies in poor countries.

In Vietnam, the economic differences between rural and urban areas have increased dramatically from 1993 to 1998, and peaked in 2002 before reducing slightly in 2004 and significantly in 2006. The urban-rural gap increases across the expenditure distribution, the components of expenditure. Also, the differences are in education, household demographic structure, industrial structure and related returns (Thu Le, Booth 2010: 8-14).

In the study "Urban-rural inequality in Africa", the authors measure inequalities in African countries, and determine the extent to which these inequalities are a consequence of discrepancies between urban and rural areas (Sahn and Stifel 2002:12-17). The analysis focuses on living standards, the asset index, education and health. The conclusion is that the living standards in rural areas lag far behind those in urban areas. The gaps between urban and rural areas are in fact dramatic spatial differences.

The paper "An empirical research of urbanization and urban-rural gap in China: 1952-2005" presents two important problems of urban-rural relationship in China nowadays: the accelerated urbanization process and an enlarged urban-rural gap. The researchers emphasize the urban-rural income gap. There is an intensively positive correlation between urbanization and urban-rural consumption gap. The rapid urbanization results in the increase of urban-rural inequalities (Chao, Zhidong and Mingxing 2008: 404-406).

"The urban-rural divide: Myth or Reality?", a study of teachers from Great Britain presents different types of deprivation, measures of deprivation and an analysis of why urban people are more deprived than rural people (Alister, Alana and Ayele 2007:16-19).

In the paper "A study on life quality in the rural area" the authors argued with the idea that in the developed economies there is a trend to remove differences between rural and urban and starting from these premises the authors are making an analysis of the life quality in the Romanian rural area in 2001-2007. The conclusion is that in Romania there is still a major discrepancy between rural and urban which is not beneficial for the Romanian rural area (Mateoc-Sîrb, Mateoc, Șeulean, Darvași and Mănescu 2008:118-121).

Professor Maria Vincze shows that one disadvantage of rural development in Romania is the lack of horizontal link between communes, difficult collaboration, connections between cities and unbalanced surroundings areas (Vincze 2000:7).

Methodology

In order to achieve our goal, we will focus our analysis on the following differences between rural and urban areas:

- the endowment with durable goods
- the level and structure of households' incomes and expenditures
- the structure of consumption.

The endowment with durable goods will be evaluated using a qualitative scale. We will take in consideration eleven durable goods: washing machine (automatic or no), TV (white-black or color), computer, phone (fix and mobile), refrigerator, stove, fridge, vacuum cleaner, stereo system, car and freezer. The index of endowment with durable goods was constructed using a weighted mean between the weight of each durable goods and the share of households that own these goods (out of 100 households). The value obtained will show the average endowment level with durable goods. The lowest value may be zero – which means the households do not have durable goods at all -, while the highest value may be 100 – which means that all households have all the eleven durable goods taken in consideration.

The analysis of incomes and expenditures will be realized using real values. The data series have been deflated by the inflation values, all the data (incomes and expenditures) being expressed in the prices of year 2000. Thus, the time series will reflect the real evolution of incomes and expenditures, an evolution in a situation of constant prices. The influence of other factors on incomes and expenditures evolutions was determinate using regression equations.

The quantification of educational level for the head of household is realized using a scale from 1 to 3. If the value obtained is near to 1, it means that the majority of households' heads have primary educational level; if the value is near to 2, it means that the majority of households' heads have secondary educational level; if the value is near to 3, it means that the majority of households' heads have higher educational level.

The measurement of consumption structure is realized using two types of data. In the case of agricultural products we have used the monthly quantities consumed by households (measured in kilos, liters or pieces), while in the case of services we have utilized the average monthly expenditures for each type of service. We considered more appropriate to use the quantities and not monthly values of expenditures for agricultural products in order to eliminate the prices impact. For the same reason, the monthly values of expenditures for services consumption were calculated in the prices of year 2000.

Results and discussions

Analyzing the endowment with durable goods in rural and urban areas we observed that the rural areas are less endowed than the urban areas. The index of endowment with durable goods (IEDG) has recorded high differences between rural and urban (as we can see in Figure 1), in 2009 the value of index for rural areas being approximately at the level of the index in 2001 for urban areas. Fortunately, the gap between urban and rural is decreasing slowly from 20.5 in 2001 to 17.7 points in 2009.

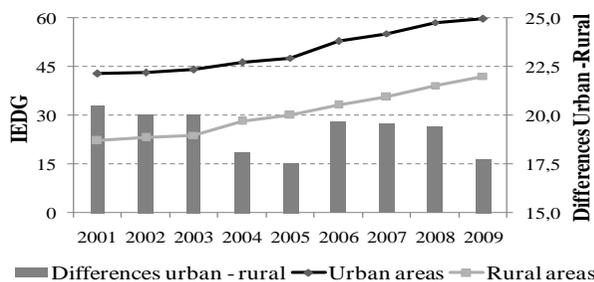


Fig. 1. Evolution of endowment with durable goods

Source: NIS and authors' calculations

Analytically, the highest differences are in the case of automatic washing machines - in 2009, 79.8% out of urban households owned automatic washing machines, while only 28.8% out of rural households had an automatic washing machine - and vacuum cleaner - in 2009, 81.2% out of urban households and only 36.4% out of rural households owned a vacuum cleaner (NIS).

Even if the bathroom and the restroom are not durable goods, in the analysis of households' endowment we consider appropriate to analyze their situation. Unfortunately, the gaps between urban and rural are very big in this case also. As we can see in Fig. 2, the existence of bathroom, shower or restroom inside the house is normal in the urban areas, while in the rural areas the usual aspect is that these facilities to be outside the house.

The second analysis is related to the households' incomes and expenditures. As we expected, the level of incomes in the urban areas is higher than in rural areas. The differences are even much higher if we separate the incomes in financial and material revenues. Due to the fact that between 30% - 45% out of total incomes in rural areas are in a material (natural) form, the gap in the financial incomes are even much higher: during the time span 2000 - 2009, the highest differences between financial incomes in urban as reported to rural areas was recorded in 2009, 402 lei (in the prices of year 2000. The corresponding value in the prices of year 2009 is 1039,8 lei).

The study of incomes reveals another conclusion: as income per capita grows, the disparity between urban and rural incomes increases (as we can see on the Fig. 3) - from 76.2 lei in 2000 to 270.1 lei in 2009 for total incomes, or from 151.6 lei in 2000 to 402 lei in 2009 for the financial incomes. In other words, *the economic growth recorded by our country since 2000 instead of reducing the disparities between rural and urban incomes, it has grown them.*

An explanation for the income gap is represented by the differences in the educational level. The educational level in the rural areas is much lower than the educational level in the urban areas. In the rural areas the majority of households' heads have primary or secondary educational level, while in the urban areas the majority of households' heads have secondary or higher educational levels. Testing the correlation between households' incomes and the educational level, we deduced that there is a statistically significant relationship between these two variables at the 99% confidence level. The equation (1) expresses the fitted model:

$$HI = 0,00338317 \cdot Ed^{18,504} \quad (1)$$

where: HI - household's income, Ed - educational level. Therefore, every time the educational level of the household's head will increase by 1%, the household's income will increase by 18,504%. In conclusion, the gap in the educational level between rural and urban represents a reason for the incomes disparities.

As in the case of incomes, the level of expenditures is higher in the urban than rural households. In the Fig. 4 we can see the evolution of expenditures and we deduce that the disparities between urban and rural increase during the time. The differences are even much higher if we separate the expenditures in financial and material. Due to the fact that between 30% - 46% out of total

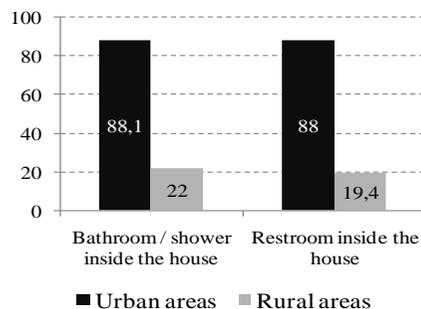


Fig. 2. The share of households by utility equipment in 2009

Source: NIS and authors' calculations

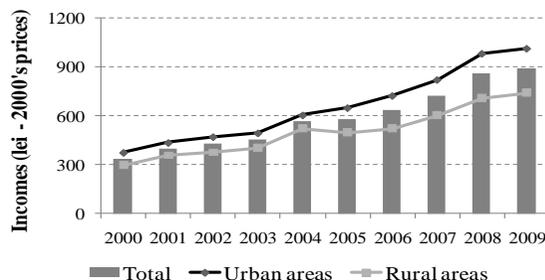


Fig. 3. Evolution of households' incomes

Source: NIS and authors' calculations

expenditures in rural areas represents goods and services produced in the household (in urban areas the share of these goods is maximum 10%), the gap in the financial expenditures are even much higher: during the time span 2000 – 2009, the highest differences in real terms between financial expenditures in urban as reported to rural areas was recorded in 2008, 358 lei (in the prices of year 2000. In the prices of 2008, the difference is 884,3 lei).

The disparity between expenditures in urban and rural areas is the result of incomes gaps. Testing the correlation between households' expenditures and incomes, we deduced that there is a statistically significant relationship between these two variables at the 99% confidence level. The equation (2) expresses the fitted model:

$$E = 75,0824 + 0,811866 \cdot I \quad (2)$$

where: E – household's expenditure, I – household's income. Then, every time the households 'incomes will increase by 100 lei, the households' expenditures will increase by 81,1866 lei ($R^2 = 99,7574\%$).

Before proceeding to analyze the structure of expenditures, we will study the extent to which household can cover their current expenditures. The data shows us that there is no significant difference between urban and rural regarding this aspect. In general, in rural areas it is a little more difficult than in urban areas to cover the current expenditures, but the values are approximately the same. Considering the major differences in incomes and expenditures between rural and urban, the similarity in perceptions regarding the cover of current expenditures make us believe that rural households are deprived of certain goods and services.

The differences in the structure of consumption are very clear. In rural areas, the food consumption represents more than 50% out of total consumption, while the consumption of services hardly reaches to 20%. On the other side, in urban areas in the last years, the food consumption was around 40%, while the consumption of services reached 30% out of total consumption. In general, a higher share for food consumption represents a sign of low living standards. The Fig. 5 shows us that the rural households are especially deprived of services. In the majority of cases, the economic data have demonstrated that an increase in the incomes reduced the share of food consumption in total expenditures. In the last 5 years, a slowly reduction in the share of food consumption for rural areas can be observed, reduction which in our opinion was generated by the increase of incomes.

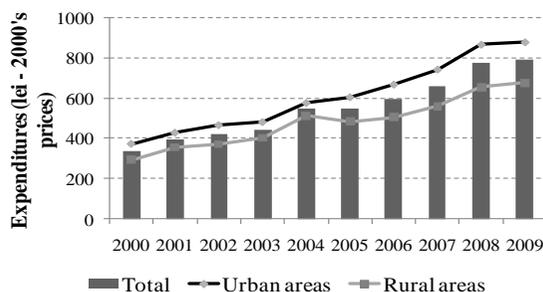


Fig. 4. Evolution of household's expenditures
Source: NIS and authors' calculations

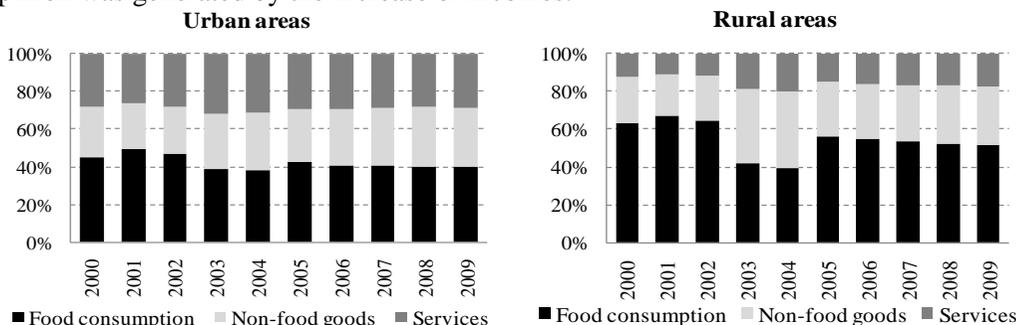


Fig. 5. The structure of consumption

Unfortunately, analyzing of which goods and services rural households are deprived, we find the highest differences in some of the most important services: health, education, cultural and recreational services. In their case the differences become more accentuated every year affecting

the quality of human resource. We consider they have a negative long term impact on the development of rural areas, their evolution accentuating the gaps between rural and urban areas. Analyzing the food consumption we have discovered also some differences between rural and urban areas. The first difference is that in rural areas the consumption of “inferior goods” - bread, corn, potatoes - is higher than in urban areas. In rural areas, the consumption of bread and corn is by 1 kilo/person/month more than in urban areas, while in urban areas the consumption of meat and fruits is 1 kilo/person/month higher than in rural areas.

The consumption of fruits records an interesting situation. In general, in rural areas, the consumption of fruits does not necessitate any financial expenses, while in the urban areas the majority of fruits consumed are bought from markets. In spite of that, the urban households are consuming more fruits than rural households. Unfortunately the opposite situation is observed in the case of alcoholic drinks: in rural areas the consumption of alcoholic drinks per persons is higher than in urban areas. Milk consumption has another interesting evolution. The rural households are considering milk as an “inferior good”, while for the urban households the milk is a “normal good”. A possible explanation is the fact that in the rural areas milk represents a common agricultural product consumed by households, while in urban area milk is less consumed.

Conclusions

As a result of our analysis we consider that in the Romania of year 2009 there are significant differences between urban and rural areas. First of all are the differences between the education level and consumption of educational and cultural services. These differences have a negative impact on the rural areas, the incomes gained by the rural households being considerably lower than the incomes obtained by urban families. As a result of income differences, the gaps in the expenditures between rural and urban households are increasing every year. We can see all this differences in the level of endowments with durable goods, in the structure of consumption and in the specific goods and services consumed.

The income differences determine the rural households to own and use less durable goods, to have the bathroom or the restroom outside the house in most of the cases, to pay for a holiday only occasionally, to spend less on health, personal care, education, water, sewerage, sanitation and utilities, to eat more bread, corn or drink more alcoholic beverages.

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THE FINANCIAL PERFORMANCE OF EUROPEAN COMPANIES: A COMPARATIVE APPROACH

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The present study empirically examines the financial performance of European companies and tries to identify the profitability differences that exist between: enterprises with same profile, economic sectors and between several countries from the European Union. Based on data of the year 2009, the newest available on the BACH-ESD database, three financial performance main indicators are being calculated, namely: Return on Assets, Return on Equity and Net Margin. Results are discussed and compared with the ones obtained in former similar studies and some conclusions are drawn. The most performing sectors are found to be mining, quarrying, professional, scientific and technical activities, utilities and IT&C. The sectors that perform the worst are transport and storage, agriculture, accommodation and food service. As shown in other studies the most profitable and competitive companies in the sample belong to the Nederland, Belgium and Austria and the least profitable ones are situated in Italy and Portugal. As a complementary useful result of the study, the average values obtained for the three variables, in the various sectors considered, can be utilized for future comparisons, for assessing the financial performance of companies that belong to same sectors as those surveyed.

This paper is a dissemination of the results obtained by the author in the doctoral program “The financial performance of EU member states’ companies”, coordinator: Professor Carmen Corduneanu, PhD, carried out within West University of Timișoara, Romania, in the period October 2010- July 2012.

Keywords: financial performance, return on assets, return on equity, net margin, BACH-ESD database

JEL code: L20, L25

1. Introduction

From the perspective of companies and their owners, obtaining profit is the ultimate objective and the main driver of company activity. Profit can be considered the result of all efforts made and the incentive necessary for sustaining further activity. Financial performance highlights the efficiency with which firms transform their revenue into income that can be afterwards distributed to shareholders. This mostly makes the difference between companies that are winners and those who are defeated in market competition. Companies that are not profitable usually end up being taken over by other more profitable ones or go bankrupt. However in terms of society as a whole, a very high profitability can signal a lack of competition in the market. Thus, if the profits outweigh by far the efforts made, the risks assumed and the value of introduced innovations, they might be the result of a lack of competition in the market, situation that adversely affects consumers and the general welfare of society.

The positive effects of financial performance are very numerous. Besides generously rewarding shareholders, profitable companies attract investments, from both foreign and domestic investors, and enhance the development of the sector in which they activate and of the economy as a whole. Profitability encourages companies to employ people, pay salaries and product goods and services. Profitable companies are those who pay high taxes and transfer a share of their profits to governments and allow means of living for country population. Financial performance is, in the same time the result of a large variety of factors (Gruian, 2010) including: company productivity,

efficiency, effectiveness, performing management, proper corporate governance, innovation and other external factors like: macroeconomic, monetary, fiscal and sectoral conditions.

The present study tries to explore in terms of financial performance the differences between European sectors and countries. It will also identify the most profitable and unprofitable industries and analyze if there are common under-performing or over-performing sectors, or sectoral performances of different countries are complementary and one country excels where another fails to succeed. The research will start with a literature review; which will present results of similar studies and mostly utilized measures of financial performance. It will continue with the empirical assessment of variables. The obtained results will be discussed and some conclusions will be drawn.

2. Literature review

The competitiveness and financial performance of European companies are the subjects of numerous studies. Most of them are financed by the European Commission through its Enterprise and Industry Directorate General. Studies are meant to highlight the past and present situation of microeconomic performance in the EU and identify the factors that influenced the way competitiveness and profitability evolved in the past period.

A recent study (European Commission, 2009) analyses the competitiveness and profitability of EU companies considering a sectoral approach. It also identifies the main sectoral drivers of performance. The period considered is 1995-2005 and the data used in the profitability analysis is from Bank for the Accounts of Companies Harmonized (BACH) and from the US Department of Commerce, Bureau of Economic Analysis. The study also verifies the similarities and differences between the US and the EU companies. A slight difference between UE and US profitability, measured by Return on Assets and Net Margin can be observed in the considered period. The EU recorded a higher profitability growth due to the dramatic lowering of corporate tax rates across the region, whereas the US saw no significant reduction in its corporate tax rate (European Commission, 2009: 18).

Authors of the same study consider that among the EU countries there is a wide disparity between the most profitable sectors and the least profitable ones. The best performing sectors are business services, utilities, mining and quarrying and other commodity based sectors and some manufacturing industries, especially the manufacture of coke, refined petroleum and nuclear fuel and the manufacture of pulp, paper and paper products which add value to the commodity producing industries of mining and forestry. At the other end of the hierarchy we can find land and air transportation, activities that had a negative average of net margin in the considered period. Other low performing industries are several manufacturing sectors, wholesale and retail trade, constructions, etc.

The most widely used indicators of financial performance are Return on Assets, Return on Equity, and Net Margin. Return on assets (ROA) is one of the most utilized financial ratios. It evaluates the efficiency with which the assets are utilized. ROA is calculated as the ratio between net profit and company's assets, on the basis of Balance sheet information (Achim, 2010: 353).

Return on Equity (ROE) shows the efficiency with which the capital brought by investors is utilized for obtaining profit. This is also an often utilized profitability indicator utilized especially by shareholders and also named financial profitability (Colasse, 2009: 72). It is calculated by dividing the net result of the activity to company's equity. This indicator is important especially for investors, because it helps them compare company's results with those of competitors.

Net Margin (NM) or profit margin is a profitability measure that shows company's ability to transform revenue into profit and control production costs. It assesses the effectiveness with which profit is generated from the revenue through the value add management process (Bull, 2008: 24). NM is a very good indicator for comparing companies in the same industry and is sometimes used to compare business sectors to observe the differences of profitability. Yet the value of the NM can differ very much depending on company's profile. Thus companies that

belong to the wholesale industry can have net margins under 5% and be very profitable because of their turnover. On the other hand companies that belong to services, information technology or other highly innovative sectors, can have a net margin of over 25-30%.

3. Research methodology

3.1. Sample and data selection

For the comparative study we will use data from BACH-ESD, the European database of aggregate information on non-financial corporations. Data is provided by the Central Balance-Sheet Data Offices from eight countries of the European Union (EU): Austria (AT), Belgium (BE), France (FR), Germany (DE), Italy (IT), Nederland, (NL), Portugal (PT) and Spain (ES).

The sample provided by the BACH-ESD database contains a relatively large number of companies from each of the participating countries, thus the data provided has a high level of confidence and quality. The database has been used recently by many other authors (e.g. European Commission, 2009: 134; Busuioc, 2009 and others). The data is also rigorously organized and can be broken into categories including 13 private economic sectors according to the NACE rev. 2 statistical classification (classes A-N), excluding the financial intermediation class (K). The database also provides a number of 28 rates from companies' annual accounts that refer to financial structure, cash-flow and profitability. For the present financial performance comparative study we considered data from the year 2009, the newest available in the database. We compare all eight countries and all 13 business sectors. We also consider all the companies regardless of size.

3.2. Variable definition

The variables analyzed in the present comparative study are: Return on Assets (ROA), Return on Equity (ROE) and Net Margin (NM).

1. $ROE = \text{Profit or loss of the year} / \text{Capital and reserves}$

The ROE indicator corresponds to Rate no. 12, found in the Operating costs, earning and profitability rates section of the BACH-ESD and does not require additional calculations.

2. $ROA = \text{Profit or loss of the year} / \text{Total Assets}$

The ROA rate is calculated in the present study by multiplying Rate no. 12 (ROE) by Rate no. 22 of the BACH-ESD database, which is the rate between Capital & reserves and Total Assets.

3. $NM = \text{Profit or loss of the year} / \text{Net turnover}$

NM is obtained by dividing the ROA indicator, calculated above to Rate no. 16 in the Operating costs, earning and profitability rates section of the database (Net turnover / Total Assets).

4. Variable calculation and comparative analysis

The calculated variables are presented in Table 1 (ROA), Table 2 (ROE) and Table 3 (NM). Average values presented on the table margins are obtained as a weighted average (W.A.) of the three indicators presented for countries and sectors, considering the size of the Value Added (VA) in each country and sector. Thus the profitability of larger sector has a more important impact on countries' economy average profitability than the impact of a smaller one. The same rule stands for the average profitability of business sectors.

4.1. Return on assets

Table 1: Return on Assets, year 2009

| NACE CODE | NAME OF NACE SECTION | COUNTRY | | | | | | | | |
|-----------|--|--------------|---------------|--------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | | AT | BE | DE | ES | FR | IT | NL | PT | W.A. |
| A | Agriculture, forestry and fishing | 1,36% | 1,07% | n.a. | 0,12% | 1,19% | 0,71% | 2,11% | -0,56% | 1,07% |
| B | Mining and quarrying | 6,30% | 10,22% | 0,45% | 4,22% | 10,69% | 5,03% | 26,89% | 3,08% | 15,32% |
| C | Manufacturing | 6,22% | 5,47% | 1,24% | 0,31% | 1,68% | 0,28% | 3,92% | 0,83% | 1,74% |
| D | Electricity, gas, steam and air conditioning supply | 4,13% | 2,81% | 6,37% | 4,94% | 2,58% | 4,43% | 2,58% | 3,37% | 4,38% |
| E | Water supply; sewerage, waste management & remediation act. | 1,72% | 0,81% | 3,13% | 3,17% | 2,66% | 1,18% | 0,27% | 1,25% | 2,23% |
| F | Construction | 4,75% | 2,94% | 3,31% | -0,23% | 4,28% | 0,98% | 4,23% | 0,19% | 3,04% |
| G | Wholesale & Retail trade; repair of motor vehic. & motorcyc. | 4,05% | 3,48% | 4,99% | 3,64% | 3,67% | 0,75% | 4,69% | 2,17% | 3,48% |
| H | Transportation and storage | -1,92% | 1,08% | 0,99% | 0,35% | 0,70% | 0,90% | 1,12% | -0,71% | 0,63% |
| I | Accommodation and food service activities | 2,08% | 1,19% | -1,04% | -0,73% | 2,71% | -0,90% | 3,72% | -1,65% | 1,18% |
| J | Information and communication | 5,06% | 4,09% | 2,25% | 9,10% | 5,50% | 1,33% | 4,18% | 4,43% | 4,13% |
| L | Real estate activities | 0,47% | 1,42% | 1,45% | -0,24% | 2,18% | 0,81% | n.a. | 0,35% | 1,61% |
| M | Professional, scientific and technical activities | 7,72% | 2,68% | 4,11% | 6,39% | 3,93% | 1,33% | 9,10% | 3,20% | 4,47% |
| N | Administrative and support service activities | 2,13% | 1,31% | 3,55% | 1,88% | 1,65% | 0,51% | 2,07% | 1,95% | 1,66% |
| | W.A. | 3,87% | 3,45% | 2,37% | 2,83% | 2,80% | 0,91% | 5,34% | 1,41% | 2,68% |

Source: BACH-ESD database, authors' calculations

We analyze the ROA indicator first because it is the most appropriate for financial performance measurement. Unlike ROE, ROA considers all capital invested in the business, regardless its provenience. In the present case the value of ROA indicator varies from a minimum of -1.92% in the transportation and storage sector of the Austrian economy to a maximum of 26.89% in the mining and quarrying sector of the Dutch economy. Its values vary across countries and industries. The best values for ROA belongs mostly to the mining and quarrying sector, which had the best financial performance in the context of the economic and financial crisis that generated a strong growth of the raw metals demand and price. Thus The Nederland and other European countries like Belgium, Austria and Italy achieved a very high performance in the mining sector during the year 2009 due to these international conjunctures.

The second best performing sector was the one including professional, scientific and technical activities, which had an average ROA of 4.47% on overall. Best performing companies of this sector belong to The Nederland, Austria (which performed best in this sector) and Spain. Other sectors of the European with good results are utilities, information, communications and commerce. Average value of ROA for the companies included in the sample is 2.68%. This is a relatively low figure but it is acceptable considering the effects of the economic and financial crisis. We can also note that some business sectors were more affected by the crisis than others. The ones that had the lowest profitability are transportation and storage, agriculture, hotels and restaurants, real estate and even manufacturing. If we consider the overall performance of countries we can see that the most competitive ones managed to maintain the highest profitability levels. These countries are The Nederland, Austria and Belgium. Other countries with a lower level of competitiveness suffered dramatically low levels of financial performance (e.g. Italy and Portugal).

4.2. Return on Equity

Table 2: Return on Equity, year 2009

| NACE CODE | NAME OF NACE SECTION | COUNTRY | | | | | | | | |
|-----------|--|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|
| | | AT | BE | DE | ES | FR | IT | NL | PT | W.A. |
| A | Agriculture, forestry and fishing | 3,20% | 3,52% | n.a. | 0,25% | 1,74% | 2,02% | 6,36% | -1,71% | 2,47% |
| B | Mining and quarrying | 25,25% | 17,06% | 2,26% | 14,15% | 17,98% | 12,40% | 171,61% | 8,01% | 79,01% |
| C | Manufacturing | 17,25% | 11,18% | 4,18% | 0,82% | 4,75% | 0,80% | 6,68% | 2,37% | 4,53% |
| D | Electricity, gas, steam and air conditioning supply | 10,09% | 7,17% | 21,38% | 11,79% | 8,57% | 11,09% | 7,29% | 11,27% | 12,94% |
| | Water supply; sewerage, waste management & remediation act. | 6,47% | 2,10% | 9,18% | 9,06% | 9,76% | 3,97% | 0,99% | 6,26% | 7,23% |
| F | Construction | 21,71% | 5,63% | 20,77% | -1,16% | 17,71% | 4,09% | 13,38% | 0,93% | 12,19% |
| G | Wholesale & Retail trade; repair of motor vehic. & motorcyc. | 13,29% | 8,64% | 16,10% | 9,71% | 11,09% | 2,88% | 11,85% | 6,92% | 10,28% |
| H | Transportation and storage | -6,19% | 2,81% | 3,52% | 0,74% | 2,67% | 2,84% | 2,37% | -5,67% | 1,86% |
| I | Accommodation and food service activities | 11,86% | 3,23% | -3,43% | -1,89% | 8,32% | -2,60% | 9,30% | -5,75% | 3,59% |
| J | Information and communication | 13,15% | 10,54% | 4,82% | 29,57% | 15,79% | 4,67% | 17,93% | 12,43% | 12,82% |
| L | Real estate activities | 1,21% | 3,65% | 4,59% | -0,52% | 6,25% | 1,88% | n.a. | 1,35% | 4,73% |
| M | Professional, scientific and technical activities | 21,95% | 3,95% | 13,79% | 14,18% | 8,54% | 5,56% | 17,97% | 4,99% | 9,94% |
| N | Administrative and support service activities | 6,64% | 3,60% | 16,25% | 6,74% | 5,76% | 2,00% | 6,14% | 8,62% | 5,87% |
| | Weighted average | 11,79% | 7,63% | 8,01% | 8,28% | 8,46% | 2,85% | 19,17% | 3,90% | 8,32% |

Source: BACH-ESD database, authors' calculations

The second indicator considered for the assessment of financial performance is Return on Equity. Even if we present it to be the second indicator of profitability, it is of most importance to shareholders because they are interested in how well company management has used their funds to make profit, and not directly interested of how efficiently managers used the borrowed capital. Values obtained for the ROE deepen the differences between the companies included in the sample. From a sectoral point of view the mining and quarrying industry leads by far with a huge profitability average of almost 80%. This is strongly influenced by the favorable international conjuncture of the mining industry and the high competitiveness of the Dutch mining sector. We do not exclude the fact that these results can be influenced by the variable sample of companies provided by the BACH-ESD database. Yet all European companies in the mining sector obtained very good results in terms of profitability, with the exception of Germany.

Consequent with the ROA results European companies had good financial results in terms of ROE in the utilities sector, information and communications and recorded low performances in transport and storage, agriculture and hotels and restaurants. A notable difference is observed in the construction sector, where the equity invested by shareholders represents a relatively low proportion in the total investment. This transforms the 3.04% economic profitability in a higher financial profitability of 12.19% for investors that activated in this sector.

Considering the overall countries' financial performance measured by ROE The Nederland and Austria are still the first two countries. At the other end Italy and Portugal are the worst performers with a ROE rate well below the 8.32% average.

4.3. Net margin

Table 3: Net Margin, year 2009

| NACE CODE | NAME OF NACE SECTION | COUNTRY | | | | | | | | |
|-----------|--|--------------|---------------|--------|----------------|---------------|--------------|---------------|---------------|---------------|
| | | AT | BE | DE | ES | FR | IT | NL | PT | W.A. |
| A | Agriculture, forestry and fishing | 2,02% | 1,11% | n.a. | 0,18% | 2,76% | 0,99% | 2,90% | -1,58% | 1,82% |
| B | Mining and quarrying | 3,91% | 70,84% | 1,12% | 50,58% | 16,31% | 9,48% | 13,44% | 6,33% | 12,33% |
| C | Manufacturing | 4,99% | 8,42% | 1,14% | 0,38% | 1,35% | 0,30% | 8,98% | 0,98% | 2,11% |
| D | Electricity, gas, steam and air conditioning supply | 4,43% | 5,89% | 4,46% | 14,07% | 8,35% | 5,57% | 5,15% | 14,35% | 7,32% |
| E | Water supply; sewerage, waste management & remediation act. | 2,88% | 3,25% | 8,08% | 10,42% | 4,51% | 2,61% | 0,68% | 5,54% | 5,53% |
| F | Construction | 3,39% | 4,97% | 2,91% | -0,54% | 3,85% | 1,43% | 3,24% | 0,43% | 2,84% |
| G | Wholesale & Retail trade; repair of motor vehic. & motorcyc. | 2,09% | 2,07% | 1,48% | 2,36% | 1,57% | 0,46% | 3,66% | 1,67% | 1,77% |
| H | Transportation and storage | -2,18% | 1,81% | 1,10% | 1,41% | 1,14% | 3,13% | 2,34% | -2,22% | 1,42% |
| I | Accommodation and food service activities | 2,95% | 2,60% | -0,49% | -1,83% | 2,31% | -1,55% | 5,12% | -3,47% | 0,95% |
| J | Information and communication | 4,36% | 8,13% | 5,46% | 12,98% | 6,67% | 2,86% | 9,00% | 7,19% | 6,80% |
| L | Real estate activities | 4,00% | 19,67% | 8,89% | -2,17% | 15,09% | 1,86% | n.a. | 3,18% | 11,55% |
| M | Professional, scientific and technical activities | 6,60% | 37,63% | 3,37% | 136,44% | 18,74% | 1,30% | 12,48% | 16,09% | 16,47% |
| N | Administrative and support service activities | 1,66% | 2,24% | 2,98% | 2,13% | 1,57% | 0,59% | 2,14% | 2,56% | 1,75% |
| | Weighted average | 3,09% | 7,80% | 2,35% | 4,37% | 4,14% | 1,45% | 6,44% | 2,91% | 3,79% |

Source: BACH-ESD database, author's calculations

In terms of Net Margin the hierarchy of countries and sectors changes slightly. The sector that brings the highest profits compared to its turnover is the one that refers to professional, scientific and technical activities. Although profits in this sector represent a smaller proportion of companies' assets and equity, they represent a higher proportion of turnover. Thus if the turnover would be higher, this sector would have the biggest potential. The mining and quarrying sector also has a high profit margin, but this is still a modest figure compared to the very high performances in terms of ROA and ROE. This proved that the high performances of this sector were strongly based on the high turnover achieved. High performances can also be encountered in the real estate activities, another service sector that produces higher profits compared to turnover. Other performing industries are utilities, information and communications. Poorest results were obtained in the hotels and restaurants services sector, transportation, wholesale, retail trade and even manufacturing, sectors mostly influenced by the economic and financial crisis. If we consider the countries included in the sample, the best results in terms of NM were obtained by Belgium, followed closely by The Nederland. Poorest performing countries, consequent with previous results obtained in this study, are Italy and Portugal.

For a better understanding of study results we will also present them as diagrams (Figures 1, 2).

Figure 1: The financial performance of European sectors

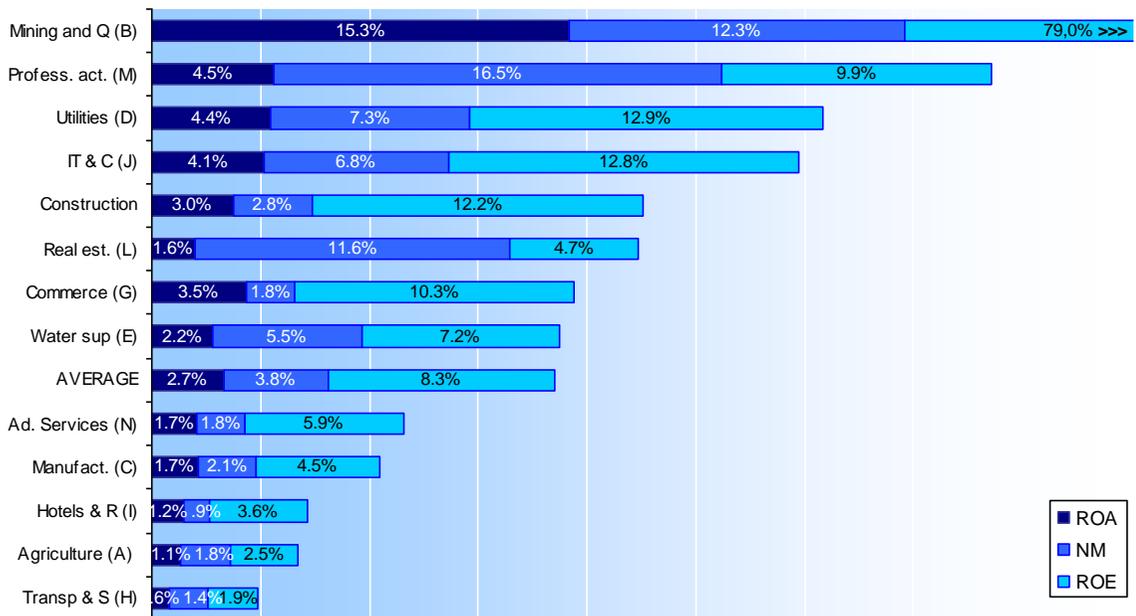
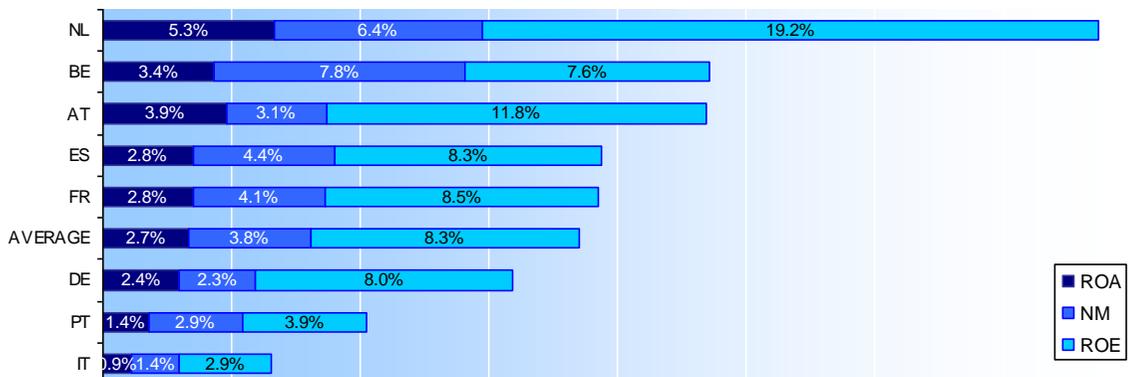


Figure 2: The financial performance of European countries



5. Conclusions, limitations and future research

Financial performance can be measured in various ways. In the present study we assessed it at a mezzo and macroeconomic level based on data from microeconomic level, more precisely, from the harmonized annual financial statements of a sample of European companies.

Several important differences have been identified between the thirteen non-financial economic sectors and between the eight developed countries considered. This article shows the strengths and weaknesses of the European economy. Thus as we can clearly see from the graphs above, the most performing sectors are mining and quarrying; professional, scientific and technical activities, utilities and IT&C. The sectors that perform the worst are transport and storage, agriculture, accommodation and food service activities. As shown in other studies the most profitable and competitive companies in the sample belong to the Nederland, Belgium and Austria and the least profitable ones are situated in Italy and Portugal. Yet the results refer to the average values recorded by countries' companies. One should consider that there are performing and underperforming companies in every country but averages values for the considered samples are the ones presented above.

Results can also be interpreted in the sense that some industries are more vulnerable in times of economic and financial crisis (transport and storage, agriculture, accommodation and food

services, manufacturing). Moreover countries that are less competitive suffer stronger overall decreases in economy due to economic crises. These conclusions are also in line with other research on the same topic.

Present study also offers average national and sectoral rates for profitability measurement and comparison in the year 2009. These values can be used as reference points for other studies that have the similar topics.

This study also has some limitations. The accuracy and relevance of the results are limited to the quality and exhaustiveness of the data provided by the BACH-ESD database. More details about this database can be obtained from the internet link in the bibliography. Other limitations refer to the short period considered, of only one year and the influence of economic and financial conditions in the year considered. Future studies could consider a larger number of countries, a longer period of time and a more detailed classification of the economic activities. They could also try to examine in depth the factors that caused the performance differences.

This paper is a dissemination of the results obtained by the author in the doctoral program “The financial performance of EU member states’ companies”, coordinator: Professor Carmen Corduneanu, PhD, carried out within West University of Timișoara, Romania, in the period October 2010- July 2012.

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A POSSIBLE MODEL FOR ANALYSING THE PRACTICAL NEEDS OF STUDENTS IN ECONOMICS-PRACTEAM MODEL

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Data presented in this paper are part of the activities of the PRACTeam project "Practice of students in economics. Inter-regional partnership between universities and the labor market" project co-financed by European Social Fund Operational Programme Human Resources Development 2007-2013 - "Invest in people! "Contract no. POSDRU/90/2.1/S/64150. Identifying the needs of practice activity had as research tools: focus group and questionnaires. Research subjects were third-year students who have completed the practical work from all three partners: Oradea, Timisoara and Suceava. The results obtained in this research were the basis for discussions during the workshop PRACTeam between student representatives, tutors and practice coordinators. Based on the central elements and highlighted problems were developed materials for both tutors and students. The specific objectives of identifying needs for practical training were: to determine administrative and organizational elements deemed most appropriate for students in terms of practical training, identifying methods of communication between all stakeholders (students, coordinators and tutors of practice) the most suitable in terms of training students, identifying the strengths and weaknesses in relation to the conduct of practical training. Presentation integrates the results with emphasis on elements that can be improved, structured around the following areas: evaluation of the internship, access into the practice, conduct practical work (satisfaction with the relationship with the tutor, satisfaction with relationship with practice coordinator, student satisfaction with the activity, satisfaction with knowledge, skills acquired in satisfaction with the practice, satisfaction with communication with colleagues) positive, negative aspects, students' views on improving practice activity.

Keywords: needs analyses, students, practice coordinators, tutors, practice activity.

JEL Classification: M53, M54

Introduction

According to the law "practice is the work of students, in accordance with the curriculum, which aims to verify the applicability of their theoretical knowledge learned in the training program."

Increase skill practice and increase the students' work skills leads to better employability of the labor market, with positive effects on employment, labor productivity and wage levels. This is possible by adapting the needs of students to both supply and needs of labor market.

According to sociological theories, identifying needs involves collecting data on those in need, their environment, the problems faced and solutions to these problems. Needs analysis is part of needs with the needs assessment that involves synthesizing information obtained in the stage of identifying needs, setting priorities for the decider.

The data of this study were obtained by questionnaires and focus group and are the result of identifying the needs of students who have completed the practical training. The results from this needs assessment were the basis for discussions during the Workshop PRACTeam presented to the student representatives, tutors and practice coordinators. Based on the central problems and issues that emerged from this survey, practice materials for both tutors and students were developed.

Objectives

The specific objectives of identifying the needs for practical training were:

- Determination of the administrative and organization considered most appropriate for students in practical training,
- Identify methods of communication between all stakeholders (students, coordinators and tutors to practice) the most appropriate in terms of students in terms of practical training,
- Identify strengths and weaknesses regarding the conduct of practical training.

Identify needs of students on practical training was conducted by: Applying a third-year student questionnaire that followed the practice at each partner 3 focus groups with students in third year of study, one from each partner. The 627 questionnaires were applied and interpreted as follows: 194 in Oradea, 212 in Suceava and 221 in Timisoara. 3 focus groups were organized as follows: 9 students in Oradea, Suceava 14 students and 12 students in Timisoara.

Although data analysis and processing of focus groups revealed that positive elements do exceed the negative ones in terms of practical assessment activities from students, the presentation is focused mainly on elements that can be improved structured in the following directions:

Evaluation of the practice activity -Identified Problems

Regarding the assessment made by the students, the majority stated that it reflects the efforts and results achieved by students, but there were exceptions, which showed the best responses in focus groups conducted with students. The most important aspect in this regard was the work of the teacher coordinator in situations where students were happy, practice coordinators were described as "objective" and constantly monitored the work of students, working with the tutor from the company where students have completed the practice.

1. Working poor or lack of collaboration between practice coordinators and practice tutors.

"to be assessed correctly there must be collaboration with the practice coordinator" (student-Suceava P2); "nobody was interested in what and how we got the ratings firms. He put some questions without actually knowing what you did in the practice activity. I had colleagues who did not practice at all, did the project as required but did not practice. He did not actually practice. His work was like any theoretical project." (student P2-Suceava)

2. Low practice coordinators involvement in the monitoring the student activity: "Maybe teachers should call and check Since we oversee, the teacher receives a bonus for that, they should make a bit of interest if all received money from that." (student P1-Timisoara)

3. Severity and fairness of the practice coordinators and fairness in the evaluation process:

"I really did not seem right to me. Because the new area I had made a folder with a certain content. I scored a 10 and I did everything I had to do in that folder, and others who were not even a quarter of that file have taken all the same grade." (student-Univ. Oradea)

Access to practice unit

Access to practice facilities, reported by students participating in the focus group is made mainly by personal relationships: "My mother knew someone from the Carpathian Bank but could not take me there and then spoke to someone at the Romanian Bank." • Searching one: "I went to the bank that are in the area and I've got Banc Post card from them, was close to home and I went to ask them and I was accepted"

Carrying out practical work

Elements of communication-with peers, the coordinator, faculty tutor, networking, organization, administration, accumulation of knowledge, skills, strengths, weaknesses.

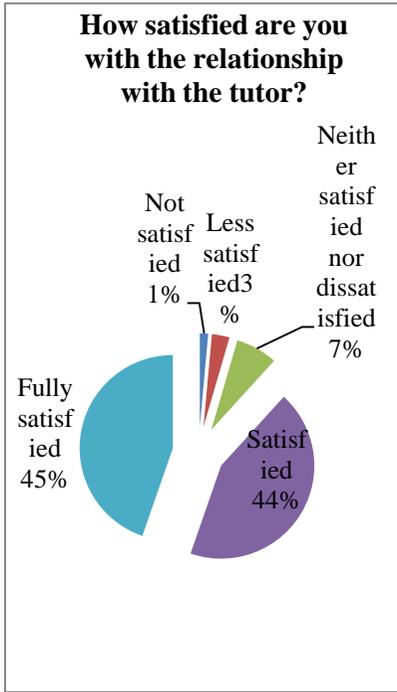


Fig.1. Satisfaction with the tutor relationship.....

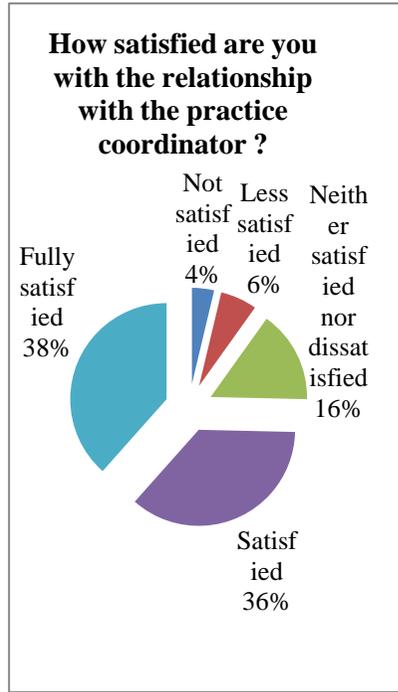


Fig.2. Satisfaction with the relationship with the coordinator of practice

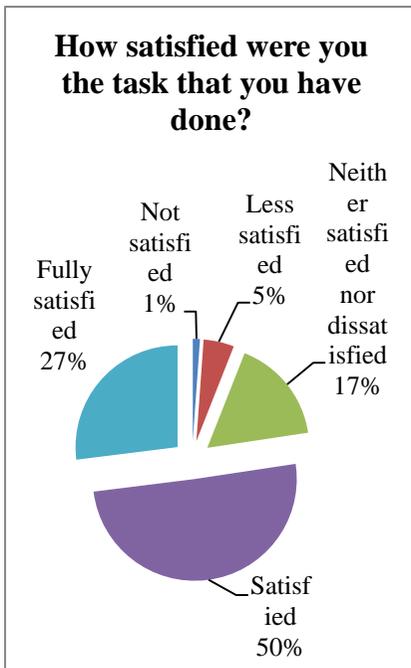


Fig.3. Satisfaction with work

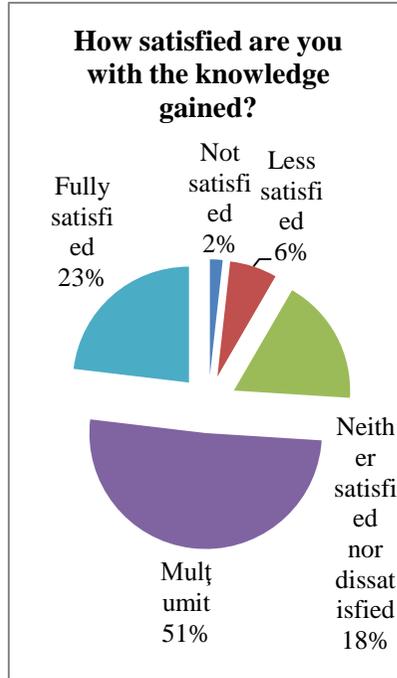


Fig.4. Satisfaction with knowledge gained

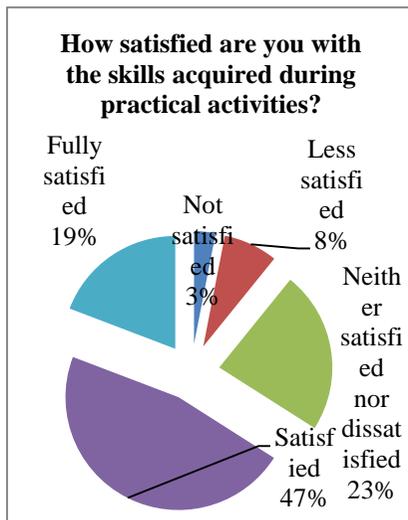


Fig.5. Satisfaction with the skills during practical activities

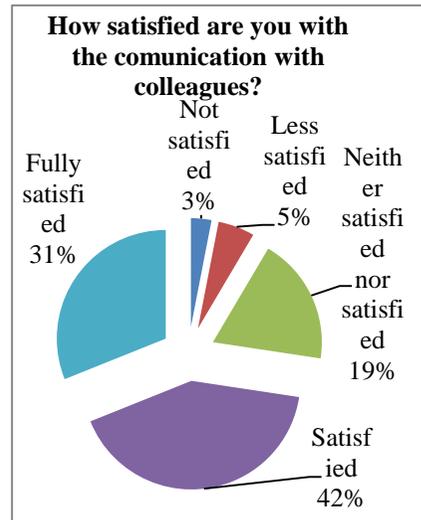


Fig.6. Satisfaction with the acquired communication with colleagues

Positive aspects The analysis of data on positive aspects, most responses were for knowledge / skills gained (321 responses) responsibilities (132 responses); Negative aspects In order of most responses to the negative aspects category: they did not given me too much responsibility (114 responses), the indifference from the employees (129 responses);

Opinions on improving students' practical work

1. Practice calendar so as not to overlap with the holidays. Practice period: in this sense the most comments were related to students unable to participate during the summer because they are working or wish to do so. There have been several recommendations are to be held within three weeks during the semester or one day a week throughout the semester.
2. Duration, the problem appears to be contradictory: too much time considering some students and others as insufficient for a good education.
3. Compensation or reimbursement for student: " (...) To work in a restaurant, simply take advantage of you, make you do all sorts of activities for which others get a lot of money and make you think that they do you a favor that they write a certificate at the end"(student P1-Timisoara).
4. Contacting companies - units of practice by faculty representatives: "I think that would help us a lot and faculty if they conclude some contracts between companies and faculty, a kind of collaboration. [...] Should be appointed and companies from one person to take care of us that handle our training, "(student P2-Suceava)
5. Targets and a work plan to the student: "Companies that get students to practice have developed programs, objectives so that students learn something from practice." (Student P2-Suceava)
6. In addition to the recommendations of students explicit mention one aspect that I consider particularly important in the organization of the practice, as shown in group discussions: student involvement and accountability to the work that was taken. The need for involvement / responsibility of students: "Q: And then what have to be changed in your opinion? A: The attitude of the student. If the student wants he will find a certificate. "(student-P1-Timisoara). "I think it depends on the objectives that we have when we practice. It's not just the companies' blame. It is also our fault, because if we do not want to learn as much, we have no interest, no

one in forced to do anything. I believe that is possible in Suceava. If you are interested and want to do something - you can."(student P2-Suceava)

Conclusions:

- The needs of students identified by this study, come to once again emphasize the need for dialogue between the actors involved in the practice and pursuit of improving teaching practice in both the organization and in terms of content.
- The objectives of our project aims, through its three years activities to cover the practical needs of students so that results from this needs assessment were the basis for discussions during the Workshop PRACTeam between student representatives, tutors and practice coordinators. Based on the central problems and issues that emerged, were developed practice materials for both tutors and students.

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THE RELATIONSHIP BETWEEN MACROECONOMIC VARIABLES AND ROMANIAN CORPORATE DEFAULT RATES BETWEEN 2002-2008

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During its 20 year history of market economy, Romania experienced the most severe downturn in 2009, which resulted in many cost, mainly because of the output loss. These conditions forced several firms to declare bankruptcy and to stop their activity. The aim of this research is to assess the relationship between the corporate default rates and the macroeconomic processes in the case of Romania for the period comprised between 2002Q1-2008Q4.

For this, based on the relevant literature, we ranked the potential explanatory variables of the default rates into seven groups: cyclical indicators, household indicators, corporate indicators, external sector indicators, price stability indicators and interest rates, loans to private sector and finally the capital market indicators. Some studies base their results only on accounting data, others only on market data. Our study focuses on both, since this seems to be an adequate approach in capturing most of the processes.

Similar to the banks' loan portfolio structure, we conducted analysis for five sectors: industry, construction, agriculture, services and the overall economy. For each sector the average default probability at time t is modeled as a logistic function of many general and sector-specific macroeconomic variables. The use of logistic regression was motivated by its ability to account for fractional data between 0 and 1.

We found that at least one variable from each group has a significant explanatory power regarding the evolution of the default rates in all five sectors analyzed. In some cases the sign of the variables was the opposite of what the economic theory would have suggested, but it has to be taken into account that Romania posted the picture of an overheated economy during the analyzed period. Another important conclusion was that many variables were significant through their lagged value, which indicates an even better supervision of the evolution of the specific variables. From all the variables, the volatility of the BET-C index proves to be the most important in predicting the evolution of the default rates, as it didn't proved to be significant only for the construction sector. The evolution of FDI and the volatility of the BET-C index proved to be very important in determining the evolution of the corporate default rates, as well. The first was a very important factor in the financing of companies, especially during the analyzed period, and the risk meter is something that never should be disregarded when it comes of analyzing default rates.

Keywords: corporate default rate, macroeconomic processes, economic imbalances, logistic regression, lagged effects.

JEL codes: C22, C51, C52, E32, G32, G33

I. Introduction

In conformity with a research made by the World Bank in 2001, in the period comprised between the end of the 1970s and the end of the 20th century there were 112 bank crises in 93 countries all over the world. Most of these crises caused significant economic downturns in developed countries, as well as in emerging economies (see Wolf, M (2010)). The crises had considerable costs, which affected the whole society (the economic growth remained under its potential level, most of the banks got into governmental property, therefore their debts became the nation's debt (1)). To avoid these costs, several researchers proposed the analysis of the effect of macroeconomic factors on the probability of default in the financial and corporate sector. The aim of this paper was to conduct such an analysis in Romania for the period comprised between 2002Q1-2008Q4.

II. Literature review

We ranked the potential explanatory variables of the default rates into seven groups: cyclical indicators, household indicators, corporate indicators, external sector indicators, price stability indicators and interest rates, loans to private sector and finally the capital market indicators.

Among the **cyclical variables** the most frequently analysed are the real GDP growth, the seasonally adjusted nominal GDP, the value of the GDP-gap, industrial output change and its seasonally adjusted change, the industrial distance to default and the economic activity indicator. Bonfim, D. (2008), Monnin, P. and Jokipii, T. (2010), Boss, M. et al. (2009) and Castrén, O., Dées, S. and Zaher, F. (2008) found significant the effect of the real GDP on PD, but at the latter authors robustness problems evolved. Ali, A. and Daly, K. (2010) found significant the effect of the nominal GDP, Bonfim, D. (2008) the effect of economic activity indicator and Hol, S. (2006) the effect of the GDP-gap on PD. Bos, M. et al. (2009) and Hol, S. (2006) proved the significance of the industrial production index, but the former discovered robustness difficulties.

The second category consists of the **money market indices**: consumer price index, short term/long term real and nominal interest rates, M1 money supply, average nominal interest rates, average lending interest rates for corporate bank loans. In Liu, J.'s (2004) research the average short and long term nominal interest rates, while in Boss, M. et al.'s (2009) investigation besides the short term nominal interest rates, the consumer price index influences significantly the PD. According to Hol, S. (2006) the money supply combined with firm specific financial indicators (2) are relevant explanatory variables of the PD. Finally, the last significant indicator of this group is the average lending interest rate for corporate bank loans analyzed by Bonfim, D. (2008). The next group is related to the **outstanding loans**: the growth rate of the loans and bank loans-GDP ratio. The former indicator was found significant on PD by Bonfim, D. (2008), and the latter one by Ali, A. and Daly, K. (2010).

The fourth category consists of the **capital market indicators**: the US treasury notes' yields with three and six months maturity, the real stock prices, the capital market index change, the S&P500's and some specific companies' yields and the slope of the yield curve. Castrén, O., et al. (2008) point out that the capital market indices and yield curve's slope (calculated as the difference of the long and short term yields) determines significantly the PD. In the study of Duffie, D. et al. (2006) the S&P500 and the Treasury notes' yield with three months maturity proved to be significant in relation with the PD.

Among the **household's indicators**, the consumption, consumption/GDP ratio, unemployment rate, employment rate, the annual growth rate of the disposable income and the growth rate of the household's income were studied. Boss, M. et al. (2009) found significant the unemployment rate in the case of a standard regression model, but in other model specifications their lags were also found significant in relation to the PD.

The indicators of the corporate sector include the Gross Fixed Capital Formation (GFCF), the average labor productivity, the real investments, investment in fixed assets, and the ratio of the mentioned variables and real GDP. In this group there are also included the following: unit labor

cost, real corporate debt and birth rate. In Liu, J.'s (2004) article the birth rate of the companies shows two opposite effects regarding the corporate default rates: on short term the growth of the rate decreases the value of the dependent variable, while on long term increases them. This relationship is examined with an ECM model, but the author did not find any explanations for the observed behavior of the dependent variable. Boss, M. et al. (2009) proved the significant influence of the unit labor cost and the investment in fixed assets/GDP ratio on the PD using a standard regression model. Both in the case of the unemployment rate, and also in the case of the unit labor cost their lagged values proved to be significant regarding the PD.

The last analyzed variable group is the **external sector**, which includes the real exports, the real exports to GDP ratio, oil prices, euro/US dollar real exchange rate and the exchange rate index. Boss, M. et al. (2009) found significant the lagged values of the real exports to GDP ratio, the oil prices and the real exports in explaining the evolution of the PD using different specifications of the standard regression model.

III. Methodology

For each sector the average default probability at time t is modeled as a logistic function of many general and sector-specific macroeconomic variables. The initial logistic regression equation can be noted as:

$$DR_{t,s} = \frac{1}{1 + e^{-X \cdot \beta}}, \quad (1)$$

where $DR_{t,s}$ denotes the sector-specific corporate default rates, X denotes the matrix of the explanatory variables, while β is a column matrix representing the coefficient estimates. The used methodology, based on the work of Papke and Wooldridge, mentined in the paper of Boss, M. et al. (2009) allows the estimation of the default probabilities directly but, in contrast to common logistic regression models, it explicitly accounts for fractional data between 0 and 1. The large number of analyzed macroeconomic variables indicated the use of a model selection process, which helped to find the optimal multivariate model. The estimated models were sorted by the value of the adjusted R-squared and the value for the quasi-likelihood estimator, according to Boss, M. et al. (2009).

IV. Data and macroeconomic dynamics

With the aim of better understanding some of the links between credit risk and macroeconomic developments at an aggregate level, we built up correlation matrices between a large set of macroeconomic variables and corporate default rates. These matrices may provide a guideline of the cyclical co-movement between default rates and other macroeconomic variables, which can later be used as explanatory variables under a regression analysis framework.

1. Data

The corporate default rates were given by the Romanian National Commerce Office, in quarterly data, for each industry.

The correlation coefficients were calculated for five sectors: agriculture, industry, construction, services and for the overall economy. The data used for the analyses refer to the period comprised between 2002Q1 – 2008Q4. For each sector we used both the general and also the sector specific, seasonally adjusted (3) macroeconomic variables. Furthermore, where it was indicated the quarter - on - quarter change of the variables was taken into account in order to highlight their dynamic effects on the default rates.

Further on we focus on presenting the most significant correlation coefficients for each group of variables (4) regarding the overall economy, industry and services, since these two sectors represent the most important parts of the economy.

In the case of the **overall economy** within *the cyclical variables* the change of the nominal GDP, within the *households* the gross average wages, within the *corporate sector* the nominal GFCF, within the *external sector* the loans lent by foreigners, within *the price stability and interest rates* group the interest rates for existing loans denominated in Euro, within the *loans to private sector* the outstanding loans to households and finally within the *capital market* the value of the BET-C index stood out from the rest of the variables.

For the **industry** sector within the first group of variables the change of the nominal GDP, within the households the gross average wages, within the third group the nominal unit labor cost index, within the fourth group the FDI, within the fifth group the inflation rate, in the penultimate group the outstanding amount of bank loans lent to the industrial sector, and finally in the last group the value of the BET-C index was the most significant.

For the **services** sector within the cyclical variables the change of the nominal GDP, from the households the gross average wages, within the third group the ratio of nominal GFCF and GDP, within the fourth group the FDI, within the fifth group yet again the inflation rate, in the penultimate group the outstanding amount of bank loans lent to the services sector, and finally in the *capital market* the value of the BET-C index proved to be the most correlated with the default rates.

2. Results for the econometric analysis

(Table nr. 1) presents the estimated coefficients and *p* values for each analyzed sector. For the overall economy six variables were found to be significant in explaining the movements of the corporate default rates. No variables from the external sector were found to be significant. Even though the theory suggests a negative relationship between default rates and real GDP, the results are contrarian with this. This shouldn't be a surprise in the case of Romania, as during the analyzed period a highly overheated economic activity was observable. Bonfim, D. (2009) highlighted a similar relationship between credit overdue and real GDP growth. This relationship implies that a period of robust economic growth is usually followed by an increase in the number of defaulted firms with a lag of 1.5 to 2 years. The positive relationship between the lagged private real consumption and the dependent variable, similarly to the real GDP, could be explained with an overheat of the private consumption. Furthermore, both increased volatility of the BET-C index and interest rates have a positive effect on default rates which is in line with the theory. Other significant variables were the lags of real labor productivity index and loans to households.

In the model built for the industry sector four variables were found to be significant in explaining the movements of the industrial corporate default rates. Unfortunately, no variables from households, corporate sector and loans to private sector were found to be significant. A general observation for this model can be that from every group of variables the lagged ones became significant. Our results regarding the relationship between the industrial default rates and inflation rate doesn't prove to confirm the theory, as the relationship between the lag of inflation rate and default rate is negative. Among the group of cyclical variables the lagged values of industrial GVA were found to be significant in explaining the industrial corporate default rates. In contrary to the theory, which indicates a negative relationship, in our model the relationship between the two variables is positive. The explanation could be the same as for the overall economy. From the group of foreign sector the lagged total FDI proved to be significant and its relationship with the corporate default rates is positive. From the group of capital market the lagged volatility of BET-C is significant.

In columns 7 and 8 we can see which macroeconomic variables were significant from different categories for the construction sector. In the case of this model there weren't significant variables from the group of price stability and interest rates. As we can see, the nominal GDP has a negative coefficient, this can be interpreted as when the value of the nominal GDP is decreasing (in other words, there is a recession), the value of the default rates is increasing. It can be seen

that there is a positive coefficient for the change of the average unit labor cost in the industrial sector lagged with five periods. This may suggest that the increase of the unit labor cost in the construction sector will increase in five periods the default rates.

For the agriculture sector we can see that there weren't significant variables from the group of price stability and interest rates and from loans to the private sector. The real labor productivity lagged with three periods has a negative coefficient, this meaning that if the real labor productivity decreases in the agricultural sector, it will increase in three periods the default rate. It is interesting too that if the net average wages increase they will increase in a half year the value of the default rates as well. Furthermore, the table shows that if the RON appreciates against the EURO the default rates will increase again.

In the case of the services sector, it can be seen that there weren't significant variables only from the external group. The highest impact on the default rates are caused by the changes in private real consumption and loans to households, both posting a negative relationship. For the services sector, the contemporaneous value of the volatility of the BET-C index was significant, indicating a positive relationship. Furthermore, the results show that interest rates for EURO denominated newly issued loans increase the probability of default in the next period.

V. Conclusions

Our aim with this research was to assess the relationship between the corporate default rates and the macroeconomic processes in the case of Romania for the period comprised between 2002Q1-2008Q4. In our analysis we employed a total number of 81 variables, which were combined differently for the following sectors: agriculture, industry, construction, services and the overall economy. Furthermore, these variables were ranked into seven groups: cyclical indicators, household indicators, corporate indicators, external sector indicators, price stability indicators and interest rates, loans to private sector and finally the capital market indicators.

Summarizing the results group-by-group can give a comprehensive overlook of the results obtained. Regarding the cyclical variables the nominal GDP and the real GDP proved to be significant in explaining the corporate default rates, not just for the overall economy, but for certain sectors, as well. On the other hand, in two cases (Industry and Services), sector specific cyclical indicators (GVA) showed high explanatory power regarding the dependent variable.

Eventually, for the household sector the private real consumption and the gross and net average wages, for the corporate sector the average labor productivity and labor cost, for the external sector the RON/EURO exchange rate, Total FDI and real Exports to GDP ratio, for price stability and interest rates the inflation rate and both EURO and RON interest rates, for loans to the private sector both the outstanding loans to households and firms, and finally for the capital market group the volatility of the BET-C index and the level of the index shows high explanatory power.

Overall, at least one variable from each group has a significant explanatory power regarding the evolution of the default rates. In some cases the sign of the variables was the opposite of what the economic theory would have suggested, but it has to be taken into account that Romania posted the picture of an overheated economy during the analyzed period. Another important conclusion is that many variables were significant through their lagged value, which indicates an even better supervision of the evolution of the specific variables. From all the variables, the volatility of the BET-C index proves to be the most important in predicting the evolution of the default rates, as it didn't proved to be significant only for the construction sector.

VI. Notes

1. From the 112 mentioned bank crises in the case of 27 the fiscal costs exceeded 10% of that specific country's GDP. Furthermore, in the case of 47 states the cumulative output remained with more than 10% under the potential level in the following years.

2. For example: average cash amount/debt amount, average financial coverage indicator, average liquidity, long term value of the firm, average firm size.
3. We were seeking to use only seasonally adjusted data, but in some cases only seasonally unadjusted data was available.
4. The used macroeconomic variables:
 - Cyclical indicators: Nominal GDP sa., Nominal GDP sa. (%), Real GDP sa., Real GDP sa. (%), GVA sa. Industry, GVA sa. Industry (%), GVA sa. Construction, GVA sa. Construction (%), GVA sa. Agriculture, GVA sa. Agriculture (%), GVA sa. Services, GVA sa., Services (%).
 - Household indicators: Private real consumption sa., Private real consumption sa. (%), PCR/GDP sa., Unemployment rate sa., Gross average wages, Gross average wages(%), Net average wages, Net average wages(%).
 - Corporate indicators: Nominal GFCF sa., Nominal GFCF sa. (%), Real GFCF sa., Real GFCF sa. (%), GFCF/GDP sa. (nom.), GFCF/GDP sa. (Real), Average real labor productivity nsa., Avg. real labor productivity nsa. (%), Labor cost index (industry) sa., Labor cost index sa. (Industry) (%), Labor cost index sa. (Construction), Labor cost index sa. (Construction) (%), Labor cost index sa. (Services), Labor cost index sa. (Services) (%).
 - External sector indicators: Gross nominal exports sa., Gross nominal exports sa. (%), Gross real exports sa., Gross real exports sa. (%), Real Exports/GDP sa., Total FDI nsa., Total FDI nsa. (%), FDI abroad nsa., FDI in Romania nsa., Foreign FDI nsa. (%), Total FDI/GDP sa., Total FDI/GDP nsa., Loans abroad nsa., Loans abroad nsa. (%), Loans to Romania nsa., Loans to Romania nsa. (%), RON/EUR nominal exch. rate nsa., RON/EUR nominal exch. rate nsa. (%), RON/EUR real exch. Rate index, German Real GDP sa., German Real GDP sa. (%), French Real GDP sa., French Real GDP sa. (%), Italian Real GDP sa., Italian Real GDP sa. (%).
 - Price stability indicators and interest rates: Inflation rate, Interest rates for outstanding corporate loans (RON), Interest rates for newly issued corporate loans (RON), Interest rates for outstanding corporate loans (EUR), Interest rates for newly issued corporate loans (EUR).
 - Loans to private sector: Outstanding loans to households nsa. (LtH), Outstanding loans to households nsa. (%), Outstanding loans to firms nsa. (LtF), Outstanding loans to firms nsa. (%), LtH/GDP, LtF/GDP, Outstanding loans to firms nsa. (Industry), Outstanding loans to firms nsa. (%) (Industry), Outstanding loans to firms nsa. (Construction), Outstanding loans to firms nsa. (%) (Construction), Outstanding loans to firms nsa. (Agriculture), Outstanding loans to firms nsa. (%) (Agriculture), Outstanding loans to firms nsa. (Services), Outstanding loans to firms nsa. (%) (Services).
 - Capital market indicators: BET-C index value, BET-C volatility (yearly), BET-C yield.

Table 1: Results for the econometric analysis

| | Overall economy | | Industry | | Construction | | Agriculture | | Services | | |
|------------------------------------|--|-----------------------------|-------------|----------------------------|--------------|----------------------------|-------------|----------------------------------|-------------|---------------------------|---|
| | Coefficient | Lag of variable | Coefficient | Lag of variable | Coefficient | Lag of variable | Coefficient | Lag of variable | Coefficient | Lag of variable | |
| | Constant | -18.0386*** (0.00001) | - | -18.6634*** (0.00529) | - | -6.88358** (0.03836) | - | -10.9335*** (0.00001) | - | -3.79269 (0.1463) | - |
| Cyclical variables | Nominal GDP sa. (%) | | | | | -8.29408** (0.01860) | - | | | | |
| | Real GDP sa. | 0.000193748*** (0.00011) | 5 | | | | | 0.0000561656* * (0.02170) | 3 | | |
| | GVA sa. industry | | | 12.9567** (0.03777) | 5 | | | | | | |
| | GVA sa. services | | | | | | | | | 0.0110089** (0.0251) | 4 |
| Households | Private real consumption sa. (%) | 5.80199** (0.01327) | 4 | | | | | | | -4.78416* (0.0595) | 3 |
| | Gross average wages | | | | | 0.00319292*** (0.00256) | - | | | | |
| | Net average wages(%) | | | | | | | 2.51802** (0.04918) | 2 | | |
| Corporate sector | Average real labor productivity nsa. | 0.00572784*** (0.00029) | 2 | | | | | - 0.00774716*** (0.000097) | 3 | 0.00752352*** (0.0001) | 2 |
| | Labor cost index sa. (construction) | | | | | 2.81094* (0.08917) | 5 | | | | |
| External sector | Real Exports/GDP sa. | | | | | | | 6.68051*** (0.00483) | 2 | | |
| | Total FDI nsa. | | | 0.000160575** (0.01404) | | | | | | | |
| | RON/EUR nominal exch. rate nsa. (%) | | | | | -2.8321*** (0.00012) | 1 | -1.16338*** (0.00288) | - | | |
| Price stability and interest rates | Inflation rate | | | -0.0649178*** (0.00298) | 3 | | | | | | |
| | IR_O_ROM | 0.03809** (0.04545) | 3 | | | | | | | | |
| | IR_N_EUR | | | | | | | | | 0.170774* (0.0547) | 1 |
| Loans to the private sector | Outstanding loans to households nsa. | -0.754387* (0.06402) | 4 | | | | | | | | |
| | Outstanding loans to households nsa. (%) | | | | | | | | | -1.5783*** (0.0021) | 3 |
| | Outstanding loans to firms nsa. (%) | | | | | 6.49966** (0.01774) | 2 | | | | |
| Capital market | BET-C index value | | | | | -0.0004205** (0.02558) | 4 | | | | |
| | BET-C volatility (yearly) | 1.13602** (0.03775) | 3 | 1.42833* (0.06769) | 3 | | | 1.93739*** (0.00057) | 1 | 0.781511* (0.0720) | - |
| | Adjusted R-squared | 0.930142 | | 0.829331 | | 0.863473 | | 0.851494 | | 0.910175 | |
| | Log-likelihood | 14.32392 | | 1.197292 | | 4.212762 | | 14.56706 | | 11.81074 | |

Source: authors' calculations

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KEY ASPECTS OF ANALYSIS ON THE IMPACT OF RECENT DEVELOPMENTS IN HEALTH SERVICES IN THE WESTERN REGION OF ROMANIA

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The paper aims to establish the principal correlations and positions of the tertiary sector in the Romanian economy, for realistic assessment of the actions, decisions and developments in this field.

The research starts from the statistical analysis regarding the current condition and the importance of services, calculating dynamics and relevant percentages. It is also detailed the situation of health services in the western region. Its being inventoried some of the latest developments and of most impact, within them.

The effects of government policies are viewed from the angle of influence on economic activity, being performed a SWOT analysis adequate to the current situation. Attention is paid both to the direct impact, in the field, and the indirect one, in the economic life ensemble and society as a whole, short and long term.

The research results highlight the economic situation of Romania and the way in which economic activity is in close contact with the health system.

Keywords: Tertiary sector, medical services, health reform, economic development, sustainable development

JEL Codes: I18, R11

1. Introduction

Current economic theory recognizes the leading role that services play in economic and social progress. Their heterogeneity makes that, different services not to contribute equally to the economic growth, nor the magnitude and manner of involvement and action.

Central role in long-term evolution of the entire society, including the economic growth is detained by the knowledge intensive services (activities where the share is the intelligence factor, focused on high specialized qualification).

This paper examines some specific and general issues regarding the services in the Romanian economy, with particularization on the health services in Western Region, in the context of new health reforms.

2. Current state analysis of the tertiary sector in Romania

At the macroeconomic level, indicators are used to express both the size and the share of the attracted resources in this sector and the amount and the contribution of the effects produced by the activities of services to the general economic and social situation.

Based on analysis of dimensions and services sector interdependencies in the Romanian economy and society, it can track the current state of developments in this sector and effective strategies may be formulated for its future development.

Regarding the place of our services in the country's economy, a frame of employment can be extracted from the available statistical data, as shown in Table no. 1.

Table no. 1. Total employed persons in tertiary sector by type of activities (thousand persons)

| Activities | | 1996 | 2000 | 2004 | 2008 |
|--|--|--------|---------|--------|--------|
| I. Total employed persons | | 9379.0 | 10771.6 | 9410.4 | 9365.9 |
| II. Total employed persons in tertiary sector (1), which: | | 2837.4 | 3149.0 | 3419.1 | 3670.9 |
| 1 | Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods | 771.7 | 887.8 | 953.0 | 1166.1 |
| 2 | Hotels and restaurants | 115.6 | 120.4 | 142.0 | 136.3 |
| 3 | Transport, storage and communication | 547.1 | 476.7 | 456.6 | 498.8 |
| 4 | Financial intermediation | 71.3 | 87.4 | 86.8 | 98.0 |
| 5 | Real estate, renting and business activities | 257.5 | 194.2 | 327.6 | 345.4 |
| 6 | Public administration and defense; compulsory social security | 125.1 | 405.1 | 411.2 | 396.9 |
| 7 | Education | 441.3 | 387.2 | 406.1 | 389.0 |
| 8 | Health and social work | 337.2 | 324.0 | 362.2 | 387.4 |
| 9 | Other community, social and personal service activities | 170.6 | 266.2 | 273.6 | 253.0 |

Source: Eurostat, accessed April 22, 2011,

http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/data/database

From Table no.1 we see that employment in the tertiary sector has increased during the analyzed period with 833,500 jobs. Within this, the number of people working in health and social assistance increased from 1996 to 2008 with 50,200 persons, the increase representing only 6.02% of the total growth above.

Table no. 2. Dynamics of employed persons in tertiary sector by type of activities

| Activities | 1996 | 2000 | 2004 | 2008 |
|---|--------|---------|--------|--------|
| Total employed persons (thousand persons) | 9379.0 | 10771.6 | 9410.4 | 9365.9 |
| Total employed persons in tertiary sector (thousand persons) | 2837.4 | 3149.0 | 3419.1 | 3670.9 |
| Health and social work (thousand persons) | 337.2 | 324.0 | 362.2 | 387.4 |
| Dynamics of employed persons in tertiary sector (%) (1996 = 100) | 100 | 110.98 | 120.50 | 129.37 |
| Dynamics of employed persons in social work (%) (1996 = 100) | 100 | 96.09 | 107.41 | 114.89 |
| The share of employed persons from tertiary sector in total employed persons (%) | 30.25 | 29.23 | 36.3 | 39.19 |
| The share of employed persons from Health and social work in total employed persons (%) | 11.9 | 10.3 | 10.6 | 10.55 |

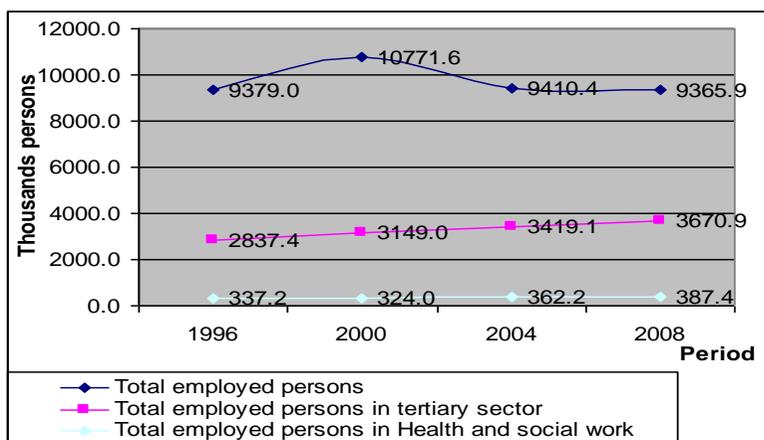
Source: Table no. 1

Analyzing the dynamics of persons employed in the tertiary sector (Table no. 2 - Dynamic calculated with a fixed base, the base year being 1996), it is noted that in 2000 there was an increase with 10.9% of the number of persons employed, in 2004 their number increased by 20.5% and in 2008 the increase was of 29.3%, compared with base year 1996.

Dynamics of persons employed in health and social care, calculated also with a fixed base, indicate a decrease of 4% in 2000, an increase of 7.4% in 2004 compared with the base year and in 2008 the increase was 14.8%.

The percentage of persons employed in the tertiary sector in total employment in Romania was 30.25% in 1996, and in 2008 it increased to 39.19%. In contrast, the percentage of employed persons in health and social care compared to the total persons employed in the service sector dropped from 11.9%, as being recorded in 1996, to 10.5% in 2008.

Dynamics of the number of employed persons in health and social care and the tertiary sector in total can be seen in Figure No.1.



Source: Table no.1

Figure no. 1. Dynamics of employed persons in tertiary sector

In what regards value data of services sector size and the gross domestic product at the national level (last years) as well as the contribution of services to the GDP creation, see Table no. 3.

Table no. 3. GDP and Services in Romania (dates from 2009)

| GDP (mil lei – current prices) | PIB (mil lei – constant prices) | Services (mil lei – current prices) | Services (mil lei – constant prices) |
|--------------------------------------|---------------------------------------|---|--|
| 491273 | 342176.35 | 246306.2 | 166069.67 |

Source: „, Statistical Breviary: Romania in Figures”,

<http://www.insse.ro/cms/files/publicatii/Romania%20in%20cifre%202010.pdf>; accessed April 16, 2011

And INS, <https://statistici.insse.ro/ipc/>; accessed April 17, 2011

Compared with the developed countries where the share of services in GDP creation is 60-70%, in Romania, as shown in Table no. 4, the percentage of services in GDP does not exceed 50%.

3. Medical services analysis in the western region in the context of new health reform

Medical services are part of the services dedicated to the population and are meant to maintain the health and vitality of the population, with direct effects on the living standards of individuals, but also in the functioning and development of the economic mechanism. (Jivan and Fruja, 2006: 96).

In Romania, in the last 20 years, the medical system has gone through various reforms. The new health reform was initiated in 2010 through the decentralization of hospitals, namely the public health units were transferred to the local administration. For the period 2011-2012, it was formulated the national strategy of streamlining the hospitals and health system.

The strategy stipulates measures to reorganize the Romanian health system for a sustainable financing, for remodeling the demand of health services and a strategy directed towards the human resources that states that it is wished to stop doctors leaving abroad. The problem that arises, concerns the realism of such decisions, in the conditions when they are strongly contested by civil society, by many professionals and service providers in the field and in the context in which it is avoided the debate in the Legislature (the adoption of reforming laws is based on the principle of government accountability in parliament).

The most drastic reform proposed through the Ministry of Health strategy was the one that began the cancellation and fusion of hospitals. This paper makes some specific references to the manner

in which this decision affected the quality of medical services in Western Development Region (Arad, Caraş-Severin, Hunedoara and Timiş).

Western development region's population, on July 1st 2009 was about 1,921,700 inhabitants, representing 8.95% of the Romanian population. This region is considered to be a growing region, with above average national economic performance, often in second place after Bucharest-Ilfov.

Table no. 4. Health units, 31 July 2007

| Region / County | Hospitals | Polyclinics | Dispensary | Sanatoriums T.B.C. | Medical Offices |
|----------------------------|------------------|--------------------|-------------------|-------------------------------|----------------------------|
| Western Development Region | 47 | 4 | 31 | 2 | 89 |
| Arad | 12 | - | 2 | - | 35 |
| Caraş-Severin | 8 | 2 | 6 | - | - |
| Hunedoara | 11 | 1 | 18 | 2 | 1 |
| Timiş | 16 | 1 | 5 | - | 53 |

Source: Romanian Statistical Yearbook 2008, NIS, 2009

As shown in Table no. 4, in Western Development Region, on July 31, 2007, 47 hospitals activated that carried out ill treatment related activities. Starting with April 2011, according to an order given by the Ministry of Health, as part of "crisis measures" of the Romanian government, several hospitals have been abolished and readjusted (converted into alms houses).

The measure is questionable in terms of related operating costs, because the alms houses will have to be sustained by public funds). Thus, in West region, 11 hospitals were abolished and 10 hospitals were merged with larger hospitals in the region. Of 47 existing hospital on July 31, 2007, from this year, only 26 hospitals will be operating in the context of lacking personnel in hospital units and no hiring can be made because of restrictions imposed by the government.

Along with the abolition of hospitals its been declared (as motivation / logic support) the monitoring of the system's functionality, with the aim to apply an appropriate treatment to the patients and solve financial problems by attracting new funds to health system, according to Ministry of Health.

But the transition to the hospital closures and fusions was done without creating specialized ambulatory units in place of the abolished and with no investment made in road infrastructure by the Ministry of Transport. For example, in Caraş-Severin county, especially in winter, are encountered problems on the road, and the transport of patients to the hospital from Reşiţa is now carried out under the risks of delays caused by these roads.

It is foreshadowed, therefore, the practical impossibility of achieving the appropriate specialized medical services for the population in areas that will remain without hospitals because of the lack of the required centers for ambulatory medical services, of reduced number of medical establishments in general (abolition of the hospitals) and of the given infrastructure .

Critical comments made above with reference to the affected individuals should be extended over economic units in the area (where is working the population registered in the medical units abolished), with hard to predict impact in the domain of labor factor productivity in the long term.

Really positive main effects that could become apparent are that, by abolishing some hospitals will be made some short-term cost reductions (in near future), and through this project it could be covered the deficit of social centers that the Western Region has, this social sector will take over abandoned buildings.

The possibility of reducing costs regards especially those designed to provide management services by merging three or four hospitals. Their leadership will be provided by a manager or

specialized management firms (for couple hospitals at the same time), with effects in costs and in the leadership act (management, administration).

But these potential savings will have to be first validated in relation with the actual achievable functionality under the new conditions. Because the diversity and the increase of complexity can create management problems, which often counteract the positive effects. In addition, if we can be optimistic about professional management, not the same can be said about the "cost" changes, existing - by now - certain losses that can not be avoided or counteracted.

We take into account that the abolition deflected on certain hospitals where, in recent years were made significant investments and expenses; under new conditions, they will be practically lost (wasted utility, will be decommissioned, placed in conservation, abandoned, being performed in purposes from what those units are now diverted). Also, in conceptual and organizational point of view, many were small hospitals of local interest. It makes sense that, the abolition of all this means reduced capacity for the provision of medical services.

Specifically, hospitals abolished from the Western Region had made in the past years, investments in renovation and endowment with the appropriate equipment (from local communities). For example, in Buziaş (balnear resort from Timiș county), many tourists spend their holidays and in the local hospital where there is a double line on-call as well as specialists that provide quality medical assistance both to tourists and inhabitants. Instead of the abolished hospital currently does not operate even a balnear clinic.

The funds intended to a hospital will now be used by all hospitals belonging to one fusion, which constitutes a threat to the competitive spirit and hence of the quality and professional performance in the long term: Each hospital has allocated certain amounts of money for its functioning and the distribution is at different levels, depending on the number of patients treated and cured; certain hospitals may thus provide more financial resources than others. But under new organizational formula, these funds will be practically used by all hospitals participating to the fusion.

Table No. 5. Summary of SWOT analysis through abolition and merging of hospitals

| STRENGTHS | WEAKNESSES |
|--|--|
| <ul style="list-style-type: none"> - cost reductions; - instead of abolished hospitals will operate retirement homes, orphanages (West Region has a deficiency of such centers). | <ul style="list-style-type: none"> - staff reductions (regardless of the activity type); - loss of certain investment (converting them into useless); - loss of local interest services related to the abolished medical units |
| OPPORTUNITIES | THREATS |
| <ul style="list-style-type: none"> - possible modernizing changes in the hospital management. | <ul style="list-style-type: none"> - lack of specialized health care insurance, due to increased distances, for patients, up to medical units and in deficient of road infrastructure in some areas; - for fusion, the funds destined to a hospital will be used by all hospitals that are part of the fusion; - possible management problems, quality being compromised. |

Source: made by author

4. Conclusions

In conclusion to the shown above, it follows that funds savings are possible especially by reducing the number of salaries paid for management positions by the hospital), but which are also small in relation with the existing financial problems, and related destructive effects are so large, profound and extensive, including long-term that can not be justified.

The shown numbers demonstrate the strong entry of Romania in crisis, including services (economic sector had recorded the strongest increases in the economy after 1989). Maintaining services under 50% of GDP, with often falling trends proves not only the crisis but also the precariousness of the Romanian economy.

The Optical of the declared reforming measures is, in fact, a crisis one, but anachronistic through adequate perception of industry, applied on a domain which is not industry and where are some defining features that make measures inapplicable, of "labor productivity growth" available in industry (Gadrey, 1996). Ignoring these characteristics is paid dearly, unfortunately not by those who choose wrong (in our country, at least), but by the beneficiaries of the measures imposed by government and service providers in domain.

Romania must rely on its main assets: (i) educational level (still) high, which is an important opportunity to development of intensive services in knowledge (information services, research, health) and (ii) low cost of labor that, generally speaking, is a key attraction for foreign investors, both in services and in other economic sectors.

Unfortunately for the Romanian medical system - as well as other services - this factor (chip labor, low salaries that are paid to Romanians) is what determines the migration of qualification carriers and labor towards richer economies, in conditions of major progress in field in rich countries (Walker 2010).

Doctors leaving the country falls in the phenomenology known as "theft of gray matter" or "brain drain"(Christian Dustmann, Itzhak Fadlon and Yoram Weiss) and it is happening in terms of a lack of national policies and has all the economic, social effects, general, for the nation, especially we can not put any question that there is no need of the doctors that decide to leave the country, quite the contrary. Such negative phenomena are being encouraged by government measures such as those discussed in the paper (which is visible through actual developments in the recent months).

Before starting the health reform related to the hospitals abolishing, professional analysis were required (under conditions of knowledge of specific - including managerial - of the domain), in consultation with specialists, for finding (other) solutions to reduce costs, it was required including the detailed analysis of the economic situation and performance of hospitals proposed for dissolution. Thus, it was crucial to analyze the situation of hospitalized patients, of those discharged (treated case = case resolved), of the performance of medical staff in the Western Region and from other regions of the country (a non-political relevant economic analysis).

Such consultations and documented training would have provided a consensus, solutions quality and their applicability, as opposed to the measures taken against the will of those included in the process. Adhesion value (which is completely ignored in most measures of the current government) is one that can be found including in productivity and in cost reduction (in the case analyzed, unfortunately, it will be found in a negative sense, as the lack of adhesion).

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Note

(1) Total tertiary sector activities were calculated as the sum of employed persons from related activities: “Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods”, “Hotels and restaurants”, “Transport, storage and communication”, “Financial intermediation”, “Real estate, renting and business activities”, “Public administration and defense; compulsory social security”, “Education”, “Health and social work” and “Other community, social and personal service activities”.

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DETERMINANTS OF COMMUNITY PARTICIPATION IN ORADEA

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The present paper is part of the research of the PhD thesis made by the author, having the title: Community Participation in Oradea, registered at the University of Oradea - Faculty of Social and Human Sciences. The general objectives of the paper are the explanation of different types of citizens' involvement in the life of their community, the investigation of the existing relationships between different forms of participation, the interpretation of the effects different forms of participation have on the studied communities and the identification of relevant mechanism for the stimulation social involvement.

The citizens' political and civil participation, social responsibility, community spirit, civic activism together with other concepts from the civil society's rhetoric entered the agenda of public debates together with the intensifying efforts for adhering to the European Community, being the subject of numerous studies conducted in this field. The need for a strong civic society, with interested and involved citizens in the life of the community which they belong to, for social and economical development belong to the same discourse of the strong democratic society, being challenged in the literature, starting with Tocqueville, Almond and Verba, to Putnam and many others. In parallel to the civil society's rhetoric and the analysis coming from this direction, are the studies and theories of community development, which on one side are based on development policies, regulations, institutional framework of development, but contain also aspects of citizens' involvement in evaluating the community problems, the decision making processes and in the actual implementation of solutions. Moreover the aspects of network belonging and social trust which are reflected in the concept of social capital are sources both for participation as well for economic and social development.

*The present paper reflects the analysis of the determinant factors which can increase the engagement rates in the community life of the Romanians, engagement which is relevant on the production of different types of collective goods. The analysis is based on data obtained with the CEEEX research, coordinated by Adrian Hatos, "Leaders, Participants and Viewers. Determinants of community participation in the urban Romania". The tested hypotheses in the research part, based on the results of different studies and theoretic approaches, derive from the general question of the paper: **which are the factors that determine the community participation of the people living in Oradea.** Thus, the participation variation is verified by: gender, age, social status, social capital, civic competence, leadership experience, participation opportunities. The main results suggest that community participation is explained by civic competence, well-being, bridging social capital, gender and age.*

Key words: *community participation, community development, civic activism.*

JEL codes: *D17, H41*

1. Theoretical framework, work hypotheses

Regarding participation types in the community, we can identify more types which sometimes, just like Marinetto (2003) and Kim and Bearman (1997) pointed out, depend, besides the citizens' motivations, also on the political or social environment in which participation manifests and on the political definition given to participation. These forms can cover a large spectrum of actions, from protesting the authorities' decisions, to participation at different public debates, associative participation for the community, volunteer work or helping actions to charity to underprivileged categories. Thus, we can say that any action of the individuals for producing desirable collective goods represents community participation and thus civic participation is a particular type of this kind of engagement in the community.

Following one of Marc Morje Howard's (2002) arguments, developed also by Hatos (2008), we consider that civic participation in post-communist countries is lower compared to Western countries because people here are skeptical when it comes to involvement in formal non-governmental organization, for different reasons (the memory of communist organizations, considering these NGOs as part of the western hegemonic system, inability of these organizations to meet the needs of the citizens or reduced access to them). Nevertheless, it is possible for the Romanians to avoid involvement in the classical organizations of the civil society, but to act through other networks such as families or neighborhoods in ways that produce collective goods. This argument is supported by the data of our research, participation rates at different community activities being higher than belonging to an NGO, but this data has to be analyzed carefully as there is no direct correspondence between the two types of participation.

Some of the analyses highlights the civil society's weaknesses and explains them mostly through the low levels of social trust. Thus, the connections are made between social trust and low levels of civic participation, NGO memberships, weak social connections and corruption (Uslaner: 2003), (Badescu: 2001), (Howard: 2003). The lack of involvement is influenced by the lack of trust (both institutional and general) which was weakened by the communist regime (Hann: 1996). The same arguments are used for explaining the decline of civic involvement from the western societies, yet the sources for mistrust are different (Putman: 2000).

Factors that explain low rates of participation in Romania are education, profession, gender, home environment, the participant's profile being a young male, from an urban environment, educated with previous experience in civic participation (CSDF: 2003). Previous involvement in organizations was analyzed in a different manner by Hatos (2008), the author focusing on the relationship between the present civic involvement and the activism in the communist period, demonstrating the existence of a positive relationship argued with the fact that the previous activism represented both a learning context of the abilities necessary for the success of the action and a framework for developing a specific social identity (Dodescu and Hatos: 2004).

The effects of participation can be seen in two main directions: the first connection mentioned above is the civil society arena in which intrinsically refers to the role citizens (individually or in networks) have in sustaining democracy. A good, democratic society cares for all its citizens and aims at improving the quality of life for all, thus the involvement of people in public affairs should be an asset in gratifying this social developmental goal. Secondly, the theories of development emphasize the importance of social capital, seen as the ability to gain access to resources due to membership in different networks characterized by trust among members as well as common knowledge and experience of previous actions (Portes: 1998, Ostrom: 2000). Consequently, participation and membership in networks is an important source of development.

D. Sandu (2005) defines community participation as being the process of involvement of the members of a community in actions "that follow the fulfilling of certain local needs, predominantly local and public or group type" (p.43). This participation is predominantly voluntary, but it can also be involuntary when it is not known who is going to benefit from this action or when there are some pressures to stimulate participation. Iuliana Precupetu (2003)

analyzes both theoretically and empirically, the connection between social participation, social capital and poverty. According to literature, the author presents a few factors that influence participation: civic competence (seen as the individuals' perception regarding their capacity of influencing the decisions of those in charge) and political involvement, cultural behavior, access to public facilities (well-being indexes), satisfaction regarding the possibility to be part of the social life, quality of the social and political environment, satisfaction regarding the possibility to be part of the decision making process at different levels and information.

Another factor that was highlighted by A. Hatos (2008) as having a role in explaining community participation is having a leading position, both before the revolution and after, both in the political hierarchy and the one from the field of work. By means analysis of the scores of individual participation and having different leading positions, the author demonstrates the positive relationships between these, highlighting the strong connection between having a leading position by the members of the family for individual participation.

These relationships are tested in the present analysis, explaining the community participation rates of the people living in Oradea according to the available data, verifying the following research hypotheses: [1] A. Young people are going to participate more than older people; B. Retired people are going to participate more than mature people: they have more time, but may have problems that can affect their participation; [2] People with higher social status are going to participate more than those with a lower status. The status is going to be analyzed in two dimensions: educational level (number of completed study years) and well-being indexes (incomes per home, goods in home); [3] As social capital rises, community participation rises as well - social capital is measured according to its two distinct dimensions: belonging to social networks (intensity of the networks: time spent with friends and their density: number of friends) but also social trust; [4] Civic competence or the sense of personal efficiency raises the chances of participation. Civic competence is measure through the answers to the questions: to what degree do you think you can influence de decisions from the country of town); [5] They had leading positions that worked either as contexts for learning abilities and knowledges needed for a successful participation, or as instances for developing a specific social identity; [6] Participation is influenced by the context in which it occurs: the lack of contexts/ opportunities to participate has a inhibitive effect on it.

2. Data and methods

For the second stage of the CEEX project presented in the introductory section questionnaires were applied to a random sample of 461 people from various areas of the city of Oradea, in October 2007. The sample includes 50% men and 50% women, aged between 18 and 86 with a rather equal distribution according to category of age.

2. a. The dependent variable:

In our research community participation has been recorded through questions regarding participation rates to various activities on the level of neighborhood, as shown in chart 1.

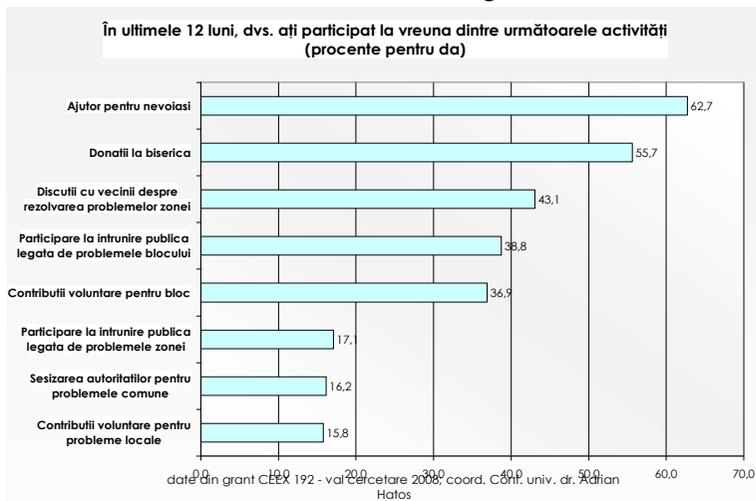


Chart no. 1 – Community participation forms and rates in Oradea

In order to analyze the determinants of community participation a summative scale has been created, based on these variables ($\alpha > .811$), with the minimal value of 0 and a maximum value of 8 activities for the respondents to participate, the average being 2.8.

2.b. Independent variables

The gender of respondents is introduced in the analysis as a dummy variable with 1 as value for males. Age is a continuous variable measured used as such in the analysis.

Social status is measured on two dimensions: level of education measured in years of study on one hand and household assets on the other. The variable referring to years of study completed is the outcome of the recodification of the categorical variable last school the respondent graduated from, thus resulting the scale variable used. As for the economical status we have chosen as explanatory variable household goods that we consider relevant to exemplify household welfare in time. Personal income or income per household, beyond the potential errors resulting from calculations made in Ron or Rol is more variable in time and has a higher non response rate. In order to introduce household assets in the analysis we created as summative scale of assets.

Social capital was included in the analysis on several distinct dimensions: intensity of networks, their density and generalized trust. The intensity of networks to which an individual belongs is calculated by answers to the question: how much time do you spend with your friends with the following potential responses: weekly, a few times per month, a few times per year, no time at all that has been turned into dummy variables keeping the *no time at all* category as reference. Density of networks is calculated through a scale of the extensive social capital built as an average value of responses to three questions: 'how many friends do you have?', 'how many friends do you have that you can borrow a small amount of money from?' and 'how many friends do you have that you can borrow a large amount of money from?'

Personal effectiveness, or civic competence, was introduced in the analysis as an average scale of answers to the questions: 'To what degree do you think that people like you can influence important decisions regarding: the community/ the entire country?'. Positions of management

were followed through responses to a set of 14 items for which a summative scale was designed by adding up the ‚yes’ answers after a dichotic recodification of variables.

| | N | Minimum | Maximum | Average | Std. Dev. |
|--|-----|---------|---------|---------|-----------|
| age | 376 | 18,00 | 86,00 | 42,5452 | 16,43470 |
| most recent school graduated from measured in years of study | 384 | ,00 | 8,00 | 4,5703 | 1,78191 |
| Household assests scale | 448 | ,00 | 12,00 | 8,1429 | 2,74610 |
| Efficacy scale | 431 | 1,00 | 4,00 | 1,7645 | ,74451 |
| Density of social capital | 336 | ,00 | 28,67 | 4,8482 | 4,16796 |
| free time spent with friends weekly | 461 | ,00 | 1,00 | 48,37% | ,50028 |
| free time spent once or twice a month | 461 | ,00 | 1,00 | 31,24% | ,46396 |
| free time spent once or twice per year | 461 | ,00 | 1,00 | 11,06% | ,31401 |
| Social trust scale | 430 | ,00 | 4,00 | 2,2312 | ,69982 |
| Leading positions scale | 449 | ,00 | 11,00 | 1,5924 | 2,13099 |
| Valid N (listwise) | 264 | | | | |

Chart no 1. Description of independent variables

3. Analyses

3.a. The effect of context on community participation

One of the aspects that have been traced in the analyses was the actual participation according to opportunities available for each individual. This was possible due to the fact that one of the response options to the question was: *not applicable*. To this purpose two distinct scales were created: one of absolute participation and one of relative participation, the latter taking into account situations where participation was not applicable. For absolute participation ($\alpha > .811$) we have built a summative scale of the cases in which participation to one of the activities in the list of variables was reported. The average value of the scale is 2.81 with a min. of 0 and a max. of 8 activities to participate in, with left inclination and a skewness value of 0.232.

For the scale of relative participation we have eliminated those cases where ‚not applicable’ was reported for each action. The difference between the distribution of relative participation and that of absolute participation is rather similar, with an average of 3.9 and a skewness value of 0.231. When comparing the averages of the two variables, there is a significant difference between them to be observed ($t = -29.61$, $p = 0.00$). The dispersed distribution of the responses on this second scale make is less suitable for future analyses, therefore it will not be used further here.

As a conclusion of the comparison between absolute and relative participation, it may be said that the people of Oradea participate in less than half (39.91%) of the activities they have the opportunity to participate so that the arguments that explain the lack of community activism through the absence of contexts in which citizens can get involved can be refuted to some extent. This is indicative only of the fact that the explanation of the low rate of community participation needs to be sought elsewhere and does not dismiss the creation of contexts for activism, at least as context for acquiring the knowledge and the abilities required for a successful participation. Consequently, for the available data, we dismiss *hypothesis no. 8* which maintains that community participation varies according to the context that enables or inhibits it.

3.b. Determinants of community participation

In this section, through multiple regression analysis we will outline the factors that explain community participation and the level to which they contribute to these explanations according to the formulated theoretical hypotheses.

| COMMUNITY PARTICIPATION ABSOLUTE SCORE | B | S.E. | Beta |
|--|-------|------|-------|
| (Constant) | ,280 | ,909 | |
| gender of dummy respondent – male | -,688 | ,229 | -,175 |
| age of respondent | ,004 | ,009 | ,030 |
| Education | -,026 | ,071 | -,023 |
| scale of household assets | ,221 | ,051 | ,283 |

| | | | |
|--|---------------|-------------|--------------|
| scale of personal efficiency/ civic competence | ,460 | ,165 | ,165 |
| social capital - density | ,019 | ,029 | ,040 |
| free time spent with friends weekly | -1,180 | ,512 | -,300 |
| free time spent with friends one or twice a month | -,777 | ,498 | -,187 |
| free time spent with friends one or twice per year | -,116 | ,635 | -,014 |
| scale of social trust | ,288 | ,182 | ,094 |
| absolute scale of holding a leading position | ,261 | ,062 | ,271 |
| <i>Adj. R</i> | <i>0.188</i> | | |

** coefficients in bold represent significant effects for $\alpha < .05$

Chart no. 2. Regression chart for the community participation dependent variable.

The model explains 18% of the variation of community participation as absolute score. The gender of subjects, as well as their age, are predictors of community participation but contrary to hypotheses formulated based on other studies on the same topic. On the other hand, according to our data, women participate more, in other words, the female gender is a predictor of participation. In this case it is possible that the difference is in the distinct forms of participation analyzed: men are oriented towards other types of actions including civic and associative ones, while women are involved more in activities closer to the household.

In this model one of the factors that explains most of the variation is represented by the scale of goods, which is thus a good predictor of community participation in the sense that an increased level of endowment of the household enhances the increase of community participation. Nevertheless, the second indicator of social status, education does not influence participation in the case of our sample. This conclusion points at the social structure of the current urban Romania where cultural and financial capital are not facets of the social status: there are wealthy people with no education, as well as poor people with education and as far as community participation is concerned financial aspects appears to be more important than the educational.

Perceived effectiveness is also a factor that explains participation: the more a person feels that he/she can influence decisions, the more likely is the person to participate in actions on the level of community. Here we can argue that strategies that stress *empowerment* have more chances to succeed, since the feeling of responsibility and that of effectiveness cumulated are important resources of community activism, as other studies have shown it (Dodescu, Hatos 2004).

Also, our analyses confirm the significant role of social capital in explaining community participation: people who are part of dense social networks (have a large number of friends) participate more in the solving community problems. However, the intensity of relations (meeting friends on a weekly or monthly basis) has a negative effect on participation, thus supporting the theories of weak relations as well as the significance of bridging social capital for participation and development. Generalized social trust is not a predictor of community participation.

Another factor that proves to be relevant in explaining community participation is represented by the issue of holding management positions, either in the professional or in the political life, before and after 1898. In other words, people who have or had management positions participate more in actions on the level of neighborhood. This is indicative of the fact that either acquiring the knowledge and the abilities of a successful participation or the creation of a role identity specific to social activists are important mechanisms in promoting participation.

4. Conclusions and discussions regarding community participation

As a conclusion, it can be said that as far as community participation in Oradea is concerned, the following hypotheses are confirmed or modified:

- People from wealthier social categories have a higher rate of participation;
- Density of social networks increases participation while their intensity decreases it;
- Women participate more in community actions than men;
- Older people participate more than young people but participation decreases with age;
- The level of education does not explain community participation;

- Generalized social trust does not explain community participation.

Generally speaking we may say that these results point to the fact that it is possible that on the level of the urban communities in Romania community participation has a distinct profile than civic participation traditionally measured as associative participation in NGOs. This could be the reason for not finding support for some of the tested. Consequently, we formulate the hypothesis that will be tested in the future, namely that in terms of adherents, community participation is highly different from associative participation.

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AUTHORITARIANISM AND DEMOCRACY IN THE RATING EQUATION

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The challenges that the rating process has been submitted to after the onset of the contemporary economic crisis caused profound shifts on how this activity is performed. The parties involved in assessing and evaluating country risk have observed only distorting effects derived from the global recession, thus neglecting political valences inevitably associated to the difficult times that came to past. This article aims to evaluate the role of authoritarianism and democracy over investors, but also to analyze the situation of the social movements that took place in the Arab world.

Keywords: political risk, geopolitics, realpolitik,, international business, rating

JEL: F51, F59

Realpolitik under the circumstances of authoritarianism

The events that occurred in 2011 in North Africa led to rethinking of how democratic governments and various companies that depend on them, altered their relationship with authoritarian governments. The transposition of North African nations from modernization to modernity (Huntington S.) brings a change of paradigm.

The important developments from the Middle East and North Africa seem to give a new perspective on how all these players are starting to look at their partners, whose legitimacy to govern is impaired. Until the end of the events marking the international political scene, governments and companies will show an aversion towards these regimes than not well seen by the international community or by the people they lead. Actions that will take shape during the next period can have as a final point the recognition of the importance of governance legitimacy and a clearer manner to point it out in political risk assessments. If we get to rethink the political stability in terms of the legitimacy to govern, there will be extensive changes in foreign policy among with heavily developing of new strategies for foreign investments, which will have a direct link to the global policies.

Current events have brought to public attention the issue of ethics in the relations between developing and developed countries, but also the need to find a new direction expressing realpolitik (Rauchhaus R.). France was affected by the international perception that it had cordial ties wto the former Tunisian autarkic regime. U.S. openly supported Mubarak regime in Egypt, while Britain, neglecting the Lockerbie incident, claimed diplomatic rehabilitation for Muammar Gaddafi. The argument to support dictators and undemocratic governments was traditionally based on players' pragmatism. This way of treating things achieved through a diplomatic approach has attracted support from such states in the Cold War, the Gulf conflict and, more recently, in the U.S. war against terrorism.

On the basis of searching for allies but also fueled by the fear that governments could be replaced with others that are opposing the ones from developed countries, the former governments have begun to tolerate bilateral relations with these illegitimate partners. Democratic governments have shown a tendency to neglect the political issues of states under dictatorships, also revealing great tolerance for their leaders' conduct.

Westerners fear that the political vacuum in the countries of the Arab world, would allow Islamic extremists to gain the power in these locations. However, such fears seem to be contradicted by the peoples who are kicking the dictators, and demand an increase of the democratization

process. In reality, the actual direction that they will go will depend on the message made by every political force and by the degree to which this message attracts more supporters. This approach is obvious in Egypt, where The Muslim Brotherhood is unlikely to impose its Islamic vision, as most people called for reforms designed to democratize the country. One can not overlook the fact that any action taken in the revolution affected regions must take into account the view of the political representatives of Islam. This idea comes out based on the premise that their representatives will have to play a more or less significant place in the political life of each country.

The problem that developed countries governments face in the post-revolutionary period is that new leaders will have to seek legitimacy in a democratic way. By seeking legitimacy, foreign governments and multinationals with business in these countries will have to accept the new regimes regardless of their political orientation or the statements they make. This has dual implications reflected at government and investor level.

The investments and ratings in the new political conjuncture

Political issues in Tunisia, Egypt and Libya created ethical and practical dilemmas for investors who have exposure on those countries. The prevalent sectors covered by foreign investment are associated to the extraction / processing of natural resources and tourism. Especially in the mining industry there is the possibility to operate in environments which are characterized by the troubled political legitimacy of the ruling regimes. Any change of such a regime creates a concern of the investors in terms of contract and asset security. Further on, issues related to how the investor is perceived and his/her ties with the former regime are other elements to be considered. There are historical precedents where companies were forced to pay damages to the new regime due to the fact that they have had a history of collaboration with the former corrupt or authoritarian government.

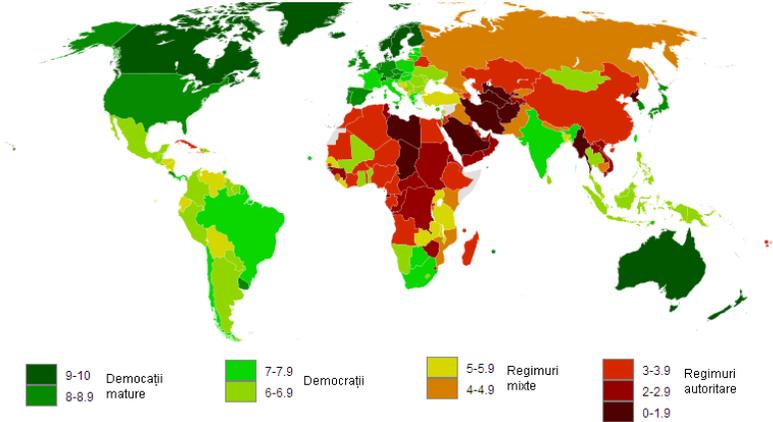
In their traditional approach, theories reveal that foreign investors tend to be indifferent to the type of the host's country government, or that they even favor the "stability" of an autocracy. A study performed by "Economist Intelligence Unit" (EIU - Index of Democracy 2010) regarding companies with business abroad found out that 50% of respondents considered the democracy as an attribute when making the investment decision, while 30% indicated that authoritarian states were chosen because they are more predictable and offer a stable environment. The results of the study show the investors' predisposition to performing business with authoritarian governments, which are perceived as more stable.

If recent developments in North African countries are likely to change the opinions already formed on those issues it is still uncertain. It is unlikely to experience a radical shift in the conscious of investors, because in many cases the benefits are higher than the long-term costs. Mining companies operating in the areas affected by strong authoritarianism can not afford the luxury to select countries where they operate. They simply go where the resource is available to be extracted. In order to overcome the political problems this particular class of investors a serious planning of operations is performed in the countries where they carry out such states. Companies in the oil field, as a specific example for the mining sector, have some experience in managing political risk. The latest example of mutation in these companies is the Algerian government's decision, to take economic measures that would bring more money to the public budgets by sanctioning oilcos. The taken measures calmed down the social tensions as they followed to tax foreign companies operating in the oil field.

Experienced investors in international markets are prepared for the event that the newly installed regimes want to review the terms of contracts or concessions. The investors' major concern is actually the possibility that overturning these authoritarian regimes could bring a prolonged period of uncertainty, with frequent changes of political direction. This perception is reconciled with the idea of political stability, arising from the EIU study, meaning that an investor wants,

above all stability. There is little doubt that the current political events make other autarkic regimes' longevity to become increasingly suspect. In this regard, investors should reassess the premises from leaving the quantification and measurement of political risk and their actions in countries with autocratic regimes.

Fig. 1: EIU Democracy Index (2010)



Source: Economist Intelligence Unit

Because the evaluation and rating agencies are the first level of protection for investors regarding country risk, it becomes impetuous the need to consider in their analysis a differentiator between democratic and authoritarian states. This issue is strongly connected to the legitimacy of the regime. As investors, rating institutions tend to marginalize the impact of the legitimacy of a political system in the political risk for a state. Worrying is the fact that not all investors have the ability or power to reorganize their business under the specter of new changes and the mere presence of big names on the market is not sufficient to guarantee the absence of political and economic crashes.

All this leads to the idea that rating institutions should reconsider how they analyze different entities. Indeed it should be noted that there are patterns in which political risk ratings tend to decrease at countries with a more pronounced degree of authoritarianism. Translating this situation in ratings provided for political risk assessment reveal that Iran and China can not have a higher evaluation than democratic states have. A rethinking of how states are seen in terms of their government legitimacy comes at a delicate moment, as the world is currently divided almost equally between democracy and authoritarianism.

The new contagion sources for political risk

Internet and technology have begun to play an important role in influencing masses of people and unavoidably this is reflected in an indirect manner on the economy. The impact of technology is the main differentiator of the twentieth century and the twenty-first century, compared with previous periods. Accessibility and ease characterizes information flows and this has attracted a number of vulnerabilities. This field is still being neglected in the rating process of a country or a company. In 2011's yearly context, the online communication has played a decisive role in the formation and the events that have succeeded in Africa and have spread to the entire Arab world. Internet services were restored in Egypt on February 2, 2011, after being completely closed for two days after the riots that took place. The causes which urged the authorities to take such measures are related to the role the Internet plays in daily activity, and especially the role it had in shaping and carrying out revolutions in Egypt and Tunisia.

The new-found vocation of social networks in a politics is crucial as it provides a fairly and clear measurement of the frustrations of a nation. Thus social networks are a barometer for political risk in countries where liberty is still to be improved. In the past, many governments have resorted to repressive policies or internal regulations to stop the activity of some internet pages with opposing views. The most frequently cited reason to resort to this measure is the inconsistency between company and country policies. In the case of Facebook, a rule made to ease up the reconciliation process between public and private policies requires all administrators to use their true identity on their pages. In the specific cases of the protests in Egypt, Facebook faced a requirement to assess the compliance of this policy. The social network's answer to this claim was this time astonishing, as instead of closing the page, Facebook facilitated a controlled transfer of the page created under a pseudonym to an U.S. Egyptian dissident. Such an action has allowed the operation of the page without any real risk to its creator and without violating their own regulations. Active involvement of Facebook in the riots from Egypt has occurred in the context that several human rights organizations have highlighted the power that IT companies hold on to controlling information flows.

The historical duels between companies from the IT sector and governments have major implications, since each of them seem to have understood the power each holds. In 2010, Google entered into an open conflict with Chinese government censorship on the issue of its search engine results'. Meanwhile, the Russian government used the illegal use of software to close more pro-democratic NGOs with critical vocations to its policies. In this case, Microsoft responded by offering free licenses for the applications for which those Russian organizations could afford. During the riots from Egypt, both Facebook and Twitter have played an important role in organizing and conducting protests while other companies from the industry have supported their actions. For example, Google has provided a service to allow users to post messages on Twitter by voice command, after the government blocked access to the micro blogging of the social network. The role of the social networks in the protests and uprisings during the recent years has attracted worldwide attention. Thus, social networks have made possible changes in the political regimes more easily. A basic assumption in understanding their role is that social networks are more difficult to support an authoritarian regime. Even for hardened autocracies such as Iran and Myanmar the on line environment poses a threat as it may induce a slow democratization process.

However, not the social networks are instigating to revolutions. They are merely the means of communications for the frustrations of a nation by representing a free way of expressing uncensored ideas. In fact, the role of networks in creating and developing the events in Tunisia and Egypt differ only in terms of their means compared to the tape recordings of the video of ayatollah's Khomeini Ruholla Iranian revolution of 1979. Social networking groups have managed to facilitate political shifts by cost reduction, organization, recruitment and training of new adherents to a certain cause.

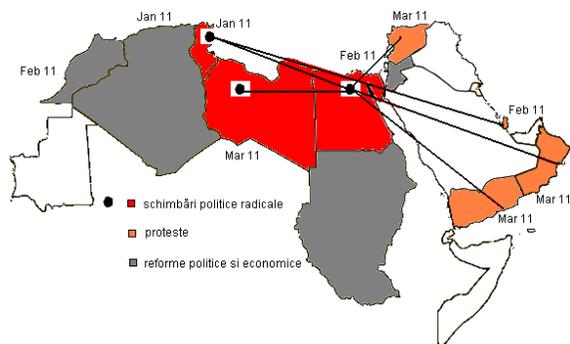
Fig. 2: Indices of the predisposition to conflict and corruption of some countries of the Arab League Member (Feb 2011)

| | Yemen | Libia | Egipt | Syria | Arabia Saudita | |
|--------------------|---------|----------|---------|-------|----------------|--------------|
| Shoe-Thrower Index | 86.9 | 71 | 67.6 | 67.3 | 52.8 | great risk |
| IP Coruptie | 146 | 146 | 98 | 127 | 50 | |
| | Algeria | Iordania | Tunisia | Maroc | Bahrein | |
| Shoe-Thrower Index | 51.3 | 50.3 | 49.4 | 48.2 | 37.7 | reduced risk |
| IP Coruptie | 105 | 50 | 59 | 85 | 48 | |

Source: The Economist, Transparency International

Tunisia is a landmark case because it is the first country in which social conflicts broke out. Its on line revolution has started after posting in several locations of the online environment some materials showing the problems the country. Even if "inspiration is not contagion" it is impossible to overlook the fact that the premise of a contagion is supported not only by the people's desire to overthrow the government after a predetermined pattern, but more to common problems faced by all the countries affected: unemployment, poverty and the corruption. The primary role played by social network in the Tunisian revolution would be an example for the Egyptian authorities, who evaluated from the outset the true contagion potential of these situations, but failed to oppose the free flow of information.

Fig. 3: Protest movements in the Arab world and their propagation (2011)



Sursa: BBC

Symptomatic factors of Tunisian problems are found in all countries placed under the specter of crisis caused by the political context in which they are. What social networks have been helping with is to free up the information flow within these countries where freedom of expression is still restricted. This has led to mutations of the political risk associated to them.

The cases of Tunisia and Egypt were direct results of the use of social networks like Facebook and Twitter to help organize, communicate and, ultimately, to initiate protests. In the past, there were examples of nations that have turned to social media to express their discontent with the political regimes. In 2009 there were the examples of the "green revolution" from Iran, closely followed by Western media via YouTube and Twitter, while in the Republic of Moldova, a popular movement was named "the Twitter revolution".

In conclusion the freedom of expression should be quantified in country risk analysis. This indicator can lift the mask that hides a system that sooner or later will collapse under its own weight. The on-line environment can be a clear barometer for determining the degree of freedom from each country. Of course, in the case that a government recurs to restricting dangerous groups' rights, it is understandable that such measures are to take place. Revolutions determined by social networks and their differentiators play a significant role in this gear. Representing a new environment, with dangers and benefits, social media can facilitate communication and can be a very important element of analysis to quantify the more subjective areas of country risk.

Authoritarianism and democracy are key elements in understanding and correctly evaluating political risk. However, it seems that some times their importance is neglected and this can only bring challenges to the rating process since business perceive authoritarianism somehow more stable than a democracy. In the light of the "on line revolutions" some rethinking of the validity of this idea is to be reconsidered. Further on, the events that took place in 2011 reveal new contagion sources for political risks and point out the need to consider the evaluation of certain freedoms when assessing country risk.

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TRENDS OF EMPLOYMENT IN INFORMAL SECTOR IN ROMANIA DURING CRISIS; ECONOMIC AND SOCIAL EFFECTS

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Abstract: *The present paper emphasizes the size and trend of employment in the informal sector as affected during the recent years by the crisis and by showing the relation with informal economy. The paper is structured on three parts. The first part focuses on the concepts and methodology popular and recommended by the international organizations together with the ones applied for the estimations presented in the paper. It brings information on the conceptual framework endorsed by International Labour Office (ILO) on the 15-th International Conference of Labour Statisticians (15th ICLS) - on informal sector (which was subsequently included in the revised international System of National Accounts, SNA 1993) and employment in informal sector - and on 17th ICLS, on informal employment. Methods used for obtaining the estimates for Romania figures on informal economy and employment are treated. For the informal economy the method used by National Statistical Institute of Romania (INS) for estimating the underground economy and own calculations were used. For estimating the employment in informal sector a method developed by the authors was applied which consists, on short, on reconciliation between demand and supply available from statistical sources. Second part is dedicated to the analysis on the estimates produced, with observations on the trends induced by the crisis on informal economy and employment. The second also deals with several characteristics and dimensions of the employment in informal sector by gender and economic activities as well as the relation with several macroeconomic and social indicators. Finally, the third and last part proposes the direction of action and policies aimed to combat and reduce the informal sector and to transfer it into the "light", "visible" side, i.e. the formal sector.*

Keywords: *informal employment, informal economy, economic crisis*

JEL classification: *E25, E26, G01*

I. Theoretical and methodological considerations

Informal sector

Taking into account the importance of the role played by the informal economy for employment creation, income generation and poverty reduction, it is essential first of all to establish the content and meaning of the concepts used for defining employment in informal sector as against informal economy. Secondly, these considerations are necessary to better understand the characteristics and evolutions of both phenomena, i.e. informal sector regarded from the employment perspective as well as from the economic one. And again it is worth to clearly present the operational definitions developed for statistics applied on the informal employment and economy.

In January 1993, the *Fifteenth International Conference of Labour Statisticians (15th ICLS)* adopted an international statistical definition of the informal sector, which was subsequently included in the revised international *System of National Accounts (SNA 1993)*. Inclusion in the SNA of the informal sector definition was considered essential as this would make possible indentifying the informal sector separately in the accounts and, hence, quantifying the contribution of the informal sector to the gross domestic product (GDP).

As stated in the OECD Handbook, "the vast majority of informal sector activities provide goods and services whose production and distribution are perfectly legal. This is in contrast to illegal production. There is also a clear distinction between the informal sector and underground production. Informal sector activities are not necessarily performed with the deliberate intention

of evading the payment of taxes or social security contributions, or infringing labour legislation or other regulations.”

At the Fifteenth International Conference of Labour Statisticians, the **informal sector** was characterized as „consisting of units engaged in the production of goods or services with the primary objective of generating employment and incomes to the persons concerned. These units typically operate at a low level of organization, with little or no division between labour and capital as factors of production and on a small scale. Labour relations - where they exist - are based mostly on casual employment, kinship or personal and social relations rather than contractual arrangements with formal guarantees”.

In order to obtain an internationally agreed on definition of the informal sector - acceptable to both labour statisticians and national accountants - the informal sector had to be defined in terms of characteristics of the production units (enterprises) in which the activities take place (enterprise approach), rather than in terms of the characteristics of the persons involved or of their jobs (labour approach).

For statistical purposes, the **informal sector** was defined as a group of production units which, according to the definitions and classifications provided in the United Nations System of National Accounts (SNA Rev.4), form part of the household sector as household enterprises or, equivalently, unincorporated enterprises owned by households⁶ Within the household sector, the informal sector comprises:

- (i) "informal own-account enterprises" (i.e. household enterprises owned and operated by own-account workers, either alone or in partnership with members of the same or other households, which may employ contributing family workers and employees on an occasional basis, but do not employ employees on a continuous basis); and
- (ii) the additional component consisting of "enterprises of informal employers" (i.e. household enterprises owned and operated by employers, either alone or in partnership with members of the same or other households, which employ one or more employees on a continuous basis). For operational purposes, enterprises of informal employers may be defined, in terms of one or more of the following criteria: (i) size of the unit below a specified level of employment; (ii) non-registration of the enterprise or its employees.

⁶ According to the SNA (Rev.4), household enterprises are units engaged in the production of goods or services which are not constituted as separate legal entities independently of the households or household members that own them, and for which no complete sets of accounts (including balance sheets of assets and liabilities) are available which would permit a clear distinction of the production activities of the enterprises from the other activities of their owners and the identification of any flows of income and capital between the enterprises and the owners.

Employment in informal sector and informal employment

The 15th ICLS also defined the **employment in informal sector** as ”comprising all jobs in informal sector enterprises, or all persons who, during a given reference period, were employed in at least one informal sector enterprise, irrespective of their status in employment and whether it was their main or a secondary job,, (Hussmans R., 2004)

The *Seventeenth International Conference of Labour Statisticians (17th ICLS)* endorsed the definition of the informal employment which is a job-based concept as compared to the employment in informal sector which relates to the enterprise-based concept. Thus, the 17th ICLS defined **informal employment** as the total number of informal jobs, whether carried out in formal sector enterprises, informal sector enterprises, or households, during a given reference period, comprising (see the below diagram):

cell 3 - own-account workers employed in their own informal sector enterprises; cell 4 - employers employed in their own informal sector enterprises; cells 1 and 5 - contributing family workers, irrespective of whether they work in formal or informal sector enterprises; cell 8 - members of informal producers’ cooperatives; cells 2, 6 and 10 - employees holding informal jobs in formal sector enterprises, informal sector enterprises, or as paid domestic workers employed by households; cell 9 - own-account workers engaged in the production of goods exclusively for own final use by their household, if considered employed. Cell 7 refers to employees holding formal jobs in informal sector enterprises⁷

According to the diagram below, the coverage of different segments of informal employment, in relation with the concept applied, are:

- *Informal employment*: Cells 1 to 6 and 8 to 10.
- *Employment in the informal sector*: Cells 3 to 8.
- *Informal employment outside the informal sector*: Cells 1, 2, 9 and 10.

Conceptual Framework: Informal Employment

| Production units by type | Jobs by status in employment | | | | | | | | | |
|--|------------------------------|--------|-----------|--------|-----------------------------|-----------|--------|------------------------------------|--------|--------|
| | Own-account workers | | Employers | | Contributing family workers | Employees | | Members of producers’ cooperatives | | Formal |
| | Informal | Formal | Informal | Formal | | Informal | Formal | Informal | Formal | |
| Formal sector enterprises | | | | | 1 | 2 | | | | |
| Informal sector enterprises ^(a) | 3 | | 4 | | 5 | 6 | 7 | 8 | | |
| Households ^(b) | 9 | | | | | 10 | | | | |

(a) *As defined by the Fifteenth International Conference of Labour Statisticians (excluding households employing paid domestic workers).*

(b) *Households producing goods exclusively for their own final use and households employing paid domestic workers.*

⁷ Such cases, which are included in employment in the informal sector but excluded from informal employment, may occur when enterprises are defined as informal in using size as the only criterion, or where there is no administrative link between the registration of employees and the registration of their employers

Note: Cells shaded in dark grey refer to jobs, which, by definition, do not exist in the type of production unit in question. Cells shaded in light grey refer to formal jobs. Un-shaded cells represent the various types of informal jobs.

Methods for measuring the informal sector

The method chosen plays an important role in determining the size and characteristics of the informal sector in terms of employability. . Usually the indirect methods allow to capture the information on employment in informal sector while the direct methods on informal employment. Main **direct methods** as described in Chapter 10.3 Measuring the Informal Sector of the OECD Handbook already mentioned are:

Labour Force Surveys (LFS) - monitoring the number and characteristics of the persons in the informal sector and the conditions of their employment and work as can be achieved by periodically including a few additional questions pertaining to the informal sector definition in an existing labour force or similar household survey

Household Income and Expenditure Surveys - household income and expenditure surveys are a potential source of information on the demand by households for goods and services produced in the informal sector. They cannot provide information on the total demand for informal sector products, but only on household final consumption expenditure for informal sector products, which is only a part of the total demand.

Informal Sector Enterprise Surveys - an enterprise survey presupposes the availability of a sampling frame of informal sector enterprises or establishments. List frames are usually not available. Often, enterprise surveys can be conducted only following a census of informal sector units or a general economic/establishment census covering the relevant branches of economic activity and containing the items required for the identification of informal sector units.

Informal Sector Mixed Household-Enterprise Surveys - such surveys are the most suitable approach when the aim is to collect comprehensive data about the informal sector. These surveys can cover all informal sector entrepreneurs and their activities, irrespective of the size of the enterprises, the kind of activity and the type of workplace used, and irrespective of whether the activities are undertaken as main or secondary jobs. In particular, they can also cover activities undertaken inside the owner's home or without fixed location.

Modules attached to household surveys - attachment of an informal sector module to an existing household survey (such as LFS) means that the informal sector survey sample is obtained as a sub-sample of the base survey.

Integrated surveys - can be seen as special types of modular surveys. Integrated surveys are designed to meet several objectives at the same time, i.e. the collection of data about the informal sector and other topics, e.g. labour force, household income and expenditure.

A on the **indirect methods** used to measure the undeclared work (UDW) was presented in the Final report to the European Commission in December 2009 by a group of experts from GHK and Fondazione G. Brodolini. According to this report, *indirect or general methods* rely on comparisons of macroeconomic aggregates (such as national accounts, electricity consumption, cash transactions) in order to estimate the extent of UDW; the methods in this category are: (i) Discrepancy methods; (ii) Labour Input methods; and (iii) the Degree of Participation method.

Econometric approaches group together all the methods that produce a total quantitative estimate of the non-observed economy by means of a model; there are three distinct methods in this group: (i) the Monetary (Tanzi) Method; (ii) Global Indicators Methods (Electricity Consumption); and (iii) Latent Variable Methods.

Discrepancy method - comparing income and consumption – uses as approach for estimation: declared income which does not include income that has been concealed for tax reasons, whereas the estimate of consumption does. Thus, the difference between the two estimates can be attributable to tax evasion. Another popular application of discrepancy methods - recommended

by Eurostat to ensure the exhaustiveness of national accounts - is to compare the findings of labour force surveys (LFS) with the recorded labour demand (e.g. based on company declarations to tax or social security authorities or national statistical offices).

Labour Input method - information on the supply side of the labour market – for instance the Labour Force Survey (LFS) – can register a part of the undeclared work because individuals are less motivated than enterprises to conceal the nature of their work. In this method, the above information is compared with information on the demand. It makes use of several statistical and administrative sources.

Degree of participation method - a well-established procedure does not exist. As a general framework, positive (negative) variations in labour force participation in the official economy are seen as negative (positive) variations in undeclared labour.

Monetary Method - Tanzi Method – based on following key assumptions: underground transactions are conducted only on a cash basis.

Global Indicators Method - Electricity Consumption - the difference between the growth rate of electricity consumption (a proxy for the growth rate of total economic activity) and the growth rate of measured GDP yields an approximation of the growth rate of unrecorded income.

Latent Variable Methods - MIMIC (multiple indicators and multiple causes) or DYMIMIC (dynamic multiple indicators and multiple causes) - based on following key assumptions: Undeclared work is an unobserved (or latent) variable that influences observed indicators and is determined by observed variables.

Estimation methods used for Romania

A. The trends of the informal economy were based on the estimates on share from GDP of the underground economy.

In Romania, the National Institute for Statistics (INS) estimates within National Accounts the non-observed economy (NOE), also known as underground economy, which stands for productive legal activities but deliberately concealed from public authorities for such reasons as to avoid the payment of income, value added or other taxes; to avoid the payment of social security contributions; to avoid having to meet certain legal standards; and to avoid complying with certain administrative procedures, such as completing statistical questionnaires or other administrative forms.

The **informal sector** consists (according to ILO definition) of productive units characterised by a low level of organisation, with little or no separation between capital and work, and by work relations based on kinship and/or social relationships, rather than formal contracts. These units belong to the household sector. The owners of such units are totally responsible for all financial and non-financial obligations undertaken for the production process. If the activity of these recorded units is deliberately hidden they enter in the sphere of economic underground.

For the identification of the NOE, the whole economy is split into two sectors: formal and informal. For **formal sector**, the estimation of the INS Romania consists of:

- under-reported value added by registered institutional units in the formal sector (non-financial corporations) because of the underground utilisation of labour;
- under-reported value added by registered institutional units in the formal sector (non-financial corporations) because of value added taxes evasion.

First the estimation of black labour is performed. The activities which are under-reported are evaluated based on estimation of input of labour, procedure recommended by SNA 93. Using this approach, it is possible to evaluate the irregular labour within the productive process and under-declaration of the production obtained by means of regular labour. The method used is based on the comparison between the labour force supply and demand in order to identify the persons who carry out a legal activity in a unit from formal sector, but are not declared to authorities.

Step two – the estimation for VAT evasion is made. In order to obtain gross wages which stay at the basis of GVA compilation, the obtained number of persons engaged in “black labour” is multiplied with the average gross salary, specific by each industry, obtaining Compensation of employees. Specific coefficients of Compensation of employees into GVA are used - (characteristic for the small enterprises from the respective branch of activity, identified based on Structural Business Survey - SBS) and the amount of gross value added is estimated.

Estimations are made for the VAT evasion. One part of the VAT evasion represents the VAT for underground economy already estimated using methods presented above, and other part represents the VAT evasion of reported turnover. For the whole VAT, the tax evasion is calculated by the difference between the theoretical VAT and the value received by the State Budget. Theoretical VAT is calculated for intermediate consumption, final consumption of households, final consumption of general government and GFCF based on rates of VAT by products, defined by the law. This fraud is included in output and GVA for each corresponding branch.

For the **informal sector**, the estimations are calculated for all activities performed by family associations and self-employed. Data on these activities are available from the Ministry of Public Finance. Out of the Romanian Labour Force Survey (AMIGO) information about the number of persons who work in family associations and self-employed are used. The estimations made are based on the principle according to which the incomes realised by non-paid workers (persons from family associations and self-employed) cannot be less than the average wage earned by employees in the same activity, from small units. The income declarations of the Ministry of Public Finance received from registered self-employed and family associations are compared with the value of these calculations. As result of this analysis, the incomes are adjusted, and the tax evasion of the units registered within the informal sector is completely removed.

Another important type of non-observed economy is represented by the activities carried on in **units non-registered**. In this category are included: dressmakers, tailors, workers who repair cars, hairdressers, house painters, plumbers, teachers giving private tuition, people into house-rental during holiday time. For such activities a distinct valuation is undertaken using specific assumptions and available data sources from the statistical system. These data sources are specific to each kind of activity, as described above.

- **Hotels:** the basic assumption is that the number of non-registered tourists is equivalent to 1/3 of the total registered tourists. The average values of the accommodation for a night, considering a number of 15 holiday nights per year is, then, multiplied by the number of non-registered tourists. The result is considered as the output. The intermediate consumption is estimated by using the IC/registered output ratio of the formal sector.
- **Construction:** It is considered that 50% of the total self-employed registered in this activity carried out also a non-registered activity. This number is multiplied with the average gross salary of the construction activity and the result is considered as GVA. To calculate the production it is used the ration GVA/registered output of the small construction enterprises from the formal sector.
- **Education:** it is considered that a half of the pupils registered in the last year of the secondary school as well those from the last year of the high school took meditations. Their numbers are multiplied by the average value of a lesson, by the frequency of the lessons per week as well as by the number of weeks in a year.

B. Estimates on employment in informal sector are the results of own calculations based on the discrepancy method on labour input for employees as provided by the Romanian Labour Force Survey (AMIGO) for demand component and the Labour Cost Survey for supply component. Informal employment does not exist in public administration was the assumption used in terms of coverage on economic activities. For the non-paid employment the estimates provided by AMIGO; adjustment coefficients were applied by economic branches following an algorithm

similar to the one used by National Accounts for estimating the labour from informal sector and non-registered units.

II. Employment in the Romanian informal sector and its impact on several economic and social phenomena

Informal economy and employment during crisis

The effects of the recent financial crisis were felt in Romania since the second half of 2008. The crisis has fuelled the economy. Hidden economy and evasion of tax or payroll taxes have become increasingly common. The private sector has limited the business and resorted to layoffs. In the budgetary sector the austerity measures aimed also to drastic reductions in staff and earnings. The measures taken for reducing earnings in the budgetary sector have influenced the private sector to taken similar action. Decreased purchasing power has led people to buy cheaper products that are often found on the black market where no taxes are paid. The shadow economy has taken on, with negative consequences for state revenues, thereby stimulating the continuation of the crisis.

The estimates on informal sector evolution (*see Annex, Figure 1*) – expressed in terms both economic as percentage from GDP, and labour as percentage from total employment – show how informal sector spread widely after 2008. The share in GDP grew to 22.2% from 19.6% in 2008 (after a 21.0% in 2009). The share in employment was even higher - by 6 percentage points over the last two years (from 23.2% in 2008 to 29.2% in 2010). Even if of different amplitudes, both phenomena have similar trends with negative impact induced by the crisis.

Trends of the employment in informal sector

Since whether to include or not agricultural activities is controversial, the estimations were prepared in both versions (with and without the agricultural sector). In the following, the version including agricultural sector (TIA, total population including agricultural sector) was analyzed.

Estimations on employment in informal sector (*see Annex, Figures 2 and 3*) made as described above lead to emphasising several important observations. First of all, the phenomenon is widespread and if in 2002 the share of employment in informal sector in total population was less than a quarter (23.3%, similar to the share estimated for 2002, i.e. 23.3%), in the following years it recorded higher levels (25.7% in 2004, 24.2% in 2008), and falling in 2008 to 23.2%. But, after the emergence of the crisis, the phenomenon regressed significantly, and in 2009 it already exceeded a quarter (25.9%) of total employment and continued growing to 29.2% in 2010.

The second observation relates to the higher shares for male population as compared to female one, true for the entire period without any exception: e.g. 24.0% as against 22.5% in 2002 and 30.8% as against 27.4% in 2010.

Employment in informal sector (*see Annex, Table 1*) is more met in:

- agricultural activities (with shares below 38.5% until 2008 but reaching 39.0% in 2010) where most part is composed from elderly, persons with low education levels, who work in their own households mainly to produce for self-consumption (and less for market); the phenomenon is almost equally spread irrespective of gender; 2010 shows a migration to agricultural sector of the jobless population who remained without a work place due to dismissals in the non-agricultural activities as effect of the recent crisis;
- collective, social and personal services⁸ (raising from 46.0% in 2002 to 50.4% in 2010) where mainly two categories of persons are identified - those who perform services that require a certain qualification (such as hairdressers, tailors, dressmakers, boots makers etc.) and those who have no qualification or only very low education levels and who,

⁸ Due to the differences between the two CANE (Classification of Activities from National Economy) versions (Rev. 1 and Rev.2) the coverage for collective, social and personal services is not fully comparable for period 2008 – 2010 with previous years.

- actually, perform only domestic activities (cleaning, laundry, ironing, cooking, baby-sitting or care services for elderly or sick persons, gardening, house painting etc.);
- real estate transactions – difficult to be identified as such for the period 2002 – 2006 because, according to Rev.1 version of CANE⁹ the coverage was considerably higher also comprising renting and business activities, which were excluded in version Rev.2 of CANE – where during 2002-2006 more than a quarter of employed population was engaged in the informal sector; looking at 2008 – 2010 period the shares are significantly higher with a clear ascendant trend (from 42.3% in 2008 to 50.3% in 2010) but the phenomenon is observed exclusively for real estate transactions and presents deep gender disparities: the share for men rises 51.2% in 2008 and 62.5% in 2010 while for women 34.3%, respectively 38.1%;
- constructions (where data are comparable over time since the differences in coverage between the two CANE are insignificant), activities characterised by a constant increase over the entire period from 20.8% in 2002 to 36.6% in 2010;

In terms of employment, the informal sector absorbed workforce in every economic activity (*see Annex, Table 1*), with significant values in trade (18.2% in 2002, but 27.2% in 2010), hotels and restaurants (13.2% in 2002 and just over a fifth in 2010), mining (15.4% in 2002 significantly increased in 2010 to 23.5%), manufacturing (13.0% in 2002 to 12.8% in 2008 rising to 20.3% in 2010) etc.. Noteworthy is the growth of informal employment observed wherever the formal sector created a niche, leaving uncovered the population's demand, for inter-urban service transport, for instance. Following reduction, or interruption of the transport systems and the spectacular increase of the county's prices on rail transportation, many private companies transport networks emerged and developed rapidly in recent years. Therefore, the males employed in the informal sector in transport held significant shares for the entire period (16.2% in 2002, 19.2% in 2004, 14.7% in 2008 and highest in 2010 - 22.8%).

Services such as education and health deserve particular attention. Although the shares in total employment of the corresponding economic activity of those working in informal sector had a positive evolution by diminishing from 22.3% in 2004 to 17.0% in 2008 in the case of education and from 20.6% to 17.1% in the case of health, the year 2010 brought a negative impact, the shares increasing by about 10 percentage points as against 2008 (with levels of 27.8% for education and 26.5% for health). The existence and maintenance at close values – for the entire period – of the shares of employment in informal sector demonstrate the deficiency of the education and health care systems in Romania.

2010 marked a visible regress; estimates have shown major deteriorations in many economic activities.

In addition to those already mentioned, the situation recorded for activities (According to CANE Rev.2) in “Water distribution; sanitation, waste administration, decontamination activities” has to be commented, where the share of employment in informal sector grew to 42.6% (as compared to 25.0% in 2008), in “Activities of administrative services and activities of support services” where the regress was of 14.6 percentage points as against 2008 (40.3% in 2010 comparing to 25.7%) as well as in “Showbiz, cultural and recreation activities” where the gap against 2008 amounted to 18.6 percentage points (36.5% in 2010, 17.9% in 2008).

When looking at the distribution of employment in the informal sector by economic activities (*see Annex, Table 2*) is visible the strong share of the agricultural sector which absorbs an overwhelming part of the total employment in informal sector (59.8% in 2002 but decreasing year by year, in 2010 reaching the lowest level over entire period, i.e. 40.2%); a significant share is held by the manufacturing industry (oscillating between 11.2% in 2002 and 15.7% in 2004, in

⁹ Classification of Activities from National Economy, harmonized with the corresponding European Classification NACE (Rev.1 until 2008 and Rev.2 from 2008 onwards)

2010 recording a share of 12.4%) and wholesale and retail trade (increasing from 7.3% in 2002 to 11.4% in 2010).

Given the controversial issue of whether including or excluding agriculture from the scope of the informal sector, there is a need to assess the size and structure of this phenomenon on the particular variant, only for the non-agricultural activities (TEA — total population excluding agricultural sector).

From this perspective (*see Annex, Table 2, series on TEA*) - i.e. the distribution of the population employed in informal sector economic activities - the informal sector operates at the highest level in manufacturing activities (29.6% in 2002, down to 25.7% in 2006 - version of CANE Rev.1 and Rev.2 version CANE: 21.4% in 2008 decreased slightly to 20.7% in 2010), more among women than men (with a gap of less than 5 points percentage in 2002, declined to less than 2 percentage points in 2010).

Similarly, trade activities are on the second place (around 20% for the entire period), but gender disparities disadvantage the women.

Third place is for construction activities, where the proportion of workers in the informal sector increased during 2002-2008 (from 9.9% to 17.4% in the total workforce engaged in informal activities), but decreased in 2010 (15.9 %). The overwhelming majority of those engaged in this activity are men (14.3% of men employed in the informal sector in 2002, but 26.4% and 24.1% in 2008 and 2010 compared to only 2.0 to 3.0 % of women, regardless of year). High values are found in transport, storage and communications, especially among the male population (decreasing from 10.1% during 2002-2008 to 7.6% for 2010 to rise to 8.3 %).

Again the education and health activities draw the attention by the amount of people involved in the informal sector, especially in the case of women where 1 in 10 persons are in this situation.

The level of informal employment for collective, social and personal services remains high, the proportion for women being of 11.0% in 2006 (the maximum during the analyzed time interval), respectively, 6.2% in 2008 (minimum) compared with 9.7% and 4.3% - the percentage of men for the same period.

Impact on several economic and social phenomena

Employment has declined. The employment rate of population (NIS, AMIGO) aged 20-64 years was 63.3%, decreasing by 1.1 percentage points compared to 2008 and among the lowest compared with other Member States of EU. In 2010 was noticeable the modification of the structure of the employed population between the two basic components: employees and non-employees. Structural changes in 2010 compared to 2008 occurred against the background of the movement towards agriculture, a phenomenon seen in the diminishing share of employees (with 2.5 percentage points) and increasing share of non-employees in agriculture (mainly self-employed and family workers) by 3.1 percentage points.

Unemployment has increased. ILO unemployment rate rose to 7.3% in 2010 from 5.8% in 2008. Registered unemployment rate (according to National Agency for Employment) has seen an upward trend (*see Annex, Figure 4*) by March 2010 (8.4% - maximum of three years), after reaching a minimum in the months May, June, July 2008 of only 3.7%.

Increasing unemployment was the direct result of the massive layoffs and drastic reduction of vacancies. The number of vacant jobs offered by employers in 2010 represented only a quarter of those corresponding to 2008 (*see Annex, Figure 5*).

The purchasing power of the population was reduced. Total household real income index (INS, Household Budget Survey (ABF) for 2010 compared to 2009 was of 93.8%. Real earnings fell in 2010 to 96.0% as against 2009 and to 94.5% as against 2008.

Economic progress has been affected. GDP decreased (*see Annex, Figure 6*) in 2009 compared to 2008 (92.9%), decrease that continued in 2010 (98.7% compared to 2009)- INS, National Accounts and own calculations). Population households actual individual final consumption index also

showed a declining 91.3% in 2009 compared to 2008, and 98.0% in 2010 compared to 2009. Taxes on product were also affected; they have decreased in 2009 compared with the previous year to 87.5% and 96.0% in 2010 compared to 2009. Poverty has been exacerbated. At risk of poverty rate¹⁰ increased to 22.3% compared with 21.7% in 2009 (but slightly below that of 2008 - 22.4%).

III. Policies aimed at stimulating employment diminishment in the informal sector

Policies and measures to lower and finally eliminate informal labour should be developed according to Romanian particularities. A prerequisite for such measures and policies to take effect is to build strong structures and tools to ensure their sustainability and independence, regardless of political changes. Otherwise, the risk that they remain only "on paper" and have no actual effect in reality is extremely high.

Policies should be focussed according to target populations.

One type of policy should be outlined for the group of people who are in this situation beyond their control and working in the informal sector because they have no other choice. This applies particularly to vulnerable groups on the labour market (with low education, low skills, no opportunities for access to a minimum capital to allow a small business on their own, etc..) and even discriminated (at the extremes of the active working life - is considered too young or too "old"). For these groups of persons systems on social protection and assistance need to be improved, to encourage their employment in the formal sector through targeted grants, and a functioning system should be put in place for retraining and vocational conversion. Appropriate conditions should be created to enable mobility and labour deployment to regions where demand exists.

Another type of policy should be outlined for the second largest category, which is present within informal employment - the kind that has chosen this path. For them the objective is of identifying best practices and measures to transfer them into the formal sector. In this category are partly owners of non-registered units, with firms registered but having staff employed on the basis of unlawful agreements (without employment contract), those who under-declare incomes from profit, and unauthorized own-account workers or, again, those declaring only a small share of income. This category includes those who - employee and employer - in practice declared a low level of remuneration, part of the actual earning being paid "in hand". Their successful move from informal to the formal sector can be done only through appropriate incentive structures, so that the benefits of the formal sector should be obvious and desired.

One of the main courses of action to reduce and even eliminate informal labour is to reduce the tax burden, especially in sectors where informal work is manifested most actively: small and medium-sized enterprises, economic activities identified as having a significant share of informality. To this end, it is necessary to streamline bureaucracy and reduce the time lag for setting and registering an own-account activity, along with creating favourable conditions for obtaining credit.

Special attention should be paid to measures for improving labour legislation taking into account the practical realities, and allowing for a more flexible labor market:

- encouraging the creation of part-time jobs

¹⁰ According to EUROSTAT and EU documents (list of structural indicators, list of social inclusion indicators), the indicator used to measure (relative) poverty is named "at-risk-of-poverty-rate", to reflect that the income is only one of the multiple dimensions of poverty (the monetary dimension). The indicator is calculated as the proportion of persons from households with a disposable income less than a threshold representing 60% of the median disposable income by equivalent adult in the total population. The change in time of this relative poverty measure expresses only the influence of the income distribution modification on the proportion of poor, but not the evolution (increasing or decreasing) of the welfare level.

- coverage of the diversity of employment agreements that are practiced, but are not recognized and atypical types of employment programs;
- facilitating access to training and education (for example, for those who want to continue their studies, improving the skill or expertise, etc.).
- facilitating the reconciliation of family and professional life (for those who care for children attending preschool or elementary school, elderly or ill relatives who need help, assistance and supervision, etc.).

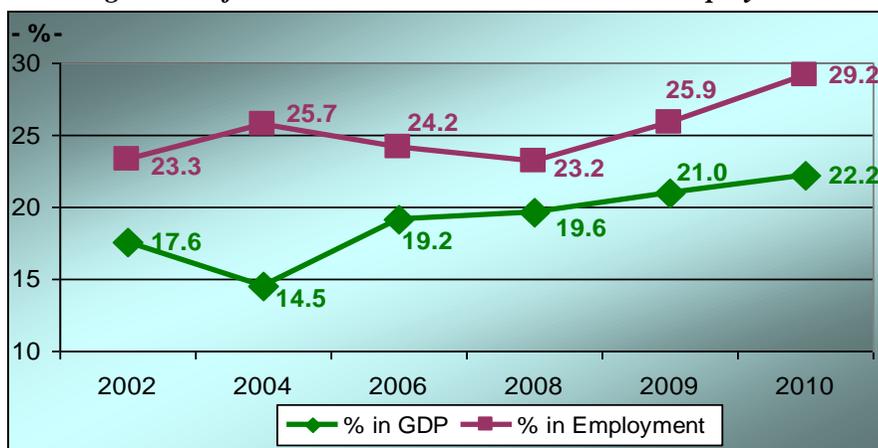
It is necessary to create structures for recognition and bringing into "light" services provided in households (home repair, fence, etc., baby-sitting, care of sick and/or elderly, performing household chores - cooking, cleaning, washing etc.) accompanied by the implementation of a benefit system in terms of tax reduction for households using/employing such services.

Strengthening cooperation between social partners is of great importance. Good coordination and collaboration among the partners will result in increased detection and reporting cases of fraud on the informal economy

Finally, in parallel with the political and economic measures, the mentality of individuals has to be changed, for both workers and employers, for the public in general. Information campaigns should be geared towards raising awareness of the risks that workers are subject to because of avoiding the declaration of work undertaken and income gained, to social stigma on informal work and those involved, from both sides - employer and employee. One key objective of the campaign should be aimed at removing deep-rooted distrust of ordinary Romanians in public institutions.

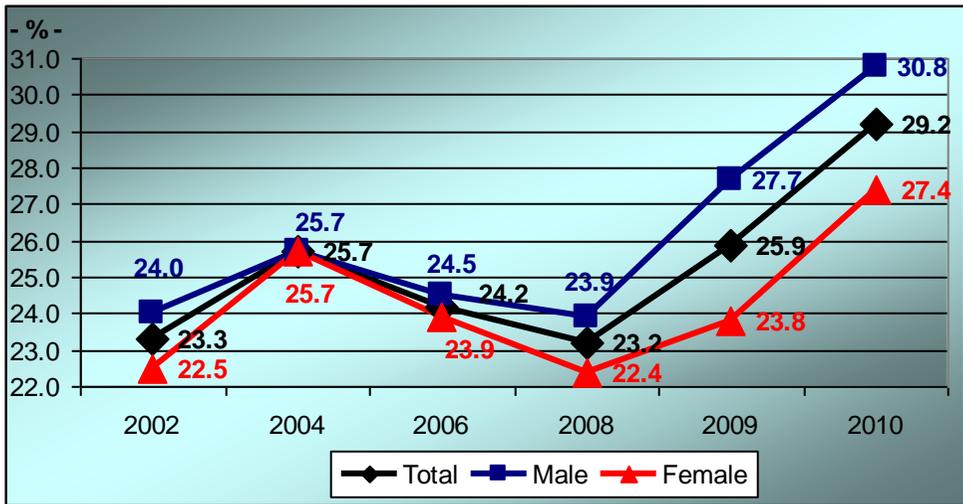
Annex.

Figure 1. Informal sector – share in GDP and in employment



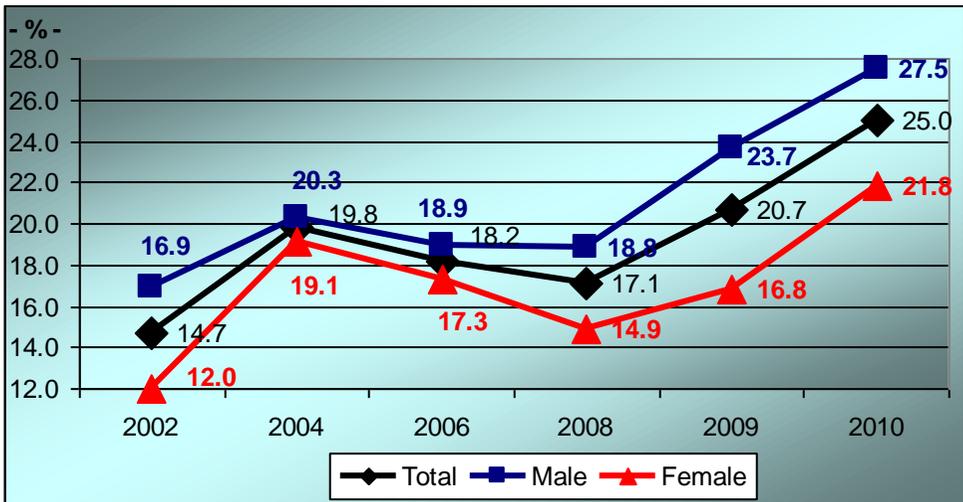
Source: INS, National accounts, Labour market statistics and own calculations

Figure 2. Share of employment in informal sector (including agricultural sector) in total employment



Source: INS, Labour market statistics and own calculations

Figure 3. Share of employment in informal sector (excluding agricultural sector) in total employment



Source: INS, Labour market statistics and own calculations

Table 1. Share of employment in informal sector by economic activities

a) total, male and female population

| CAEN Rev.1 | 2002 | 2004 | 2006 | 2008 | 2009 | 2010 | CAEN Rev.2 |
|-----------------|---------------------------|-------------|-------------|---------------------------|-------------|-------------|------------|
| | <i>Conform CAEN Rev.1</i> | | | <i>Conform CAEN Rev.2</i> | | | |
| Male and Female | | | | | | | |
| TIA | 23.3 | 25.7 | 24.2 | 23.2 | 25.9 | 29.2 | TIA |
| TEA | 14.7 | 19.8 | 18.2 | 17.1 | 20.7 | 25.0 | TEA |
| A | 38.3 | 38.4 | 38.4 | 38.5 | 38.7 | 39.0 | A |
| C | 15.4 | 20.8 | 15.5 | 13.7 | 18.9 | 23.5 | B |
| D | 13.0 | 18.1 | 15.6 | 12.8 | 15.8 | 20.3 | C |
| E | 12.6 | 16.1 | 13.1 | 11.2 | 14.8 | 17.9 | D |
| F | 20.8 | 24.2 | 24.1 | 25.0 | 40.0 | 42.6 | E |
| G | 18.2 | 23.7 | 23.0 | 26.5 | 30.6 | 36.6 | F |
| H | 13.2 | 17.3 | 16.8 | 20.9 | 23.5 | 27.2 | G |
| I | 15.0 | 18.9 | 16.9 | 14.9 | 19.5 | 23.3 | H |
| J | 12.8 | 19.6 | 20.6 | 16.5 | 18.6 | 20.5 | I |
| K | 26.4 | 26.9 | 25.6 | 19.0 | 25.0 | 29.2 | J |
| M | 13.0 | 22.3 | 19.6 | 17.8 | 20.4 | 23.3 | K |
| N | 12.8 | 20.6 | 19.4 | 42.3 | 52.5 | 50.3 | L |
| O | 46.0 | 48.3 | 47.1 | 21.4 | 27.6 | 30.4 | M |
| | | | | 25.7 | 34.1 | 40.3 | N |
| | | | | 17.0 | 22.4 | 27.8 | P |
| | | | | 17.1 | 21.7 | 26.5 | Q |
| | | | | 17.9 | 33.8 | 36.5 | R |
| | | | | 46.9 | 45.9 | 50.4 | S |

b) male population

| CAEN Rev.1 | 2002 | 2004 | 2006 | 2008 | 2009 | 2010 | CAEN Rev.2 |
|------------|---------------------------|-------------|-------------|---------------------------|-------------|-------------|------------|
| | <i>Conform CAEN Rev.1</i> | | | <i>Conform CAEN Rev.2</i> | | | |
| Male | | | | | | | |
| TIA | 24.0 | 25.7 | 24.5 | 23.9 | 27.7 | 30.8 | TIA |
| TEA | 16.9 | 20.3 | 18.9 | 18.8 | 23.7 | 27.5 | TEA |
| A | 37.4 | 37.6 | 37.9 | 37.5 | 37.9 | 38.6 | A |
| C | 15.5 | 20.5 | 15.5 | 13.6 | 19.4 | 24.2 | B |
| D | 14.7 | 18.4 | 15.8 | 13.7 | 17.9 | 21.3 | C |
| E | 13.3 | 15.7 | 13.0 | 10.6 | 15.2 | 18.2 | D |
| F | 21.4 | 24.5 | 24.5 | 25.6 | 43.6 | 45.5 | E |
| G | 23.8 | 27.9 | 27.1 | 27.5 | 31.7 | 37.6 | F |
| H | 20.0 | 22.5 | 20.4 | 25.6 | 29.8 | 33.9 | G |
| I | 16.2 | 19.2 | 16.6 | 14.7 | 19.9 | 22.8 | H |
| J | 14.4 | 19.2 | 20.1 | 19.7 | 23.4 | 22.2 | I |
| K | 31.6 | 29.2 | 26.6 | 19.5 | 27.8 | 30.8 | J |
| M | 18.0 | 27.3 | 23.7 | 19.3 | 23.5 | 25.9 | K |
| N | 15.5 | 23.3 | 20.2 | 51.2 | 68.4 | 62.5 | L |
| O | 54.8 | 46.8 | 47.5 | 24.7 | 35.4 | 37.1 | M |
| | | | | 26.3 | 38.1 | 43.6 | N |
| | | | | 22.7 | 33.9 | 40.7 | P |
| | | | | 18.7 | 27.8 | 32.7 | Q |
| | | | | 19.5 | 43.3 | 43.4 | R |
| | | | | 51.9 | 49.4 | 51.5 | S |

c) female population

| CAEN Rev.1 | 2002 | 2004 | 2006 | 2008 | 2009 | 2010 | CAEN Rev.2 |
|------------|---------------------------|-------------|-------------|---------------------------|-------------|-------------|------------|
| | <i>Conform CAEN Rev.1</i> | | | <i>Conform CAEN Rev.2</i> | | | |
| Female | | | | | | | |
| TIA | 22.5 | 25.7 | 23.9 | 22.4 | 23.8 | 27.4 | TIA |
| TEA | 12.0 | 19.1 | 17.3 | 14.9 | 16.8 | 21.8 | TEA |
| A | 39.2 | 39.4 | 39.0 | 39.6 | 39.5 | 39.6 | A |
| C | 14.5 | 22.0 | 15.3 | 14.0 | 15.8 | 19.4 | B |
| D | 11.1 | 17.7 | 15.5 | 11.8 | 13.4 | 19.0 | C |
| E | 10.5 | 17.4 | 13.6 | 13.5 | 13.4 | 16.9 | D |
| F | 15.3 | 21.7 | 20.3 | 23.4 | 30.8 | 35.1 | E |
| G | 13.5 | 20.2 | 19.5 | 16.6 | 19.7 | 25.9 | F |
| H | 9.7 | 14.6 | 14.8 | 16.9 | 18.1 | 21.7 | G |
| I | 11.4 | 18.1 | 17.9 | 15.6 | 18.2 | 25.4 | H |
| J | 11.9 | 19.8 | 20.8 | 14.7 | 15.8 | 19.3 | I |
| K | 18.9 | 23.4 | 24.0 | 18.2 | 20.2 | 26.4 | J |
| M | 11.0 | 20.5 | 18.2 | 17.2 | 18.8 | 22.0 | K |
| N | 12.0 | 19.8 | 19.1 | 34.3 | 35.3 | 38.1 | L |
| O | 34.5 | 49.9 | 46.6 | 18.5 | 20.9 | 24.4 | M |
| | | | | 24.3 | 25.8 | 33.8 | N |
| | | | | 15.1 | 18.5 | 23.5 | P |
| | | | | 16.6 | 20.0 | 24.9 | Q |
| | | | | 16.4 | 25.7 | 30.5 | R |
| | | | | 42.3 | 42.9 | 49.6 | S |

Source: INS, Labour market statistics and own calculations

Where:

TIA – Total population, including agricultural sector

TEA – Total population, excluding agricultural sector

Classification of Activities from National Economy - CANE Rev.1

- A Agriculture, hunting and forestry (including B – fishery)
- C Mining and quarrying
- D Manufacturing
- E Electricity, gas and water supply
- F Construction
- G Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods
- H Hotels and restaurants

- I Transport, storage and communications
- J Financial intermediation
- K Real estate, renting and business activities
- M Education
- N Health and social work
- O Others activities of national economy (including collective, social and personal services, private households)

Classification of Activities from National Economy - CANE Rev.2

- A Agriculture, forestry and fishing
- B Mining and quarrying
- C Manufacturing
- D Production and supply of electric and thermal energy, gas, hot water and air conditioning
- E Water distribution; sanitation, waste administration, decontamination activities
- F Construction
- G Wholesale and retail; repair of motor vehicles and motorcycles
- H Transport and storage
- I Hotels and restaurants
- J Information and communications
- K Financial intermediation and insurance
- L Real estate transactions
- M Professional, scientific and technical activities
- N Activities of administrative services and activities of support services
- P Education
- Q Health and social assistance
- R Showbiz, cultural and recreation activities
- S Other activities of national economy (including collective, social and personal services, private households)

Table 2. Distribution of employment in informal sector by economic activities

a) total, male and female population

| CANE Rev.1 | 2002 | | 2004 | | 2006 | | 2008 | | 2009 | | 2010 | | CANE Rev.2 |
|-----------------|-------------------------|-----------|-----------|-----------|-----------|-----------|-------------------------|-----------|-----------|-----------|-----------|-----------|---------------|
| | According to CANE Rev.1 | | | | | | According to CANE Rev.2 | | | | | | |
| | TIA | TEA | TIA | TEA | TIA | TEA | TIA | TEA | TIA | TEA | TIA | TEA | |
| Male and female | | | | | | | | | | | | | |
| Total | 100. 0 | 100. 0 | 100. 0 | 100. 0 | 100. 0 | 100. 0 | 100. 0 | 100. 0 | 100. 0 | 100. 0 | 100. 0 | 100. 0 | Total |
| A | 59.8 | - | 47.3 | - | 47.5 | - | 47.5 | - | 43.4 | - | 40.2 | - | A |
| C | 1.0 | 2.6 | 1.2 | 2.3 | 0.8 | 1.5 | 0.7 | 1.3 | 0.8 | 1.4 | 0.8 | 1.4 | B |
| D | 11.9 | 29.6 | 15.7 | 29.9 | 13.5 | 25.7 | 11.2 | 21.4 | 11.6 | 20.4 | 12.4 | 20.7 | C |
| E | 1.1 | 2.8 | 1.3 | 2.5 | 1.1 | 2.2 | 0.6 | 1.2 | 0.8 | 1.4 | 0.8 | 1.4 | D |
| F | 4.0 | 9.9 | 4.9 | 9.3 | 5.8 | 11.1 | 0.9 | 1.6 | 1.1 | 2.0 | 1.2 | 2.0 | E |
| G | 7.3 | 18.1 | 9.5 | 18.1 | 10.5 | 20.0 | 9.1 | 17.4 | 9.2 | 16.3 | 9.5 | 15.9 | F |
| H | 0.7 | 1.7 | 1.1 | 2.1 | 1.0 | 2.0 | 11.2 | 21.4 | 11.3 | 20.0 | 11.4 | 19.1 | G |
| I | 3.2 | 8.0 | 3.7 | 6.9 | 3.6 | 6.9 | 3.1 | 5.9 | 3.7 | 6.5 | 3.8 | 6.4 | H |
| J | 0.4 | 1.1 | 0.7 | 1.4 | 0.8 | 1.6 | 1.2 | 2.2 | 1.3 | 2.3 | 1.4 | 2.3 | I |
| K | 1.7 | 4.1 | 2.6 | 5.0 | 3.1 | 6.0 | 1.0 | 2.0 | 1.3 | 2.3 | 1.4 | 2.3 | J |
| M | 2.5 | 6.2 | 3.8 | 7.2 | 3.5 | 6.7 | 0.9 | 1.7 | 1.0 | 1.8 | 1.1 | 1.9 | K |
| N | 2.1 | 5.2 | 3.2 | 6.0 | 3.2 | 6.1 | 0.3 | 0.6 | 0.3 | 0.6 | 0.4 | 0.6 | L |
| O | 4.3 | 10.6 | 4.9 | 9.3 | 5.4 | 10.3 | 1.4 | 2.6 | 1.7 | 3.0 | 1.8 | 3.0 | M |
| | | | | | | | 1.7 | 3.3 | 2.1 | 3.8 | 2.3 | 3.8 | N |
| | | | | | | | 3.1 | 6.0 | 3.6 | 6.4 | 4.0 | 6.6 | P |
| | | | | | | | 3.0 | 5.7 | 3.6 | 6.3 | 4.0 | 6.6 | Q |
| | | | | | | | 0.4 | 0.8 | 0.6 | 1.1 | 0.7 | 1.1 | R |
| | | | | | | | 2.6 | 5.0 | 2.5 | 4.3 | 2.9 | 4.8 | S |

b) male population

| CANE Rev.1 | 2002 | | 2004 | | 2006 | | 2008 | | 2009 | | 2010 | | CANE Rev.2 |
|------------|-------------------------|-------|-------|-------|-------|-------|-------------------------|-------|-------|-------|-------|-------|------------|
| | According to CANE Rev.1 | | | | | | According to CANE Rev.2 | | | | | | |
| | TIA | TEA | TIA | TEA | TIA | TEA | TIA | TEA | TIA | TEA | TIA | TEA | |
| Male | | | | | | | | | | | | | |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | Total |
| A | 54.0 | - | 45.5 | - | 45.5 | - | 42.8 | - | 38.1 | - | 36.5 | - | A |
| C | 1.6 | 3.5 | 1.8 | 3.4 | 1.2 | 2.3 | 1.0 | 1.8 | 1.2 | 1.9 | 1.3 | 2.0 | B |
| D | 12.8 | 27.7 | 15.4 | 28.2 | 12.9 | 23.7 | 11.4 | 20.0 | 12.3 | 19.8 | 12.8 | 20.1 | C |
| E | 1.7 | 3.6 | 1.8 | 3.3 | 1.5 | 2.8 | 0.9 | 1.5 | 1.1 | 1.8 | 1.1 | 1.8 | D |
| F | 6.6 | 14.3 | 8.2 | 15.1 | 9.8 | 17.9 | 1.1 | 1.9 | 1.5 | 2.4 | 1.6 | 2.5 | E |
| G | 7.8 | 16.8 | 9.4 | 17.2 | 10.4 | 19.1 | 15.1 | 26.4 | 14.8 | 23.8 | 15.3 | 24.1 | F |
| H | 0.6 | 1.4 | 0.9 | 1.6 | 0.9 | 1.6 | 11.0 | 19.3 | 11.2 | 18.1 | 11.1 | 17.4 | G |
| I | 4.6 | 10.1 | 5.1 | 9.3 | 5.0 | 9.1 | 4.4 | 7.6 | 5.1 | 8.3 | 5.3 | 8.3 | H |
| J | 0.3 | 0.7 | 0.4 | 0.8 | 0.5 | 0.9 | 0.9 | 1.5 | 1.0 | 1.6 | 1.0 | 1.6 | I |
| K | 2.1 | 4.5 | 3.2 | 5.9 | 3.6 | 6.7 | 1.2 | 2.1 | 1.5 | 2.5 | 1.6 | 2.5 | J |
| M | 1.8 | 3.8 | 2.3 | 4.2 | 2.0 | 3.7 | 0.5 | 1.0 | 0.7 | 1.1 | 0.7 | 1.1 | K |
| N | 1.1 | 2.3 | 1.4 | 2.6 | 1.4 | 2.6 | 0.3 | 0.5 | 0.4 | 0.6 | 0.4 | 0.6 | L |
| O | 5.1 | 11.2 | 4.6 | 8.4 | 5.3 | 9.7 | 1.3 | 2.3 | 1.7 | 2.8 | 1.8 | 2.8 | M |
| | | | | | | | 2.1 | 3.7 | 2.7 | 4.4 | 2.9 | 4.5 | N |
| | | | | | | | 1.9 | 3.3 | 2.4 | 3.8 | 2.5 | 3.9 | P |
| | | | | | | | 1.2 | 2.2 | 1.7 | 2.7 | 1.7 | 2.7 | Q |
| | | | | | | | 0.4 | 0.6 | 0.6 | 1.0 | 0.6 | 1.0 | R |
| | | | | | | | 2.4 | 4.3 | 2.1 | 3.3 | 1.9 | 3.0 | S |

c) female population

| CANE Rev.1 | 2002 | | 2004 | | 2006 | | 2008 | | 2009 | | 2010 | | CANE Rev.2 |
|------------|-------------------------|-------|-------|-------|-------|-------|-------------------------|-------|-------|-------|-------|-------|------------|
| | According to CANE Rev.1 | | | | | | According to CANE Rev.2 | | | | | | |
| | TIA | TEA | TIA | TEA | TIA | TEA | TIA | TEA | TIA | TEA | TIA | TEA | |
| Female | | | | | | | | | | | | | |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | Total |
| A | 67.2 | - | 49.6 | - | 50.0 | - | 53.8 | - | 51.0 | - | 45.4 | - | A |
| C | 0.3 | 0.9 | 0.4 | 0.8 | 0.3 | 0.5 | 0.2 | 0.5 | 0.2 | 0.4 | 0.2 | 0.5 | B |
| D | 10.8 | 33.0 | 16.2 | 32.0 | 14.1 | 28.3 | 11.0 | 23.8 | 10.6 | 21.6 | 11.9 | 21.8 | C |
| E | 0.5 | 1.5 | 0.7 | 1.4 | 0.6 | 1.3 | 0.4 | 0.8 | 0.4 | 0.8 | 0.4 | 0.8 | D |
| F | 0.7 | 2.0 | 1.0 | 1.9 | 1.1 | 2.2 | 0.5 | 1.1 | 0.6 | 1.2 | 0.7 | 1.2 | E |
| G | 6.7 | 20.4 | 9.7 | 19.2 | 10.6 | 21.3 | 1.3 | 2.7 | 1.4 | 2.8 | 1.5 | 2.7 | F |
| H | 0.8 | 2.3 | 1.3 | 2.7 | 1.3 | 2.6 | 11.4 | 24.7 | 11.4 | 23.3 | 11.9 | 21.8 | G |
| I | 1.4 | 4.1 | 1.9 | 3.8 | 2.0 | 4.0 | 1.5 | 3.2 | 1.7 | 3.4 | 1.8 | 3.3 | H |
| J | 0.6 | 1.9 | 1.1 | 2.1 | 1.3 | 2.5 | 1.6 | 3.4 | 1.7 | 3.4 | 1.8 | 3.4 | I |
| K | 1.1 | 3.4 | 2.0 | 3.9 | 2.5 | 5.0 | 0.9 | 1.9 | 0.9 | 1.9 | 1.1 | 2.0 | J |
| M | 3.4 | 10.4 | 5.6 | 11.2 | 5.3 | 10.6 | 1.4 | 3.0 | 1.5 | 3.1 | 1.7 | 3.1 | K |
| N | 3.4 | 10.4 | 5.2 | 10.4 | 5.4 | 10.7 | 0.3 | 0.6 | 0.3 | 0.5 | 0.3 | 0.6 | L |
| O | 3.2 | 9.7 | 5.3 | 10.6 | 5.5 | 11.0 | 1.5 | 3.1 | 1.7 | 3.5 | 1.8 | 3.3 | M |
| | | | | | | | 1.1 | 2.5 | 1.3 | 2.6 | 1.5 | 2.8 | N |
| | | | | | | | 4.8 | 10.3 | 5.4 | 11.0 | 6.0 | 11.0 | P |
| | | | | | | | 5.3 | 11.4 | 6.3 | 12.9 | 7.1 | 12.9 | Q |
| | | | | | | | 0.4 | 1.0 | 0.6 | 1.3 | 0.7 | 1.3 | R |
| | | | | | | | 2.9 | 6.2 | 3.0 | 6.2 | 4.2 | 7.7 | S |

Source: INS, Labour market statistics and own calculations

Where:

TIA – Total population, including agricultural sector

TEA – Total population, excluding agricultural sector

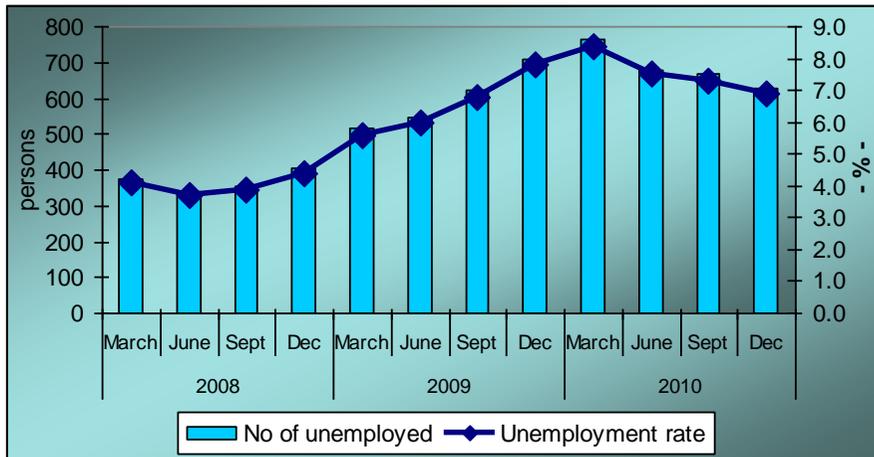
Classification of Activities from National Economy - CANE Rev.1

| | | | | | |
|---|--|---|--|---|--|
| A | Agriculture, hunting and forestry (including fishery) | B | Manufacturing | I | Transport, storage and communications |
| C | Mining and quarrying | D | Electricity, gas and water supply | J | Financial intermediation |
| D | Manufacturing | E | Construction | K | Real estate, renting and business activities |
| E | Electricity, gas and water supply | F | Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods | M | Education |
| F | Construction | G | Hotels and restaurants | N | Health and social work |
| G | Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods | H | | O | Others activities of national economy (including collective, social and personal services, private households) |
| H | Hotels and restaurants | | | | |

Classification of Activities from National Economy - CANE Rev.2

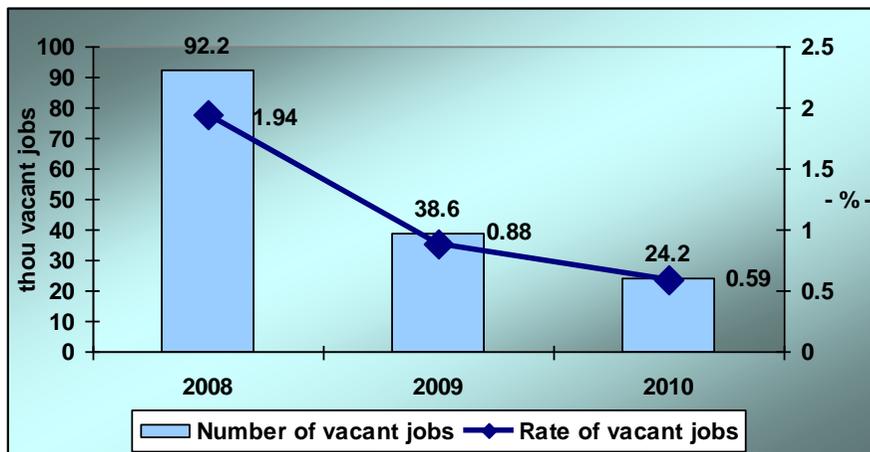
- | | | | |
|---|---|---|---|
| A | Agriculture, forestry and fishing | J | Information and communications |
| B | Mining and quarrying | K | Financial intermediation and insurance |
| C | Manufacturing | L | Real estate transactions |
| D | Production and supply of electric and thermal energy, gas, hot water and air conditioning | M | Professional, scientific and technical activities |
| E | Water distribution; sanitation, waste administration, decontamination activities | N | Activities of administrative services and activities of support services |
| F | Construction | P | Education |
| G | Wholesale and retail; repair of motor vehicles and motorcycles | Q | Health and social assistance |
| H | Transport and storage | R | Showbiz, cultural and recreation activities |
| I | Hotels and restaurants | S | Other activities of national economy (including collective, social and personal services, private households) |

Figure 4. Registered unemployment



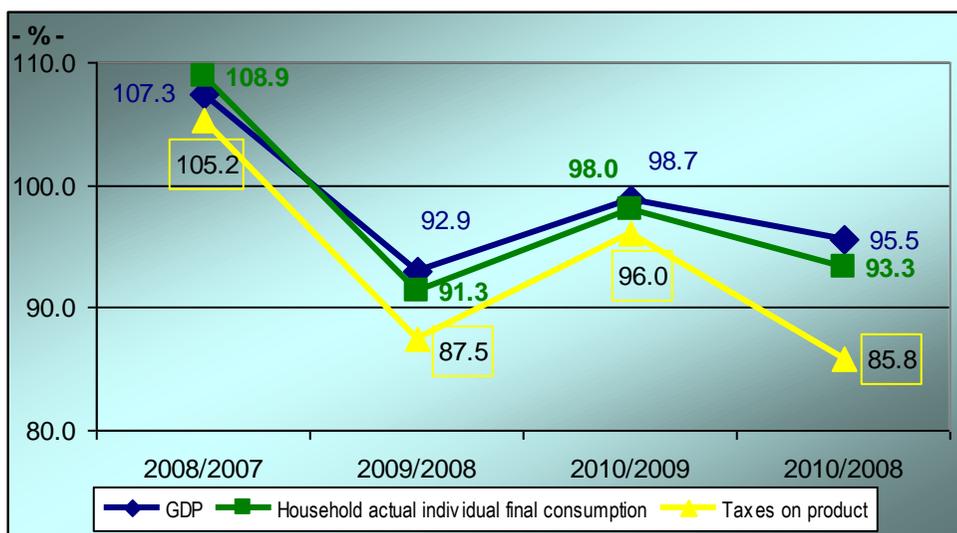
Source: National Agency for Employment (ANOFM in original)

Figure 5. Number and rate of vacant jobs



Source: INS, Statistics on job vacancies

Figure 6. Macroeconomic indicators



Source: INS, National Accounts and own calculations

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SUB-SECTION: BUSINESS ADMINISTRATION

COLLATERAL'S IMPORTANCE IN SMES FINANCING: WHAT IS THE BANKS' RESPONSE? SOME EVIDENCE FOR ROMANIA

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Searching for funding, SMEs' managers face various obstacles arising from information asymmetry, lack of experience, severe market conditions, and insufficient or unsatisfactory collaterals for banks (OECD 2006; Badulescu and Badulescu 2010; OECD 2000 and 2004; Lin and Sun 2006; Toivanen and Cresy, 2000). The collateral issue is extensively discussed in literature – preventing moral hazard, the alignment the interests (Stiglitz and Weiss 1981:393-410; Chan and Thakor 1987:345-363; Jiménez and Saurina 2004), a means to discipline the borrowers behaviour (ex post) given the existence of a credible threat (Aghion and Bolton 1992:473-494), or even banking behaviour on the market (Manove et al. 2001:726-744, Argentiero 2009). In the same time we find that the perception of firms, revealed by National Bank of Romania (NBR 2010) survey data, show that banks still use the collateral as a measure of pressure, in special in crisis times. For an important part of managers, the bank increased the level of required collateral for existing, renewing or new credits, asking for new covenants, revealing a paradox of crisis time: while the bank loans remained the favourite method of external financing needs of business, the banks often reduce their availability. Although the bank loan remains the favorite mean to support the growth ambitions, the higher level of collateral or lending costs are seen as principal obstacles by the majority of manager in EU. According to NBR survey, the influence of risk factors related to collateral had a climax at the end of 2008 and 2009, when the banks have tightened the requirement for loan guarantee. Using National Bank of Romania (NBR 2010) survey data, we show that the banks still use the collateral as a measure of pressure, in special in crisis times. For an important part of managers, the bank increased the level of required collateral for existing, renewing or new credits, asking for new covenants, revealing a paradox of crisis time: while the bank loans remained the favorite method of external financing needs of business, the banks often reduce their availability. According to NBR survey, the influence of risk factors related to collateral had a boom at the end of 2008 and 2009, when the banks have tightened the requirement for loan guarantee. Following the European trend in straightening the credit conditions, Romanian market had a more pregnant evolution with a rapid deterioration of these conditions during the second and the third quarter of 2008. In general terms, the seeking for higher percentage of coverage with real estate collaterals, paradoxically, makes banks more vulnerable, given their pro-cyclical behaviour, feeding the real estate market crisis.

Key words: SMEs lending, collateral, credit standards

JEL code: G21

Introduction

This paper aims to emphasize the importance of collateral in credit risk management, how collateral influences market behaviour of banks and customers selection, but also the excessive focus on collateral coverage during crises times. In the first part, we will review the main theoretical approaches regarding the collateral and its importance for the credit risk management. In the second part we will emphasize the importance that SMEs give to the relationship with financing institutions, and the expectations and obstacles in credit use as important mean for

growth. We will detail Romanian experience starting from NBR surveys, and we show that banks' response to crisis in 2009-2010 was to restrain lending, to tighten credit requirements (collateral, costs and covenants) and to enhance caution to real estate market. Finally, we conclude on the banks' behaviour and responses and on the consequences of this attitude on the economy.

1. Overview on the banks' policy regarding collaterals required from SMEs

Focusing on value creation and based on accepted and controlled risks (OECD 2006; Pathrose 2005), banks are often reluctant to grant loans to SMEs. This fact is due to some reasons, such as:

- informational asymmetry, resulting from the lack of standardized financial information and statements provided by SMEs, adding the bank's limited knowledge about the company seeking a loan (Badulescu and Badulescu 2010);
- higher risks associated with SMEs lending, due to limited assets that can be used as collateral, low capitalization and vulnerability to market risks;
- besides the fact that small enterprise cannot provide adequate collaterals, they hardly convince the banks about their managerial and marketing abilities or technical skills, that are essential to generate adequate cash flows and a proper debt service.

On a first sight, the financing provided to SMEs – various, in small amounts and in a reduce typology compared to large companies – could involve lower cost of transactions; however, the situation is, in fact, different. The costs involved by the analysis of the application and disbursement of a loan are generally independent of the requested amount and usually comprises other fixed costs as legal taxes, costs to obtain risk information from specialized agency etc. (OECD 2006). In the case of small amounts, it is very difficult to recover a total cost, and the unique solution could be a strict control of them by standardizing the credit types, reducing the processing time etc. Implementing a scoring system can be a way to consistently reduce and uniform the transaction cost, but this step involves an important database for calibrating, major changes in borrower and lender mentality, and it shows real efficiency only for credit institutions with lots of loan application from SMEs.

Collateral impact on credit risk, and, in a macroeconomic perspective, on the supply of credit to the companies, in special for SMEs, is a topic attracting a constant and increasing concern in recent years. From the theoretical point of view, we find two alternative interpretations that lead, empirically, to different predictions. On the one hand, is the adverse selection problem faced by a bank in financing activity, and therefore, the security offered by debtors can help alleviate this problem (Stiglitz and Weiss 1981:393-410; Chan and Thakor 1987:345-363). Thus, low-risk borrowers are willing to offer a better guarantee, considering their lower risk as a signal for their capabilities fulfil its obligations under the credit agreement and, therefore, are less probability to lose the guarantee. The guarantee is interpreted as a signal that allows the bank to reduce or eliminate the adverse selection problem caused by the existence of informational asymmetries between the bank and borrower, when the loan was approved, (Jiménez and Saurina 2004).

On the other hand, is the opinion, that even there is a *ex ante* symmetry between debtor and creditor (for example, the bank knows the quality of the debtor and correctly predicts the role of loan), guarantees are designed to mitigate the moral hazard problem once the loan was granted. In this respect, the security engaged helps to align the interests of both, creditors and debtors, thereby avoiding a situation where the borrower makes less effort to ensure the success of the project for which funding was granted. Security becomes a means to discipline the borrowers' behaviour (*ex post*) given the existence of a credible threat (Aghion and Bolton 1992:473-494).

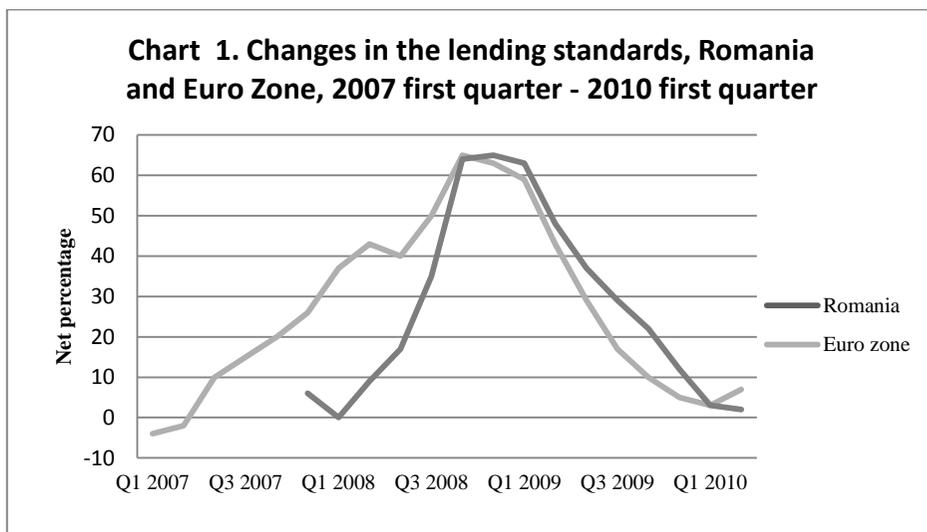
Starting from this view, we can expect to find a direct relationship between loan quality and/or the borrower, and the size of collateral, i.e. the assumption that the guarantee is a signal of high quality borrowers. However, this hypothesis is not agreed by the bankers, who tend to establish a direct relation between the level of credit risk and the volume of collateral.

2. Banks versus customers on SMEs financing. Evidence from Romania

For Romania, the analysis can be completed with another perspective, on the other part involved - the central and commercial banks, and we notice a pattern similar to the EU's one, but sometimes adapted to the specific conditions of the Romanian economy and its response to the crisis. According to the NBR quarterly survey on lending for non financial sector and population (NBR, 2010), lending standards have remained mainly unchanged over the first part of 2010. The degree of accumulated restrictiveness seems to be deemed sufficient in the current economic context, based on the fact that 2009 was characterized by a relatively continuous process of tightening of these standards (see note, NBR, February and August 2010).

According to these researches, the companies associated risks increased throughout the economy, particularly in the construction and real estate sectors and, as confirmed by above data at EU level, corporations have shown, for the first time in Romania last decade, a significant growth risks.

At the aggregate level, lending standards (internal lending norms guiding the credit policy of the credit institutions) were slightly tightened in the fourth quarter of 2009, but remained relatively unchanged in the first half of 2010. The recent developments and projections for the next period, shows that the degree of restrictiveness of credit standards seem to be sufficient in terms of risk aversion of banks in the current economic conditions. It notes, however, that neither the euro area cycle tightening of credit standards is not completed, the level of restrictiveness increased in the first quarter of 2010 (NBR, February and August 2010)



Sources: National Bank of Romania, Bank lending survey, February and August 2010, <http://bnr.ro/Studies-3215.aspx> și European Central Bank, The Euro Area Bank Lending Survey - April 2010, http://www.ecb.int/stats/pdf/blssurvey_201004.pdf?0bd480f0b472e26541e56c7c1a5f4dff

In structure, slight tightening of lending standards of banks in Romania doesn't concern the company size (SMEs. Vs. Corporations), but rather the criterion of maturity. However, the perception of risk to SMEs remains higher than corporate, explaining the reduce availability of bank loans for SMEs. Among the main factors which led banks to change lending standards (as the economic perspective, the risk associated with the industries) were the increasing share of nonperforming loans in the portfolio, the risk of required collateral / security (see Table 1).

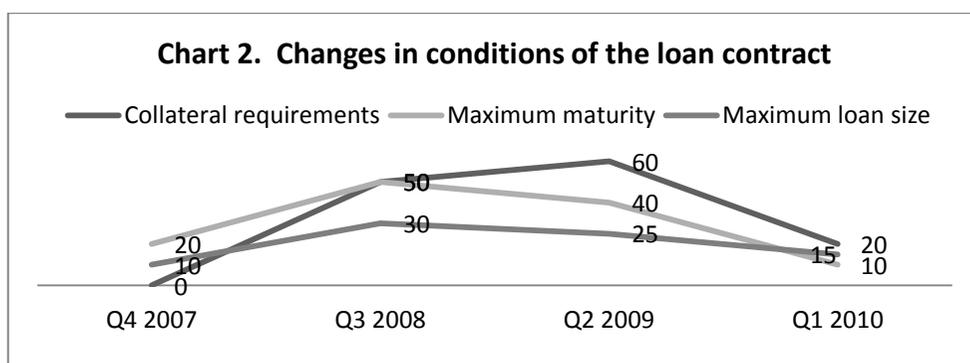
Table 1. The influence of risk factors related to collateral, by type of companies (net percentage)

| Companies (loans)-period | Companies Total (%) | Large companies | | SMEs | |
|--------------------------|---------------------|----------------------|---------------------|----------------------|---------------------|
| | | Short term loans (%) | Long term loans (%) | Short term loans (%) | Long term loans (%) |
| Q4 2007 | 20 | 50 | 60 | 40 | 40 |
| Q3 2008 | 40 | 90 | 90 | 50 | 70 |
| Q2 2009 | 80 | 60 | 50 | 60 | 60 |
| Q1 2010 | 20 | 30 | 30 | 10 | 10 |

Source: National Bank of Romania, Bank lending survey, February and August 2010, <http://bnr.ro/Studies-3215.aspx>

Regarding the changes in lending terms and conditions (the specific obligations agreed between creditor and debtor in the credit agreement signed, i.e. interest rate, collateral, maturity, etc.), we notice a clear tightening in the second quarter of 2010, at the same pace as in previous quarters. Terms under review were mostly those related to collateral, given that over 75% of non-financial credit is collateralized. Frequently, banks alternate between increasing the costs or decreasing the maximum available loan.

According to reporting banks, the LTV (loan to value ratio, i.e. maximum share of credit in the amount of real estate collateral) for loans on the balance at the middle of 2010, secured solely by mortgages, stands at 87%. In the case of new loans granted in first part of 2010, banks had a more cautious attitude, the same indicator was 76 percent (NBR , February and August 2010).



Source: National Bank of Romania, Bank lending survey, February and August 2010

Conclusions

As conclusion, we can notice that banks still try to avoid moral hazard in the relationship with borrowers – i.e. SMEs, as that moral hazard can increase in crisis period. Banks have only secondary interest in the informational asymmetry issue. We also have found that the tightening of non-price conditions (i.e. collateral) has been used as a recovery practice in order to cover the macroeconomic or specific sectors risks increasing the size of collateral, often unrelated to individual performance of the companies. Moreover, increased propensity for real estate collateral, accompanied now by more pessimistic assessment of market value (see LTV development, specified above) seems to indicate an emphasis on limited perspective, only seeking for extended credit risk coverage, but ignoring the emergence of a new risk, the risk of

collateral. It seems that the link between the bank propensity for fixed collateral and cyclicity of real estate market (see Kim, Y.-J., Lee, J.-W 1999, FDIC, 1998) is not yet seen by the banks as a valid threat. The supervisory authorities' efforts to mitigate this pro-cyclical behaviour haven't got the desired effect.

Note: 1. Interpretation and presentation of answers was based on the *net percentage*, given the difference between the share of banks that reported tightening standards, terms and conditions of lending, and the percentage of banks reported easing of these, a positive short term balance indicates that a larger proportion of banks have tightened lending standards (NBR , February and August 2010).

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PROBLEMS AND CHANCES AT THE INTERFACE BETWEEN HOSPITAL CARE AND GERIATRIC REHABILITATION

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Available statistical data offer valuable information on recent demographic changes and developments within European healthcare and welfare systems. The demographic evolution is expected to have considerable impact upon various, major aspects of the economic and social life in all European countries. The healthcare system plays an important role especially in the context of ageing societies, such as Germany. This paper focuses on the evolution of the prevention or rehabilitation service sector during the last years in Germany, analyzes the specific characteristics of the elderly patients being cared for in these facilities and underlines important aspects at the interface between (acute) hospital and geriatric rehabilitative care. Networking, integrated care services and models will be of even greater importance in the future demographic setting generating (most probably) increasing numbers and percentages of elderly, multimorbid hospitalized patients. More than this, the cooperation at regional level between acute geriatric hospital departments and geriatric rehabilitation facilities has become a mandatory quality criterion in the Free State of Bavaria. This paper presents and analyzes issues referring to a precise cooperation model (between acute and rehabilitative care) recommended for implementation even by the Free State of Bavaria while emphasizing several examples of good practice that have guaranteed the success of this cooperation model. The analysis of the main causes leading to longer length of stay (and thus "delayed discharges") for the elderly patients transferred to geriatric rehabilitation facilities within the reference model for acute-rehabilitative care provides important information and points at the existing potential for optimization in the acute hospital setting. Vicinity, tight communication and cooperation, early screening, implementation of standard procedures and case management are some of the activities that have contributed considerably to the improvement of the hospital length of stay and transfer management for elderly patients benefiting from (follow-up) inpatient geriatric rehabilitation services. The presented facts are important not only for the German health setting.

Keywords: acute-rehabilitative care interface, demographic impact, process optimization, care networking, geriatric patients.

JEL Classification Codes: I11, J11, M10.

I. Introduction

An increasing number of publications have picked out issues referring to demographic changes and their impact on healthcare and welfare systems as a central theme. The expected increasing number of elderly inpatients in German hospitals emphasizes the need for detailed analyses with regard to the specific needs of the elderly, (often) multimorbid hospitalized patients; one of these specific needs refer to the benefits provided by geriatric rehabilitation services. The fragmentation of the service provision in the German healthcare sector implies a separation of the acute hospital care from the geriatric rehabilitative care, and thus the existence of an interface between these different healthcare sectors. This paper focuses on the analysis of recent developments in the rehabilitative care sector in Germany and of possibilities for its integration with the acute hospital care illustrating opportunities and benefits resulting from strategic

partnerships and cooperation between hospitals and geriatric rehabilitation facilities by means of a best practice model (from the Free State of Bavaria).

II. Selected data on German hospitals and prevention or rehabilitation facilities

Data analysis and calculations performed on statistical data (Statistisches Bundesamt 2006, 2007, 2008, 2009c, 2011c: Worksheet 2.1) have indicated following evolutions for the German inpatient prevention or rehabilitation service sector during the time period 2005–2009: the number of facilities, established beds and average inpatient length of stay decreased (by respectively 2.4%, 1.7% and 1.1%), whereas the bed utilization rate, number of inpatient care days and cases showed a positive trend (with percentage increase of respectively 11.2%, 9.3% and 10.6%); in addition, the direct inpatient admissions from hospitals increased by 15.9% (and to about 36.7% from the total number of the direct inpatient admissions to prevention or rehabilitation facilities in 2009), whereas the direct discharges (transfers) from these facilities into (to) hospitals increased by 4% (accounting for a relatively stable percentage of about 2.0 - 2.2% of the total number of discharges from prevention or rehabilitation facilities in the selected period of time). When focusing on the evolution of geriatric departments in prevention or rehabilitation facilities during the time period 2007-2009, the calculations performed on the available statistical data (Statistisches Bundesamt 2008, 2009c, 2011c: Worksheet 2.1) have indicated positive evolutions for the main analyzed indicators, such as: number of departments (+10.0%), establishes beds (+11.1%), inpatient care days (+13.7%), inpatient cases (+16.2%), accompanied by a decrease in the inpatient length of stay by 2.2%; at the same time, the number of direct inpatient admissions to geriatric departments increased by 16.9%, whereas the direct inpatient admissions to these departments from hospitals by (only) 11.2% (accounting in 2009 for 79% of all direct inpatient admissions to these departments, compared to 83% in 2007); in addition, the direct discharges (transfers) from these departments into (to) hospitals increased by about 11.2% (accounting for about 10.2–11.2% of the total number of direct discharges from these departments in the analyzed period of time). As a very high percentage of inpatient admissions to geriatric departments in prevention or rehabilitation facilities represent transfers from hospitals, we consider that it is important to point at the evolution of the inpatient hospital cases for specific age groups, as these evolutions are of high importance in the context of present and expected demographic changes. We analyze in this paper the interface between inpatient hospital care and inpatient geriatric prevention or rehabilitation services so that we will focus on the age group 70+ years according to the reference age in the definition of geriatric patients from the new program for acute geriatric medicine adopted in the Free State of Bavaria (Bayerisches Staatsministerium für Umwelt und Gesundheit 2009: 3). In 2009, the age group 70+ accounted for about 33.6%, respectively 35.0% of the inpatient hospital cases according to the hospital diagnosis statistics (Statistisches Bundesamt 2011a: Worksheet 2.1.1.1), respectively DRG-statistics (Statistisches Bundesamt 2010a: Worksheet 2.1.1.1) in Germany; comparing the statistical data available for 2007 and 2009 (Statistisches Bundesamt 2009a, 2009b, 2010a, 2011a: Worksheet 2.1.1.1), one can notice that the percentage increase in the number of inpatient hospital cases of the age group 70+ of almost 10% (according to both hospital diagnosis and DRG-statistics) accounted for about 80%, respectively 90% of the cumulated increase in the hospital inpatients (according to the hospital diagnosis statistics, respectively to the DRG-statistics). Considering some of the expected demographic effects (population decrease, considerable change of the population age structure), one could expect an increase in the hospital inpatients of the older age groups (and of the high-age related diseases) and thus an increase in the geriatric patients benefiting from geriatric rehabilitation after/during hospitalization. The statistical data available for 2009 referring to inpatients discharged from prevention or rehabilitation facilities having a bed capacity of more than 100 (Statistisches Bundesamt 2011b: Worksheet 2.1.1.1) show that the age group 70+ accounted for about 26% of the discharged

inpatients; the highest percentage of the primary diagnoses for this age group referred to diseases of the musculoskeletal system and connective tissue, followed by diseases of the circulatory system, neoplasms and injury, poisoning and certain consequences of external causes in prevention or rehabilitation facilities (see figure 1). The data in figure 1 point at differences in the importance of selected diagnosis groups between the older age groups discharged from prevention or rehabilitation facilities (expressed as percentage in the total number of inpatients in the respective age groups), such as for e.g. for the neoplasms (decreasing with age) or for the diagnosis group referring to injury, poisoning and certain other consequences of external causes (increasing with age).

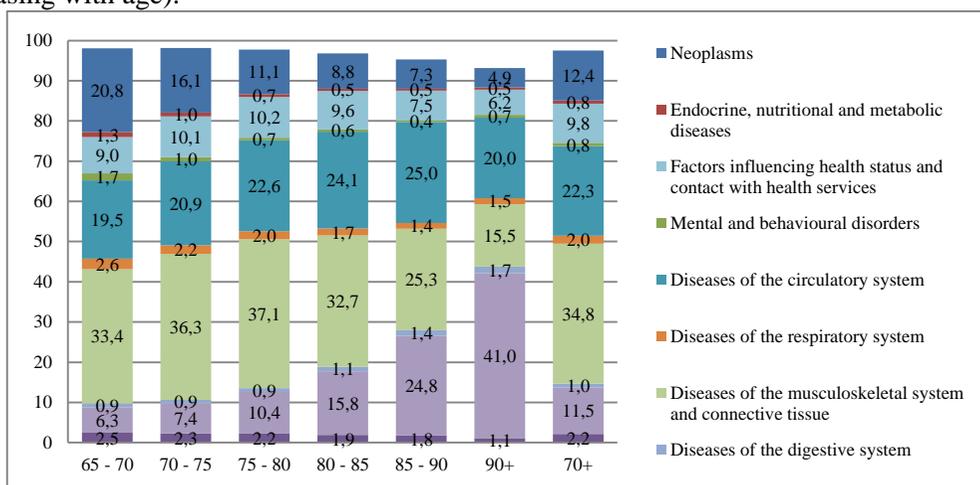


Figure 1: Percentage of the number of inpatient cases of a specific diagnosis and age group in the total number of inpatient cases of the selected age groups discharged in 2009 from prevention or rehabilitation facilities with more than 100 beds (%)

Source: authors' own figure and calculations based on the statistical data from Statistisches Bundesamt (2011b): Worksheet 1.1.1.

Explanation: age group x - y implies at least x years and less than y years.

* - only facilities with more than 100 beds.

The analysis of statistical data has so far indicated the importance of transfers from acute hospital care for the geriatric medicine departments in prevention or rehabilitation facilities; more than that, geriatric rehabilitation plays an important role as it can significantly contribute to avoiding hospital re-admissions and nursing home placement of the elderly persons (as long as possible). The mandatory quality criteria of the new program for acute geriatric medicine in the Free State of Bavaria point at the necessity for acute geriatric departments (in hospitals) to cooperate at least with one regional geriatric rehabilitation facility and underline the importance of establishing care networks for the elderly persons, the acute geriatric medicine being an important, integral part of these networks (Bayerisches Staatsministerium für Umwelt und Gesundheit 2009: 8).

III. Identifying optimization potential and best practice for hospitals at the interface with inpatient geriatric rehabilitation facilities

How can a connection, (more precisely) an interconnected model of care between acute hospitals and geriatric rehabilitation facilities emerge in the present German healthcare setting? The German Subsidies (and Funding) Law is in this context problematic, as a general “merger (fusion)” of rehabilitation facilities with acute geriatric hospital departments (and even hospitals) and the follow-up out-patient care cannot take place in publicly-subsidized institutions (hospitals). In this situation, one alternative could consist in finding reliable partners that provide inpatient geriatric rehabilitation services (and that could also provide geriatric rehabilitative day care and out-patient care) and that are ready to engage themselves in establishing geriatric

rehabilitation facilities on the premises of hospitals. At this stage, it must be clarified whether the initial location of the geriatric rehabilitation facility (in Bavaria most of them being located in the Bavarian Alps in an idyllic position) can be changed when considering procedural and structural requisites and whether there will be a sufficient large incentive for the inpatient rehabilitation service providers to establish (move) their facilities in the vicinity of the acute care hospitals. The demographic changes facilitate such interconnected models of care (with one major advantage consisting in the provision of acute care and geriatric rehabilitation services within a campus structure, close to domicile) for the elderly persons in the context that an increasing number of this age group (with geriatric multimorbidity) is expected to be admitted to hospitals and benefit from acute geriatric medicine and geriatric rehabilitation services in a setting compatible with their social environment, domicile and actual home. One should also not underestimate the “marketing-effect” of such models of care that allow regular visits from family members during the hospital and geriatric rehabilitation facility stays (thus supporting the continuous contact of the elderly, often multimorbid patients with their social environment). The vicinity between the two institutions provide further benefits (for patient transfer, service provision etc.) when the building structures are connected. It is obvious that not only the patients and their families, but also both healthcare service providers (and partners) must and do benefit from such cooperation models. The acute care hospital may follow further objectives, such as: achievement of a better (hospital) inpatient length of stay management (process optimization, process duration reduction etc.), better treatment result for elderly patients, unique market positioning, ensuring care continuity, quality, uniformity and support within the network of care for the elderly population, the avoidance (decrease) of (in) hospital re-admissions, improve patient satisfaction and enhance patient loyalty, brand building and enhancement, establishment of an important, indispensable care structure within a network of care for elderly persons etc. At the same time the geriatric rehabilitation facility in the vicinity of the acute care hospital may aim at achieving following objectives: continuous, high bed occupancy and utilization rate, ensuring high (optimal) number of inpatient cases, improvement of the patient transition process between acute care and geriatric rehabilitation, high degree of reliability regarding the rehabilitation potential of admitted patients, that should and do benefit from the provided inpatient rehabilitation services. As shown in the specific case of the selected German acute care hospital having developed this kind of strategic partnership (the so-called “Ingolstadt-Neuburg acute-rehabilitative care cooperation model”) has continuously been expanded and intensified thus generating process optimization (also process duration reduction) in the acute care hospital, higher number of admissions in the geriatric rehabilitation facility and better transition from acute into rehabilitative care. The analyzed German acute care hospital has been characterized by large and increasing numbers of elderly hospitalized patients who often need follow-up inpatient (geriatric) rehabilitative services after the acute hospital stay. This specific acute care hospital (like many others) anticipates a significant increase in the number of inpatients that will follow this treatment (and care) process. The length of stay analysis conducted on all transfers from the selected German acute care hospital to geriatric rehabilitation service providers during one year (before process optimization) revealed a very high percentage of cases (more than 65%) with hospital length of stay over the average inpatient length of stay as published in the annual DRG-catalogue for Germany (and thus generating too high costs). The major causes for the high degree of “delayed discharges / transfers” to geriatric rehabilitation facilities that were identified within the conducted analysis revealed not only suboptimal internal structures and processes, but also potential for optimization in the cooperation with the geriatric rehabilitation facilities and in the communication with the agents and companies responsible for processing the approval forms for inpatient geriatric rehabilitation services. In this context, based on the conducted internal analysis, following aspects need to be mentioned:

- *when referring to the causes related to human resources know-how, internal structures and process organization in the acute care hospital:* duration of the application process (for inpatient rehabilitative care) too long, inappropriate timing of filling in the application forms (often after having exceeded the average inpatient, catalogue-length of stay), insufficient know-how for justifying the need for inpatient rehabilitative care, incomplete (and late) identification of patients that could benefit from inpatient geriatric rehabilitation services etc.;
- *when referring to causes related to capacity and admission times limitations of the geriatric rehabilitation service providers:* high bed capacity fluctuations in geriatric rehabilitation facilities (leading to transfer problems and delays for the hospitalized elderly patients), limited admission hours/days in these facilities etc.;
- *when referring to the communication with the companies/agents responsible for processing the approval forms:* degree of further enquiries, declined applications and successful objections, (sometimes) human resource shortage (leading to long processing times) etc.

Since this analysis many activities have been performed in order to minimize waste and improve the situation. A recent analysis in the selected German acute care hospital showed that many of the implemented measures (early screening, standard procedure for filling in the approval forms, specific employee training, targeted case management etc.) led to better results. The very early, coordinated participation of the rehabilitation facility (by embedding the rehabilitation partner in the acute clinical process) and the tight communication between the two partners guarantee uninterrupted, high-quality care. The extension of the admission hours/days of the geriatric rehabilitation facility emphasized the willingness to cooperate and adapt on both sides. The basis for these activities is established via a cooperation treaty that provides the appropriate legal basis. One should not be surprised that this established (specific) networking model at the interface between acute care and geriatric rehabilitation (the so-called “Ingolstadt-Neuburg acute-rehabilitative care cooperation model”) is being recommended for implementation by the Bavarian State. This kind of strategic cooperation (for establishing care structures within networks of care for the elderly population) will become integral part of hospitals and rehabilitation facilities and thus indispensable when considering the expected demographic changes and the major factors that determine and control considerably the profitability and sustainability of hospitals and geriatric rehabilitation facilities – processes, structure, attractiveness of the medical care and treatment, “safety-thinking” and social environment of the patients. Both the increasing specialization of medical disciplines, complexity of technical requirements and the increasing financing difficulties emphasize the fact that this kind of cooperation is not only of great importance, but even inevitable - the specialization degree has become too high and the labour market too tight, so that single inpatient healthcare service providers are not able to provide and ensure comprehensive medical care without cooperating. In order for this cooperation model to be successful, the process structure of (between) the partners must be synchronized; the collaboration between the partners plays also a considerable role. Different healthcare service suppliers are also active with different priorities and needs in this context. A question that should be taken into consideration when referring to such cooperation model is whether this kind of strategic partnership could be even further expanded (intensified) in terms of establishing and developing a medical holding company (under a common corporate link). Such structural developments could determine the establishment of more efficient cost structures in areas that are not assigned exclusively to medicine. In addition, the existing interface between acute hospital care and geriatric rehabilitation would become smoother and one could further consider integrating the so-called “low-care-department (area)” between the acute clinical and rehabilitative care. Such a construct could serve patients waiting for the approval to be transferred from the acute care hospital into the geriatric rehabilitation facility: these patients could get accommodation in this department (area) and thus already benefit from the services, competence and expertise of the geriatric rehabilitation service partner (provided in advance).

This care construct would create the interface between a “low-med-” and “high-care-” department (area), which would ensure that patients could be treated in the transitional phase (between acute hospital care and geriatric rehabilitation) according to advanced concepts of care. When establishing such a care setting, it would be of great importance for the acute care hospitals and geriatric rehabilitation providers to persuade the health insurance companies to remunerate both (hospital and geriatric rehabilitation) services together by means of a complex flat rate. It seems that health insurance companies have already started (in 2011) to search for partners who are able to provide such concepts.

IV. Concluding remarks

Both the demographic changes and the increasing financing difficulties emphasize the need for analyzing, optimizing and monitoring internal processes and structures related to the transition of elderly patients between the acute hospital and geriatric rehabilitative care. The presented facts and figures from the German acute care hospital reveal clear potential for internal optimization and for optimization at the interface between hospitals and geriatric rehabilitation facilities. The presented model of acute-rehabilitative care emphasizes opportunities and benefits resulting from the vicinity and the tight cooperation between acute care hospitals and geriatric rehabilitation facilities. This model does not only guarantee high-quality care for elderly patients, but also generates economic advantages for both partners.

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WHAT FUTURE FOR TOURISM IN THE COLD REGION ENVIRONMENTS ?

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The mean temperature in Europe is estimated to increase by 2-6°C by 2100, which will probably result in shorter and milder winters and warmer and longer summers. Several researchers believe that this will have a very great effect on tourist movements in Europe, turning them round from South to North. In other words, a climate change is expected to be favourable for summer and winter tourism in northern Europe and unfavourable for winter tourism in the Alps and summer tourism around the Mediterranean. However, it is not yet known what economic, social and environmental consequences this change in tourism will have in Europe.

The aim of this article is to make the reader understand the complexity of the goods and services systems provided by tour operators, because these are the main providers for the activities included in the tourism sector.

The article is structure in many parts: theoretical approaches, research methodology and the results of its application, conclusions. The main research method was the case study on a large Romanian tour operator.

Introduction

The tourist industry is affected by weather and climate, especially tourism for sun and bathing or for skiing. These types of tourism are extremely vulnerable to changes in climate variables such as temperature, precipitation and humidity. A climate change is therefore expected to have great significance for the patterns of tourist travel in future. In this context it is however important to remember that tourism, and particularly its travel pattern, for instance car and air travel, increases global emissions of carbon dioxide and thus accelerates climate change. Because tourism both affects, and is affected by, a climate change, it is very difficult to forecast future tourist streams, as shown by several research reports. Since the commencement of the International Polar Year (IPY) in 2007 to just prior to the Copenhagen climate conference in December 2009 a number of notable anomalies have occurred.

Table 1 Cold regions and cold events that took place between 2007-2010

| Regions | Events |
|--|---|
| Alaska (2007–2008) | Second highest winter snowfall in 30 years |
| Northern Hemisphere Snow Cover Extent (January 08) | Largest January snow cover extent on record. |
| Arctic Sea Ice (September 2007) | All-time lowest extent on record in September. Surpassed previous record set in 2005 by 23 per cent. |
| Arctic Sea Ice (September 2009) | Second lowest extent on record behind September 2007. |
| Fenno-Scandinavia (2008) | Warmest winter ever recorded in most parts of Norway, Sweden and Finland. |
| Eurasian Snow Cover Extent (January 2008) | Largest January extent on record and smallest extent during March, April, and boreal spring. Antarctic Ozone hole (2008): A maximum 27.2 million km ₂ in September; 5th largest recorded (McMullen and Jabbour, 2009). |

| <i>Regions</i> | <i>Events</i> |
|---|--|
| North America (December 2010) | Big snowstorms and rainstorms were the most notable events for the United States and Canada punctuated at the end of the month by one of the most severe tornado outbreaks in December history in the south-central portion of the United States. |
| SOUTH and CENTRAL AMERICA (December 2010) | During the first two weeks of December floods in Columbia killed 257 people and at one point 1.9 million people (5% of the country's population) were affected. On December 6-8 the Panama Canal was closed because of flooding. This was only the 3rd time in history that the canal was closed and the first time as a result of weather. |
| EUROPE (December 2010) | The cold wave and snow that engulfed Western Europe towards the end of November continued into December. In fact, on December 21 the temperature fell to -15°C (5°F) at Belfast, Northern Ireland, the coldest reading ever measured there. Castlederg reported -18.7°C (-1.7°F) for the coldest temperature on record for any location in Northern Ireland (old record -17.5°C at Magherally in January 1979). For France it was the coldest December on record since 1969. In Sweden the coldest in 110 years, and in Germany the coldest in 40 years. Poland saw temperatures fall as low as -33°C (-27°F) on December 2 and Pozan received a total of 58" of snowfall during the month. 68 people were reported frozen to death in Poland. |
| AFRICA (December 2010) | A powerful winter storm blasted Egypt and other parts of the Middle East on December 10-12. Three people were killed by collapsing buildings in the port city of Alexandria where 60mm (2.3") of rain fell.. |
| ASIA (December 2010) | The same storm that blasted Egypt in mid-December also strongly affected Israel and Lebanon. The eastern Siberian 'pole of cold' lived up to its reputation in December with Oymyakon reporting a minimum of -59.2°C (-74.6°F) on December 24th, the coldest temperature in the world for the month. |
| AUSTRALIA (December 2010) | The big weather news from Australia in December were the major floods in Queensland towards the end of the month that continue to plague the state as of this writing. On the cold side, the town of Applethorpe in Queensland recorded a minimum temperature of 3.7°C (38.7°F) on December 21st. This was the 2nd coldest reading ever measured during December in the state. |

| Regions | Events |
|----------------------------|---|
| ANTARCTICA (December 2010) | The coldest temperature ever measured in the Southern Hemisphere during a December was registered at the Dome A site in Antarctica on December 1st and 2nd: -52.0°C (-61.6°F). The previous record was -48.0°C (-54.4°F) at Vostok on December 1, 1960. |

Source: <http://www.wunderground.com/blog/weatherhistorian/comment.html?entrynum=10> (accessed May 2011) and other information concerning cold regions events

Such events have served to focus the attention of governments and other stakeholders not only on the influence of climate change in Polar Regions but also because of its synergies with natural and political systems. For example, the decline in Arctic sea ice extent is inseparable from the increased interest in maritime access to the polar seas for fishing, mineral exploration and exploitation, trade and tourism, and concerns over political sovereignty.

Content

However, one of the great lessons of climate change is that the Earth behaves as a single, self-regulating system comprised of physical, chemical, biological, and human components. This means that what happens in the Polar Regions also has implications throughout the world in terms of environmental and other futures and that human activities, including that elsewhere in the world are affecting high latitudes. Of the nine tipping elements considered as Earth System components vulnerable to climate change by Lenton *et al.* (2008), five of them are directly polar related.

Table 2 Arctic vulnerable regions

| | |
|---|--|
| Regions | 5 out of 9 earth systems vulnerable to climate change are directly polar related |
| Arctic summer sea-ice | As sea ice melts it exposes darker ocean, which absorbs more heat than ice does, causing further warming. Possible time frame: by 2020; temperature increase: 0.2–2°C. |
| Boreal forests | Longer growing seasons and dry periods increase vulnerability to fires and pests. Possible time frame: by 2060; temperature increase: 3–5°C. |
| Atlantic Ocean thermohaline circulation | Regional ice melt will freshen North Atlantic water. This could shut down the ocean circulation system, including the Gulf Stream, which is driven by the sinking of dense saline water in this region. Possible time frame: by 2100; temperature increase: 3–5°C. |
| Greenland ice sheet | As ice melts, the height of surface ice decreases, so the surface is exposed to warmer temperatures at lower altitudes which accelerates melting that could lead to ice-sheet break up. Possible time frame: by 2300; temperature increase: 1–2°C. |
| West Antarctic ice sheet | Ice sheet is frozen to submarine mountains, so high potential for sudden release and collapse as oceans warm. Possible time frame: by 2300; temperature increase: 3–5°C. |

Source: Lenton *et al.* (2008)

Given such concerns it is perhaps not surprising that some polar destinations and tourism companies are looking to promote climate change tourism (Hall and Saarinen 2010) as part of a 'Last chance to see' also referred to as 'doom tourism'. 'The world has never traveled to the Arctic like now. Aided by global warming – that's opening up areas never before visited – but tinged by a quiet urgency, it's here the world gets a live demonstration of how our world is changing (Round's, 2008): observation that, 'The plight of the region has become such a part of our contemporary background that it's no wonder demand for the region has become so high. The message is quite clear: come quickly or you'll miss it', is something of a moot point, but it is one shared by a number of travel writers and commentators (e.g. E The Environmental Magazine 2002; Egan 2005; Margolis 2006).

Firstly, as Hall and Saarinen (2010) highlight, the numbers of tourists traveling in the Arctic region is substantial, of the order of over five million visitors per year. *Secondly*, European regulations and those of Arctic countries protect sites. *Thirdly*, operators are responsible for managing them properly and it's in their interests to maintain the pristine environment they are selling. *Finally*, compared to national parks in Alaska where many thousands visit, for example, the number of Arctic tourists is minimal' (Round, 2008). Similarly, (Round 2008) states, 'do we need just a little more perspective?

Apart from the geographical challenge of not including Alaska as part of the Arctic, there still remains the issue that the number of tourists is continuing to grow and represents a significant figure in relation to permanent populations and concentration in a relatively small number of accessible areas in space and time. For example, the number of fly-in tourists per year now exceeds the population of Greenland, with the number of cruise guests already being over half. A similar situation with respect to number of visitors per year in relation to permanent population also exists in Iceland, Svalbard, and northern Norway, Sweden and Finland above the Arctic Circle (Hall and Saarinen 2010).

Given the number of visitors to the Arctic it should therefore be of no surprise that tourism is regarded as such a key component of the economy, along with fisheries and mineral and energy development. Climate change, rather than having a negative impact on the regional economy is regarded as being a major beneficiary along with maritime transport generally as access to many northern areas is improved. Antarctica and the sub-Antarctic is also receiving increasing numbers of tourists, which although not on the scale of the Arctic, also has significant economic benefits both for the small number of sub-Antarctic communities as well as the gateway communities in Australia, New Zealand and South America (Hall 2000). And, given the much smaller amount of visitor access to ice-free areas, tourism is arguably of proportionally even greater significance in terms of direct environmental impact in the Antarctic than the Arctic (Hall 2010).

Nevertheless, despite the importance of tourism as both a potential means of economic adaptation to the effects of climate change as well as being a direct source of environmental impact and change and a significant contributor to greenhouse gas emissions its potential role in the future of the economic and environmental transition of high latitudes to a new set of climatic, environmental, socioeconomic, and political states is not well understood.

Although there have been a number of notable analyses and reviews of tourism in polar regions such work has often occurred in relative isolation from broader research on response to environmental and social change in polar regions. There has not only been a gap between those undertaking research in the physical and biological sciences in polar regions and those studying tourism, but even between students of tourism and other social scientists. This has meant that the nature and role of tourism in high latitude economies has not been adequately appreciated in studies of climate change, nor its positive and negative contributions to biodiversity conservation in Polar Regions (Hall 2010). For example, because of the extent to which tourism provides an economic justification for transport infrastructure that existing population sizes may not justify alone, tourism therefore becomes extremely important in providing connectivity for peripheral

high-latitude communities to major settlements. This may take the form of: increased numbers of connections (i.e. flights); improved connections (i.e. better quality of road, or speed of transport available), or whether there is a connection or not at all.

Tourism's role in polar economic development when well planned and managed therefore goes well beyond that of tourism alone as it provides a major 'enabling' role via transport, accommodation and other infrastructure that may also contribute to local quality of life.

There is therefore a need to better integrate tourism into the broader understanding of climate and environmental change in Polar Regions and for greater dialogue of those that study tourism with other disciplines. One way in which this can be advanced is by recognizing the role that tourism plays in the proposals for future research of the IPCC, some of which has already begun to be addressed as an outcome of the IPY. This is especially important given tourism's economic role in Polar Regions for both indigenous and non-indigenous populations. An issue recognized is the need to examine the economic impacts of climate change which are difficult to address at present due to the dearth of information. However, in addition to a greater integrative dimension of tourism research with other fields and regional research projects there are also clearly a number of tourism specific issues that need to be addressed in terms of the development of a more substantial knowledge base (Stewart *et al.* 2005; Hall 2008). These include:

- tourism entrepreneur and organization perceptions of climate change and their adaptation and mitigation strategies to climate and environmental change;
- tourist perception of the affects of climate change on polar destination attractiveness;
- the extent to which polar tourism experiences creates environmental advocates from those who participate in polar activities;
- the impacts of environmental change on place promotion;
- the effectiveness of tourism codes of conduct in managing operator and tourist behavior;
- the role of tourism as a vector for the introduction of invasive species;
- the potential environmental impacts of cruise ships in polar regions;
- the role of tourism in polar governance and sovereignty issues
- the role of tourism in the socio-cultural resilience of indigenous peoples and remote communities in the Arctic;
- the role of tourism in economic development and diversification

Given that tourism is such a significant economic activity and, as Stewart *et al.* (2005: 383) noted even a 'desired industry in some communities,' it is clearly vital that a deeper understanding of the complexity of polar tourism be achieved in terms that are useful for policy-makers, especially when tourism is also integral to climate and environmental change adaptation and mitigation. Among the destinations presented in the 2011 offer from the TUI catalogues there are also countries from Polar Regions as for example Norway, Sweden, Greenland, Arctic, Antarctica.

The transport to these destinations can be chosen by the tourist, from tourism packages including only airplane or train, bus or ship or combination of these. The presented destinations are classic following a popular route with well known sights, but also special natural sights and adventurous one. The main trips in the Polar Regions are:

| Region | Route | Average duration (days) | Average price (€) |
|-----------------------|---------------------------|--------------------------------|--------------------------|
| Norway Hurtigruten | Bergen-Kirkenes-Trondheim | 15 | 2600 |
| | Kirkenes-Bergen | 8 | 1200 |
| | Bergen-Kirkenes-Bergen | 14 | 1500 |
| | Bergen-Kirkenes-Svolvær | 12 | 2200 |
| | Round trip of the island | 12 | 4000 |

| <i>Region</i> | <i>Route</i> | <i>Average duration (days)</i> | <i>Average price (€)</i> |
|---------------|---|--------------------------------|--------------------------|
| Spitzbergen | The North Sea | 10 | 3500 |
| Greenland | Disko Bay Expedition | 9 | 4500 |
| | The South of Greenland | 12 | 4500 |
| | The East of Greenland-Svalbard | 15 | 6500 |
| Arctic | Murmansk – The North Pole – Murmansk | 15 | 19000 |
| | Around the Arctic Region | 67 | 55000 |
| | The North-East Passage | 25 | 25000 |
| | Canada-Greenland- Arctic Russia | 25 | 20000 |
| Antarctica | Ushuaia–Beagle channel- Drake passage - Ushuaia | 13 | 6500 |

Source: TUI Katalog, Hurtigruten Arktis Antarktis 2011- 2012

The first attraction in the TUI catalogue for 2011 in a far place is in Norway on the route Bergen-Kirkenes-Trondheim. The trip lasts for 15 days and represents a cruise trip on 2500 miles on Norway's coast, with nights of accommodation in the towns Oslo and Bergen and stops in 34 harbours. Another destination offered by TUI is the Svalbard island, attractive both due to the polar fauna with rare animals but also the glacier landscape in a proportion of 93%.

The next destination in the cold regions where TUI offers full travel services is Greenland where tourists can admire the polar fauna with rare animals and the glacier landscape in a proportion of 83%. The largest island, Greenland has lots of sights: deep fjords, icebergs, the largest iceberg in the world.

One of the most attractive holiday choices is Iceland. The Iceland trip includes visiting many cities as for example Reykjavik the capital city and Ilulissat, the third largest city in Iceland, situated 350 kilometres from the Arctic Circle. After visiting these cities, there is the trip to the glaciers where the main attraction is the Glacier Fjord which belongs to the UNESCO patrimony since 2003. The next day goes on with a trip to the Qqaatsut colony, where in 2008 there were only 52 inhabitants. For centuries this was the place where the Danish whale hunters gathered. The next days are booked for the visits of small but wonderful towns and stops at the Gooafoss waterfall; the myths say that the ancient Nordic gods are watching the country from this place. There will be stops at the largest glacier in Europe– Vatnajokull, at the glacier lagoon, the oldest church in Iceland and a walk of the Feroe Islands.

One of the most expensive offers of the German company TUI in the far areas is the expedition in the Arctic region, which lasts for 67 days and costs approximately 55.000 euro.

The rebound in growth in the main emerging market countries has significantly outpaced that seen in the main industrialised countries over recent months. However, there are some cautious grounds for optimism that the major economies may not be left hopelessly trailing behind in 2010. In Europe, orders data and surveys have tended to be stronger than output numbers, suggesting faster growth ahead – some of the recent weakness in output can be attributed to short-term factors such as weather and the winding down of car scrappage schemes. Rapid emerging market growth will also provide a boost.

European airlines have posted consistent gains in Revenue Passenger Kilometres (RPK) for most of 2010. According to data from the Association of European Airlines (AEA), RPK has grown in eight of the first eleven weeks of 2011 compared to the year earlier and in 13 of the last 17 weeks. The trend is not limited to intra-European routes – routes between Europe and Asia and Europe and North America have experienced similar patterns of growth. Passenger load factors continue to increase as well. More encouraging, these increases are driven more from the demand side than the supply side. Over the past year, airlines cut capacity significantly. This trend has slowed significantly with some capacity recently added within Europe.

The United Nations Environment Program (UNEP), The United National Education, Science and Culture Organisation (UNESCO) and the World Tourism Organisation (WTO / OMT) are preoccupied at the same time by: the protection of the natural environment and the cultural patrimony;

Cooperation with the local communities and people,

Encouraging the tourists to respect the local lifestyle ;

Preserving the plants and animals, the protected areas and landscapes;

Respecting the integrity of the local cultures and social institutions;

Development of the activities according to the local laws, national and international regulations in force;

Active opposition against the illegal, abusive or exploiting types of tourism;

Close collaboration with the business partners, local authorities, regional and national governments and other organisations for the purpose of the sustainable development of tourism;

Supplying with information regarding the development and encouragement activities for sustainable development and tourism management ;

Communicating the progress of the participants to the initiative of taking this commitment.

It is also well know the fact that the objective of tourism sustainable development cannot be achieved without the help of the stakeholders, including the clients.

Conclusions

There is a lack of studies of how tourists and other players in society will react and adapt to a changed climate. Research shows that there is a great need of increased interdisciplinary knowledge and detailed impact studies of how tourism in Europe will change in relation to climate change and sustainable development. That is why, this paper analyse tourism in the cold environments, which is expected to increase while in others it will presumably decrease or change, and this will have a great effect on the economy. Is Europe prepared for this change? What can we do to increase our preparedness? On the other hand, individual weather events cannot be specifically connected to climate change; they do act as indicators of a potential future for high latitude climates as well as being potential evidence some of the greater variability of weather events that has been forecast as part of climate change. During future hot summers, more and more European tourists will want to come north. How will this affect the economy, environment and social development of European cities? Urban tourism in Europe has increased over the past few decades, and tourism as a whole is today one of the largest segments of the business sector. In a report from 2000, the European Commission writes that tourism has a strategic role for urban planning and urban development, and that European cities must work to ensure that they can cater better for both the expectations of tourists and the wellbeing of the urban population. One good example is the City of Göteborg which has developed a clear strategy to attract visitors to the city. This represents an investment which has evidently paid off. Göteborg won the 2007 Prize as the best tourist organisation in Europe when the European Cities Tourism Awards were distributed for the first time by the organisation European Cities Marketing (ECM). The question of, 'isn't the weather strange lately?' seems to be increasingly asked in these days of conjecture about the effects of climate change.

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OUTSOURCING STRATEGIES. HOW TO FORMALIZE AND NEGOTIATE THE OUTSOURCING CONTRACT

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In the globalized economy multinational firms have given rise to local firms able to produce at a low cost and at acceptable quality levels. A growing number of firms have outsourced production and manufacturing activities of all types to these firms, not only to reduce production costs but also to make their organizational structures more streamlined and flexible. Outsourcing decisions, which originally were limited to production which had a modest technological content and was of marginal importance for the business in question, is increasingly adopted for activities which, requiring core competencies or belonging to the core business, were considered inseparable from the organization and thus not outsourceable. Gradually an outsourcing strategy has developed which has found it convenient to outsource even core competencies and functions, such as specialized manufacturing, which require a particular technology, marketing, product design, and the search for know-how (Prahalad and Hamel 1990: 79-91).

Such an outsourcing strategy has a number of advantages, among which quality improvement, a greater focus on managing other core competencies, a greater flexibility and leverage regarding resources, along with the possibility of entering new markets, even ones with a high rate of development.

This article analyzes the fundamental stages for an outsourcing strategy. It will demonstrate how, in order to achieve an outsourcing strategy, it is necessary to include outsourcing in the general strategy, gather suitable information for choosing the outsourcer, negotiate the contract with the supplier, choose the type of relationship to have with the supplier, and, finally, plan the transfer of activities and functions from the outsourcee to one or more outsourcers or providers.

Keywords: outsourcing, outsourcing decision, strategic perspective, outsourcing contract, contract negotiation, outside information, organizational culture.

JEL Codes: M10, M19, L20, L21, L24, L26

1. Introduction. The object of outsourcing

Outsourcing functions, processes and activities, normally carried out inside the firm, through outsourcing contracts – by repurchasing through supply contracts the products or results of certain activities by firms delegated for such activities – is not a new phenomenon.

Starting from the early '80s, the use of outside suppliers has taken on new features. In the global economy, in many countries still referred to as the “Third World”, multinational firms have set up local companies able to produce at low cost and at an acceptable level of quality “(1)”; these firms have been handed production and manufacturing activities of all kinds by a growing number of firms, who are motivated by the possibility of reducing manufacturing costs as well as of streamlining their organizational structure.

In recent years outsourcing strategies have undergone a profound evolution, moving from simple forms of production contracts involving third parties to agreements that entail several

strategically important functions: from technological innovation to logistics, customer relations to post-sales services.

The outsourcing decision is not limited to marginal production with a modest technological content but is increasingly extended to activities that require “core competencies” that are part of the “core business”, activities which, until that moment, were considered an inseparable part of the firm and thus not outsourceable.

2. Outsourcing as a strategic perspective

Today firms consider outsourcing from a long-term, and thus strategic, perspective, whose aim is the outsourcing of functions and processes through a network of stable agreements with specialized outsourcers who take on the role of providers, with or without exclusivity.

Quinn and Hilmer have clearly summed up the four main advantages of outsourcing from a strategic perspective (Quinn and Hilmer 1994: 43-55):

1. maximizing the yield from internal resources by concentrating investments and effort on what the firm “does best”;
2. creating or protecting the competitive advantages by developing and strengthening the “core competencies” and building barriers against present or future competitors who might try to enter the firm’s areas of interest;
3. providing incentives to investments in the outsourcers’ technology and know-how, their innovations and skills, and their specialized activities, which the outsourcee can maintain in-house only through continual investments and innovation;
4. reducing the risks in rapidly changing markets and in the presence of fast-evolving technologies; an outsourcing strategy transfers outside the firm the risks from technological change and R&D costs, thereby shortening the production cycles and making the response to customer needs faster and more flexible.

Today the tendency is to achieve global sourcing and offshoring; that is, outsourcing that involves outsourcers located in countries other than that of the outsourcer.

With the decline in transport costs and the development of the merchant marine and container ships, globalization has begun to separate the “geography of production” from the “geography of consumption” (Mella 2007: 12).

Global outsourcing and offshoring are processes that best illustrate this tendency.

Outsourcing is transforming production from a relationship involving the supply of materials, components and services into a network of competencies involving research and development and planning.

Outsourcing has entered into new fields, from customer service to R&D to the study of new business models, even health care services.

Along these lines Champy writes, in his introduction to Koulopoulos and Roloff’s book: “*The forces of globalization have finally kicked in. ... Material and product sourcing move between multiple countries as a function of price, quality, and speed. And customers are everywhere expecting to be served with consistent quality and price, independent of location. The Internet has made markets global, even for the smallest company. In fact, information technology is the great enabler of those changes*” (Koulopoulos and Roloff 2006: 1-5).

3. The phases of the outsourcing strategy

An initial interesting model for the outsourcing decision – developed with reference to the industrial services sector, though of general validity – is presented by Kumar et al. (Kumar, Aquino and Anderson 2007: 323-342). After a preliminary brainstorming process on the fundamental internal and external variables that can influence the outsourcing decision – a

process which involves all the organizational levels of the outsourcing firm – the risks of outsourcing are then considered (Pellicelli 2008).

Jennings proposes a more general model according to which the outsourcing strategy can be outlined in the following phases (Jennings 1996: 393-405). (Table 1)

Table 1 – The phases of an outsourcing strategy.

| PHASES | PRINCIPAL ACTIONS |
|--|--|
| <p>1. The objectives. Allocate outsourcing as part of the general strategy. Assess whether or not outsourcing is a feasible strategy for the organization, taking into account its current strategic objectives.</p> | <ul style="list-style-type: none"> • Define the long-term strategy for the function to be outsourced. • Consider the impact of the outsourcing decision on the chances of achieving the organization’s mission and strategies, including costs, quality, flexibility and time frame. Consider the changes in the business environment that would entail a change in strategy. |
| <p>2. Which activities to outsource. Collecting information. Collect and analyze information about the products/services to outsource and those than can be produced in house.</p> | <ul style="list-style-type: none"> • Identify the products/services to outsource and the expected performance levels. • Give a clear definition of these products/services. Identify the “core” competencies. Determine the current costs of the products/services to be outsourced and estimate the potential savings from outsourcing. • Obtain references about the supplier. |
| <p>3. Choosing the outsourcer. Set evaluation criteria to identify a group of potentially reliable candidates.</p> | <ul style="list-style-type: none"> ▪ Identify the number of suitable suppliers in order to have a vast and rational choice. ▪ Document the technical and managerial capacities of the candidate firms, their organizational cultures, and the potential fit (degree of integration with the outsourcer). |
| <p>4. Negotiating the contract. Aim for a contract that strictly establishes the services required and at the same time is flexible enough to permit the addition of future services as a response to unforeseen events.</p> | <ul style="list-style-type: none"> • Negotiate a fair and equitable agreement. • Specify the performances expected from each partner, how these should be measured and remunerated, and how any controversies that may arise are to be settled. • Clearly specify contingency clauses and how any subcontractors are to be managed. |
| <p>5. Transferring the outsourcer’s activities and functions to the supplier. Preparing a plan to transfer the outsourced activities to the supplier.</p> | <ul style="list-style-type: none"> • Set up a temporary working group to control and organize the transfer. • Actively involve those employees whose activities may be affected by the transfer. • Ensure that the managers of the functions or of those parts of the organization outsourced are actively involved in the decision-making process |
| <p>6. Choosing the appropriate outsourcer-supplier relationship</p> | <ul style="list-style-type: none"> • Buy the market, ongoing relationship, partnership, strategic alliances, upstream integration. |

Source: adapted from Jennings 1996: 393-405

4. The objectives: what place in the general strategy?

Successful outsourcing starts with the clear definition of objectives and a clear assessment of how these can be satisfied by the outsourcer. Many failures are due to unrealistic or wrong expectations (Allen and Chandrashekar 2000: 5).

In general, there is more than one objective, and the first phase in the decision-making process involving whether or not and how to outsource starts by defining which processes or functions should be kept inside the firm.

For example, one objective of outsourcing can be to support a phase of strong growth, and thus it may have a temporary horizon; or it can signal the start of a new strategy. In addition to investments, developing the necessary production capacity takes time. If the firm has entered a phase of fast growth then outsourcing will allow it not to lose the opportunity to gain market share, develop its own business, and increase supply without additional fixed costs.

Especially when we are dealing with the outsourcing of Information Technology, the “business recovery” objectives should be evaluated, thus considering what the impact could be on the firm’s activity if the supply of a particular strategically-relevant product/service were interrupted or did not respect the agreed-upon specifications.

5. Gathering internal information and the choice of activities to outsource

According to Prahalad, firms should outsource only those processes and activities they know well; he asserts that they should not outsource to resolve problems they are unable to solve internally (Prahalad 2004).

Moreover, they should not hand over entire functions, which constitutes the “brute-force approach”. For example, a firm could hand over a sales activity but should maintain data analysis activities in-house (Prahalad 2004). It is not always necessary to transfer an entire function. Maintaining part of the activities of a function in-house reduces the risk of choosing the wrong supplier and allows the firm to transfer at a later date the entire function if expected performance is below expectations. For example, a firm can transfer the active invoicing cycle and wait to transfer the passive cycle, which in general is more complex.

The decision as to which functions to transfer is always the result of a comparison between advantages and disadvantages, many of which are common to the various functions and activities, while others are specific.

Bragg offers several general suggestions regarding specific functions and activities, such as those which are listed below (Bragg 2006: 160-180).

A. Credit collection. The risk is that the supplier may be too aggressive in his approach to the debtor and the creditor firm can lose the customer.

B. Salaries and contributions. This is the function which, more than any other, is outsourced. If the firm has several operational units spread out over several geographic areas in which the outsourcer is present, then the latter can assure the necessary services with greater uniformity and timeliness.

C. Computer services. The main advantage of outsourcing this service is the reduction in capital investments in computers, investments which will have to be made by the supplier, who may even buy the computers from the outsourcee, thereby freeing up liquidity. Outsourcing this function can also lead to disadvantages that cannot be ignored. Bragg presents some of these in detail (Bragg 2006: 164-166). In particular, Espino-Rodriguez et al. have examined the outsourcing strategy in computer systems in the hotel sector by constructing a theoretical model which, when applied to that sector, shows how outsourcing does not lead to an effective

strengthening of the capacity to manage the resources used in computer systems and in information technology (Espino-Rodríguez and Gil-Padilla 2007: 757-777).

D. Customer service. The main advantage derives from the outsourcer's experience in responding to the customer requests and in managing complaints; if the outsourcee is a prestigious firm it can contribute to the outsourcer's reputation.

E. Planning and R&D. Transferring the personnel to an outsourcer with high qualifications (higher than those of the outsourcee) would streamline the function and, if this is carried out by a highly specialized team with great potential, could provide better results in terms of innovation and patents. The advantage of turning to a supplier is decisive when the firm has a request from a customer which it cannot meet in the short term due to a lack of resources (human and financial).

Nevertheless, even this form of outsourcing entails serious risks. The idea of the "outsourcing-offshore" is "synonymous to cost cutting", but firms who go this route often forget to do so in a way that increases their capacity to compete.

Wrong outsourcing choices have also caused a diminishing of the firm's capacity to compete and led to their decline (Bettis, Bradley and Hamel 1992: 7-22; Brown and Wilson 2005: 30-34). This means that the firm must be able to identify which activities to outsource without risking negative effects on their capacity to compete. Quinn and Hilmer have listed three classes of strategic risks firms can face when they outsource: 1) the loss of critical capacities or competencies; 2) the weakening of their capacity to coordinate more than one function; 3) the loss of control over the supplier (Quinn and Hilmer 1994: 43-55).

Kearney's study on the reasons that make outsourcing a problematic choice highlights that the main fear of the outsourcee is the loss of control over the outsourcer, in particular the risk it will be less able to protect its intellectual capital (Kearney 2005: 1-97).

6. The gathering of outside information and the choice of outsourcer

Gathering information on the potential outsourcer can start by contacting firms that have had dealings with the outsourcers: individual firms or associations of firms that can serve as references for the outsourcing candidates.

The technical possibilities of producing the product/service and management's capacities are the most important criteria for choosing among the outsourcers. There is a clear relation between the risks faced by the outsourcee and the supplier's capacities: the greater the latter, the fewer the risks for the outsourcee.

According to Stacey, during the implementation of the outsourcing this information must be shared and periodically discussed with the outsourcer (Stacey 1998: 24-27).

A particular aspect to consider is the size of the outsourcer: whether the outsourcer is a large or small firm. The answer depends fundamentally on the type of activities and the volume of services to outsource. In general a large outsourcer, one who can guarantee the desired volumes and quality, is preferred to a small firm, which must be the object of constant and costly controls on the part of the outsourcee.

It must be pointed out (Bragg 2006: 30-34) that the supplier can also be a large firm that produces for its own market but, since it has excess production capacity, is willing to also produce for other customers; it may be a good idea to make use of this willingness in order to outsource modest volumes of activities.

To decide which supplier to outsource an entire function (or part of a function) to, there is need for an accurate knowledge of the potential outsourcer which identifies its objectives, including how it operates to achieve its profits and to compete with its rivals.

It should always be remembered that organizational culture may be at the basis of outsourcing choices. An example of how an organizational culture may condition the choice of outsourcing strategy is Codelco, a Chilean copper mine reputed to have one of the best managements despite being partly state-run. Codelco had to decide which functions to keep in-house and which to outsource. The problem was how to create an outsourcing strategy in a sector such as mining, which traditionally invests little in information technology. The greatest problem was management's resistance due to a culture based on centralization (Upton, Staats and Fuller 2007). Table 2 presents information that is useful for evaluating the potential of outsourcer candidates.

Table 2 – How to evaluate the potential of the supplier. Some of the possible questions to ask firms that can provide references for previous experiences with the supplier.

- | |
|---|
| <ol style="list-style-type: none"> 1. How did the supplier manage the transfer (transition) of the functions from the outsourcer to its own organization? 2. What is the level and quality of the resources employed? 3. How would you describe the services provided by the supplier? 4. How was the transfer of personnel to the supplier's organization managed? 5. What were the differences in pay and benefits for the transferred personnel? 6. What was the level of responsibility given to the employees transferred to the supplier compared to the previous level in the outsourcing firm? 7. What is the quality of the supplier? 8. How and to what extent did the supplier respond to indications of defects from its own personnel? 9. What is the level of technology adopted by the supplier? 10. To what extent does the supplier use sub-contractors? 11. How did the supplier deal with any conflicts with the firm? 12. How did the supplier manage any contract renegotiations? 13. How detailed is the calculation of costs (invoicing) by the supplier? 14. Did the supplier share with the firm any cost economies not provided for in the contract? If so, in what way? 15. To what extent did the costs charged by the supplier meet the firm's expectations? Were there any economies with respect to the costs when the production occurred in-house? 16. How did the supplier manage the services not included in the contract and to what extent did it take account of the related costs? 17. How were any problems not touched on in the previous questions managed by the supplier? 18. Would you use the supplier's services again? Why or why not? |
|---|

Source: Bragg 2006: 32.

The geographical distance between outsourcee and supplier can be important in some cases, and become a determining factor when emergency actions are required, when the outsourcee has several business units spread over several geographic areas where the outsourcee is not present and would thus be forced to turn to sub-suppliers from a local firm, and when transport times are such as to compromise the rapid buildup of inventories in certain geographic areas with regard to sectors having strong sales volatility.

Even the age of the outsourcer candidate is of great importance.

In general, new firms are flexible, offer better services and frequently innovate, but they are also the most vulnerable. Those who have been in the market for some time can have greater financial stability but are often slow to innovate and are not very flexible.

7. The contract negotiation

There are different procedures for drawing up the contract, the most frequent of which we will now summarize.

After having chosen a group of potential outsourcers the firm sends each a “Request-For-Proposal” (RFP), in which some information are requested as: information on the firm and sector, activities to outsource, recourse to sub-suppliers, length of contract, transfer of personnel (Bragg, 2006).

The information obtained from the RFP is only the starting point for the selection of the outsourcer and stipulation of the contract.

The contract must be specific enough to clearly regulate every key aspect and at the same time flexible enough to allow the parties to face the consequences of unforeseen events without conflicts arising.

In particular, the contract must define the evaluation criteria for the performances and what will occur if these criteria are not fulfilled. It must establish whether or not the supplier can, in turn, use sub-suppliers. Many contracts provide for arbitration in order to resolve disputes.

In order to effectively start the negotiation the firm must understand where and to what extent the supplier earns a profit.

Even if the fundamental parameter for outsourcing is not price, if the competition among suppliers is effectively arranged then the prices offered are low and the margins reduced.

There are various tactics potential outsourcers can adopt to win the contract.

Frequently the contract contains only those clauses relating to the essential services in the platform of basic services, and additional costs are incurred for each contingency service not included in the platform. The firm responds by trying to broaden the platform and clearly defining the prices for the contingency services.

At other times the supplier renounces profits for an initial period, offering modest prices, only to ask for price adjustments later on when the outsourcee has reduced its capacity to backsource, having given up carrying out the outsourced activities. In order to make it less convenient for the outsourcer to rescind the contract, the supplier imposes high penalties for withdrawal. The outsourcer, in turn, can respond by imposing short-term contracts with low penalties for an early withdrawal.

Arjun and Subhajit, after demonstrating how widespread and serious the controversies are, especially in offshore outsourcing, present the results of a comparative analysis of the procedures adopted by a sampling of firms in order to evaluate risks and of the policies adopted to select the offshore partners.

Moreover, the authors recommend undertaking preventive due diligence for each phase of an outsourcing agreement (Arjun and Subhajit 2007: 21-46).

When the outsourcing concerns the production of goods or the supply of services, firms often turn to pilot programmes, where the supplier identifies a limited group of customers and agrees on a period of time – which can vary from 30 to 90 days – during which the customers use the service according to the agreed upon standards.

The supplier that wishes to purchase the services to give back in outsourcing generally supplies the services during this trial period at zero cost, or at a very low cost.

8. The transfer of activities and functions to the outsourcer

A plan agreed upon by the two parties – linked to the outsourcing contract – establishes the time frame and mode for the transfer of the outsourced functions.

The preliminary information for the outsourcer’s personnel and the latter’s involvement is important in this phase. Often there is recourse to a project team whose aim is to manage the transfer.

For simple activities, such as maintenance, the transition can be swift. However, this is not the case for complex activities. Too fast or hurried a transfer may not allow the outsourcer sufficient time to thoroughly learn about the activity to transfer.

The firm that turns to outsourcing generally starts by outsourcing a function (or part of a function) that has a modest impact on its economic results and on the organization, in order to reduce the negative impact of performances that do not meet expectations.

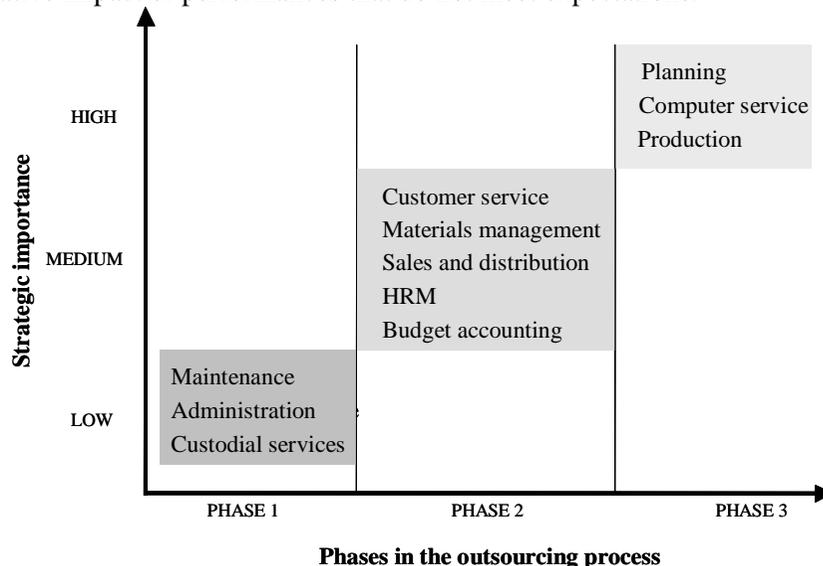


Figure 1 – Time frame for the outsourcing of various functions. Source: Bragg 2006: 30.

There are various approaches in this regard. Following Bragg, an initial approach is to follow the proper procedure regarding union relations by informing the personnel as soon as possible that the firm is considering outsourcing options (Bragg 2006: 32).

In any event, the communication must provide the personnel with valid and convincing reasons for outsourcing since deciding whether or not to outsource a function or activity in any case represents a negative assessment of the personnel who are involved in those functions and activities, which could spur the best employees to leave the firm.

Thus the firm should inform its employees only after the specifics of the contract have been defined.

The difficulties with this way of communicating are evident: 1) it is difficult to hide the selection process from the potential suppliers; 2) there are also negative effects on employees involved with those functions not being outsourced, since the suspicion may arise that the firm is hiding from them decisions that concern them.

The most complex phase is deciding which persons will be transferred to the outsourcer and with what responsibilities and salary.

It is important that: a) meetings be frequently held among the “key personnel involved”, and at least once a year for those in charge at the highest levels; b) periodical meetings be maintained even when there tend to be no more problems; c) the persons in charge of communications not be replaced.

9. The choice of relationship to have with the supplier. Forms of direct control over the outsourcer

After deciding to outsource, the problem arises concerning the type of relationship to have with the supplier.

If we limit our attention only to typical outsourcing, then we can distinguish between the following forms: a) outsourcing as a partnership, with direct control over the outsourcer in the form of corporate or formal control; b) the outsourcing of supplies without direct control in the form of a partnership.

The first alternative is preferable when the objects of outsourcing are the strategic functions and activities that fall within the core competencies and the core business; since the outsourcer outsources those functions and processes which are vital for its survival, the firm faces the risk of seeing its organizational structure weakened, so that it is natural that, where possible, it tends to acquire or maintain control over the outsourcer.

In order to maintain control over the outsourcer, the outsourcing firm can enter into an outsourcing relationship in one of the following ways:

A) Setting up a fully-owned company to carry out the outsourced activities. . This is the preferred alternative for banking and insurance groups that are outsourcing complex functions, such as management control, auditing, and the assessment and liquidation of damages.

B) Hiving off, or transferring a business while maintaining total or legal control; this solution leads to the same results as the previous one, but has the advantage of simplifying even more the transfer of assets and personnel as well as creating a better market image.

C) Acquisition of an already-existing company or participatory control in this company; this solution differs from the previous ones in that the outsourcer outsources activities through a supply contract with an outside supplier but, in order to gain control, purchases – in one of the many forms possible – the company in question. The main advantages of this alternative are that it obviates the need to form a new organization – as the outsourcer’s organization is still active – as well allows for full control (acquisition) or participatory control (share ownership).

D) Participation in strategic alliances where there is close and wide-ranging interaction among the partners, even in the form of consortiums or joint ventures, following a tendency that has become more marked in recent years. This solution is practicable especially for the outsourcing of functions that require specialized competencies which are jointly carried out by several co-venturers – research and development, advertising, etc. – with the agreement to jointly use the results obtained. Together with the advantage of producing a streamlined outsourcing with limited costs there are those deriving from a limited control and the lack of a need to outsource internal organizational structures.

In recent years new tendencies have emerged in relations between the firm that outsources without formal corporate control and its supplier.

1) Long-term relations. The average length of outsourcing contract has noticeably increased.

2) Greater cooperation. The supplier, even if not subjected to corporate control, tends to become more and more a partner, since the costs incurred by the supplier can also be considered as costs for the outsourcer and the innovations introduced by the latter can translate into future

outsourcings of production lines to the supplier. Thus a lengthy and stable collaboration is in the interests of both sides.

3) A large reduction in the number of suppliers. This tendency is common to all sectors and has given rise to considerable risks for the buyer, who can find himself in an undesirable and at times dramatic position of dependence.

4) Greater use of EDI (Electronic Data Interchange) and of other communications technologies.

5) Agreements for the gradual reduction of costs (and thus prices) by the supplier.

6) Agreements for the improvement in the quality of products by the supplier which represent components for the buyer.

7) Supplier involvement in the development of new products.

Obviously the type of relation depends on the market structure and on the types of supplies provided by the supplier.

Table 3, adapted from Cohen, Agrawal and Flaherty, summarizes the characteristics of five types of possible relation between buyer and supplier in an outsourcing context, listed in order of intensity (Cohen and Agrawal 1996; Flaherty 1996: 26).

Table 3 – The characteristics of the different types of relations with the supplier.

| “Buy market” | the “On-going relationship” ^(II) | Partnership | Strategic Alliance | Upstream integration |
|--|---|--|--|--|
| <ul style="list-style-type: none"> · Arm’s length^(I). · Clear definition of components. · Interaction via computer (EDI). · Many agreements with competitors. | <ul style="list-style-type: none"> · Medium-term contracts. · Some information sharing. · Good relations with management · Some agreements with competitors | <ul style="list-style-type: none"> · Long-term contracts. · Vast exchange of information. · Trust among partners. · Agreements of limited importance with competitors. | <ul style="list-style-type: none"> · Long-term relations. · Full sharing of information and programmes. · Large scale trust and fusion among cultures. · No agreements with competitors. | <ul style="list-style-type: none"> · Control of supplier’s capital. · Full sharing of information and programmes. · A single culture. · No agreement with competitors. |

(I) Simple agreement between buyer and seller, who have no other type of relation.

(II) “On-going relationship” indicates relationships with several suppliers. On a case by case basis the firm chooses the one more suitable for its supplies.

Source: adapted from Cohen and Agrawal 1996; Flaherty 1996: 26.

If the outsourcing relationship creates strong uncertainty regarding the buyer’s important objectives, then the relations with the supplier should be very close. In order to reduce uncertainty some firms adopt vertical integration, others strategic alliances. To find the best solution Pyke suggests going back to examining the four main objectives of operational management – costs, quality, delivery and flexibility – citing the example of a clothing company whose main competitive factor is its high product quality (Pyke 1998). Uncertainty about maintaining the quality of the fabric, which is vital for its strategic objectives, suggests it move to a close relationship with its suppliers along the lines of a strategic alliance.

10. Conclusions

Once the firm has decided on outsourcing and the activities that will be involved it must plan its implementation. The most important and complex phase is the choice of supplier, especially if the firm already has a network of relations with outside suppliers, each of whom is specialized in a particular area.

The most important and necessary phases of an outsourcing strategy are the decisions about the objectives to achieve through an outsourcing strategy and the activities to outsource.

In the first phase the firm must assess whether outsourcing is a feasible strategy for the organization given its current strategic objectives. Jennings identifies the following necessary steps (Jennings 1996: 393-405): 1) define the long-term strategy for the function to be outsourced; 2) consider the impact of the decision to outsource on the achievement of the mission and strategies of the organization, including costs, quality, flexibility, and the meeting of deadlines; 3) consider changes in the environment that require a change in strategy.

In the second phase the firm must gather and analyze the information on the products/services to outsource and those to produce in-house and decide which to outsource. In this phase the firm must (Jennings 1996: 393-405): 1) identify the products/services to outsource and the expected performance levels; 2) give a clear definition of these products/services and identify the core competencies; 3) determine the present costs of the products/services it intends to outsource and estimate the potential economies; 4) gather references on the supplier.

The other phases that concern the selection of suppliers, contract negotiation, the transfer of activities, and the relationship to enter into with the supplier require in any case a careful evaluation and must therefore be adequately planned in order to ensure a successful outsourcing strategy.

Notes

“(1)”: By “quality” we refer to at least two correlated aspects: 1) the set of characteristics that made a given system/process/object suitable to be used for a particular purpose; this form represents the extrinsic, use, or functional quality; the set of purposes for which the system/process/object can be useful for a particular subject is defined as the use function; 2) the set of characteristics that make a system/process/object conform to a reference sample – either observed or expected – that defines its functioning; this form of quality is defined as the intrinsic, project, or instrumental quality. However, from these basic notions we can see the difficulty of defining the meaning of quality; this term is fleeting, and an understanding of it is normally left to intuition (Mella 2005: 25-52).

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DESCRIPTIVE ANALYSIS OF THE INTERNATIONAL MIGRATION PHENOMENON IN ROMANIA BETWEEN 1991 AND 2008

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Migration represented and represents a very important phenomenon at global level, taking into consideration besides its demographic implications, its extremely diverse implications such as socio-economic, socio-cultural, territorial, or environmental. This represents, probably, the main reason why the research on migration is interdisciplinary, having strong connections with sociology, political sciences, history, economics, geography, demography, psychology, or law, among others. All these disciplines target different aspects of population migration, and a proper comprehension of the phenomenon implies a contribution from the part of all of them. Although migration represents a phenomenon manifested since ancient times, it has never been such an universal or significant phenomenon from the socio-economical or political perspective, as it is in present times. International migration has both a negative and positive impact on both provider and receiving countries, in general playing a very important role in the structure and dimension of the population of a country. Romania is not an exception to the previously expressed statement; furthermore, after the fall of the communist regime, migration became for Romania one of the most important socio-economical phenomena. The present paper aims at analyzing in a descriptive manner the international migration phenomenon in Romania between 1991 and 2008, from quantitative perspective. Based on data identified in the "Statistical Yearbook of Romania" - 2008 and 2009 editions - the analysis revealed the fact that both immigration and emigration flows registered oscillatory evolutions in the analysed period, but the general trend of immigration was of increasing, while the one of emigration was of decreasing. Immigration was dominated by the presence of males, of persons aged between 26 and 40 and of persons coming from the Republic of Moldova. On the other side, in the case of emigration the significant presence of females, of persons aged between 26 and 40, of persons of Romanian nationality and of those who preferred as main destination country Italy, was remarkable.

Keywords: international migration, immigration, emigration, Romania, descriptive analysis.

JEL Classification: F22, O15

Introduction

After the fall of the communist regime in 1989, migration represents one of the most important socio-economic phenomena in Romania. For many years, the high migration potential and the supposed permeability of the Romanian borders represented one of the main reasons which lead to its late adhesion to the European Union (EU) as, in general, West countries were "frightened" of the potential number of Romanian immigrants associated with a high robbery rate, expected as a consequence of the adhesion (Michalon 2005 cited in Potot 2008: 88). In the actual international frame, the migration phenomenon in Romania represents a process which, managed in a proper manner, can become an important generator of prosperity for our country. Taking into

consideration the major economical implications of migration - especially on the labour market - the present paper intends to analyse the international migration phenomenon in Romania between 1991 and 2008 in a descriptive manner from a quantitative perspective, in order to provide it a comprehensive image and to represent a starting point for potential future research on the economical implications of migration in Romania. In this sense, the present paper is structured into two parts. The first one puts forward a series of methodological aspects associated to the conducted analysis, while the second one presents the analysis' main results. The paper ends up with a series of final considerations.

Methodology

For the descriptive analysis of the international migration flows in Romania, data identified in the "Statistical Yearbook of Romania" – 2008 and 2009 editions – was processed. According to the National Institute of Statistics (2010: 39), the terms used in this paper, associated to international migration, are defined as follows:

- "International migration represents the change of permanent residence to another country or, from another country to Romania.
- Data on emigrants refer to Romanian citizens who settled their permanent residence abroad.
- Data on immigrants refer to citizens from another country who settled their permanent residence in Romania."

Furthermore, it is necessary to specify the fact that, whenever the terms of "immigration" or "emigration" are used, they refer to the number of immigrants, respectively emigrants registered during the year. Taking into consideration the above presented definitions associated to international migration, it is mandatory to outline the fact that the statistical data utilized in the analysis refer only to legal definitive migration.

Another series of data utilized in the analysis refers to population. In this sense, according to the National Institute of Statistics specifications, the population has as reference period the 1st of July of each year. "For intercensus years, the inhabitants' number has been determinate based on data from censuses and those from current evidence referring on vital and migration statistics. The inhabitants' number was calculated from data of the Population and Housing Census regarding the population with permanent residence in Romania, plus natural increase and balance of international migration determined by permanent residence changes, for population at national level" (National Institute of Statistics 2010: 37).

Before presenting the descriptive analysis, it is important to mention that the identified data were utilized for processing in the same manner they were identified in the previously mentioned sources; no transformation occurred on them.

Descriptive analysis – main findings

Between 1991 and 2008, both immigration and emigration flows registered oscillatory evolutions (Figure no. 1). In what concerns their trend orientation, in the case of immigration this was positive (the number of immigrants varying from one year to another in average with 496 persons), but in the case of emigration this was negative (the number of emigrants varying from one year to another in average with -2084 persons). Thus, it can be appreciated that, between 1991 and 2008, the general trend was of decreasing the number of persons who legally emigrated definitive from Romania. Legal immigration to Romania registered the highest value from the analysed period in 1998, when it increased with 643.26% in comparison with 1991. Starting with 2005, immigration to Romania was in continuous growth, this being potentially explained by a series of progresses associated to the regulation in the field of migration in Romania, especially in the frame of its adhesion to the EU; over the years, the regulation on migration in Romania has been improved in order to adopt the communitarian *acquis* in this field. Also, another factor for explaining the increase in immigration in Romania in the previously mentioned period could be

represented by the fact that, starting with 2004 the Romanian labour market expanded. In 2006, a series of branches (such as constructions or confections) were confronted with a lack of labour force; in order to solve this problem, entrepreneurs active in these branches resorted to immigrants supplying labour – especially from Turkey and China (Horváth 2007: 4). In what concerns the evolution of emigration in the analysed period, although the year 1990 was not included in the analysis, it is mandatory to outline the fact that this was the moment when legal definitive emigration from Romania reached its highest value (96929 persons). From the analysed period, the years 1991 and 1992 were the ones when were reached the highest values of emigration from Romania, the maximum being in 1991. The unstable economic and politic environments, emphasised by the political violence and interdictions generated by an administration, in general, inefficient could represent potential causes of high emigration immediately after the fall of the communist regime (Horváth 2007: 1). Also, after the fall of the communism, the free movement of the population was guarantee by the Constitution (Săseanu, Neagu and Petrescu 2010: 778). The years post-accession (2007 and 2008) represented for Romania period of increase of immigration and decrease of emigration; the quality of EU's member, emphasised by the disequilibrium on the labour market and by the clear trends to a demographic crisis, lead to the becoming of immigration an ongoing demographic phenomenon in Romania (Neguț, di Comite and Neacșu 2010: 577). A factor of explaining the increase in immigration in Romania in 2008, could be represented by the openness – more than ever – of the labour market for individuals supplying low and medium labour (Ministerul Administrației și Internelor 2011). In what concerns the international migration balance, between 1991 and 2008, it was negative expressing a number of emigrants higher than the one of immigrants, leading to the idea according to which Romania represents a provider country of immigrants. Exceptions were registered in 2001, 2007 and 2008 when immigration surpassed emigration; 2001 being a year when the two flows tended to equalise each other (Figure no. 1).

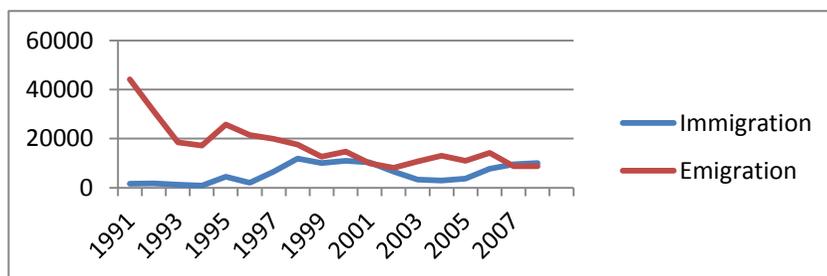


Figure no. 1: Evolution of the international migration flows between 1991 and 2008 (number of persons)

Source: produced by the authors based on data from National Institute of Statistics 2008, 2010

In what concerns the description of the international migration flows by gender, the situation is different in the case of immigration and emigration. In what concerns immigration, in every year of the period 1992-2008, the majority of immigrants in Romania was represented by males. In 1991, males only represented 36.27% out of the total immigrants (Figure no. 2). Thus, it can be stated that, during the whole analysed period, males represented the majority of immigrants to Romania, respectively 55.52%. According to the Ministry of Administration and Interior (2007), the high share of males in the total of immigrants in Romania could be explained by the migration for business; male entrepreneurs immigrants (especially those from Turkey or China) initially migrated in Romania in order to start and to develop a business, and only after reaching a stability point they proceeded to family reunification. In the case of emigration, in each year from the analysed period, females registered a higher share in the total of emigrants from Romania, in

comparison to males; the only exceptions were the years 1992 and 2001, when only 48.37%, respectively 49.49% out of the total emigrants were females (Figure no. 3). Thus, it can be appreciated that, during the whole analysed period, the highest share in the total of emigrants from Romania was represented by females (54%).

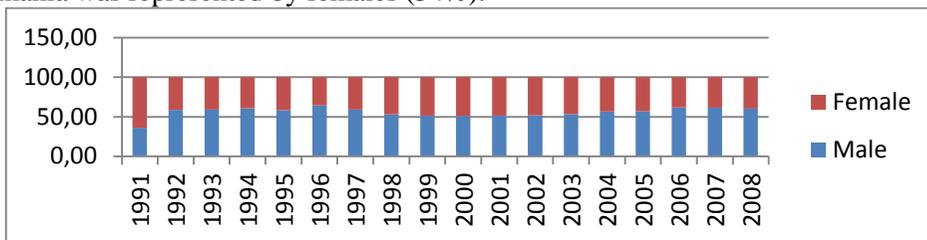


Figure no. 2: Immigration flow's structure, by gender (%)

Source: produced by the authors based on data from National Institute of Statistics 2008, 2010

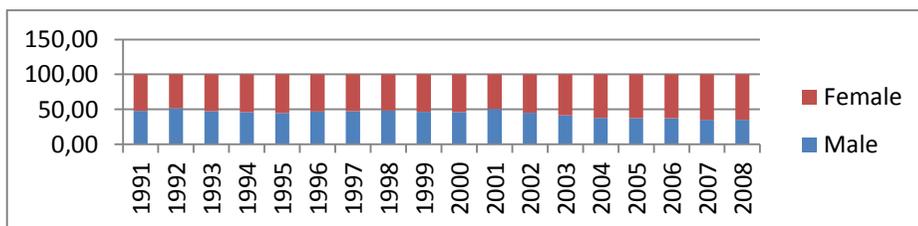


Figure no. 3: Emigration flow's structure, by gender (%)

Source: produced by the authors based on data from National Institute of Statistics 2008, 2010

Also, by dividing the total number of immigrants, respectively emigrants to Romania between 1991 and 2008 by the total population of Romania at 1st of July of each year from the mentioned period, it resulted that, in general, immigrant males have a higher share in the total of males in Romania than have the immigrant females in the total of females in Romania, while in the case of emigration females were more migratory than men in the analysed period.

Furthermore, analysing the international migration flows by age revealed the fact that in the case of immigration and emigration flows, the highest share in the total was represented by the persons aged between 26 and 40, during 1991 and 2008. This category presents a high level of interest for the labour market and it also represents a category of persons already trained, with a high innovation and work potential and extremely flexible (Constantin et al. 2004: 75) (Figure no. 4 and Figure no. 5)

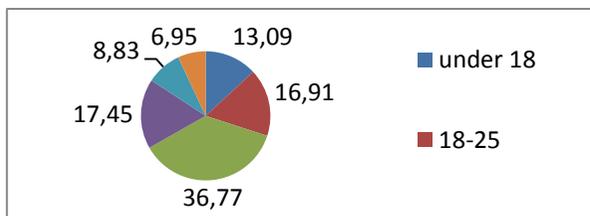


Figure no. 4: The share of the persons from the analysed age categories in the total of persons which immigrated in Romania between 1991 and 2008 (%)

Source: produced by the authors based on data from National Institute of Statistics 2008, 2010

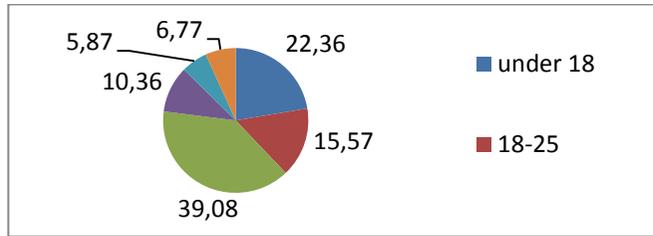


Figure no. 5: The share of the persons from the analysed age categories in the total of persons which emigrated from Romania between 1991 and 2008 (%)

Source: produced by the authors based on data from National Institute of Statistics 2008, 2010

In what concerns the analysis of the immigration flow by origin country, it could be accomplished only for the period 1994-2008 when, the majority of immigrants in Romania were coming from the Republic of Moldova (Figure no. 6).

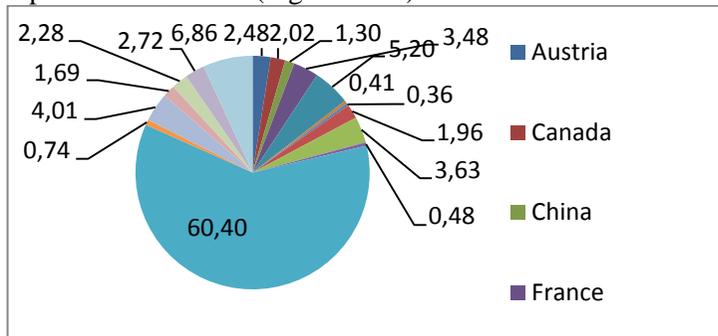


Figure no. 6: The share of the persons coming from the analysed countries in the total of persons which immigrated in Romania between 1994 and 2008 (%)

Source: produced by the authors based on data from National Institute of Statistics 2008, 2010

The descriptive analysis of emigration by nationality, revealed the fact that in all the years between 1991 and 2008 the highest share in the total of emigrants from Romania was represented by Romanians; in 2007 and 2008 they had a share of 97.27%, respectively 97.09%. Also, it is mandatory to outline the high shares of Hungarians and Germans in the total of emigrants from Romania after the fall of the communist regime, respectively the period 1991-1994, in comparison to more actual years like 2007 or 2008 (Figure no. 7). Thus, it can be appreciated that, at the beginning of the '90s, emigration was marked by the ethnic factor; on the basis of ethnic discrimination and hoping for better lives, the ethnic minorities from Romania migrated to countries to which they were historically connected (Horváth 2007: 1; Constantin, Nicolescu and Goschin 2008: 33).

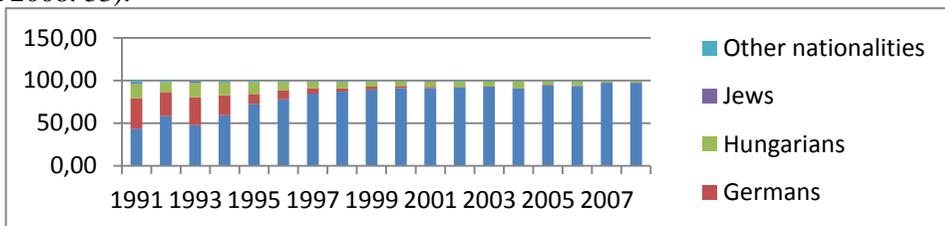


Figure no. 7: Emigration's structure between 1991 and 2008, by nationality (%)

Source: produced by the authors based on data from National Institute of Statistics, 2008 2010

Also, analysing the emigration flow by destination country, it revealed the fact that between 1991 and 2008, the vast majority of emigrants preferred Italy, followed by the U.S.A and Canada (Figure no. 8).

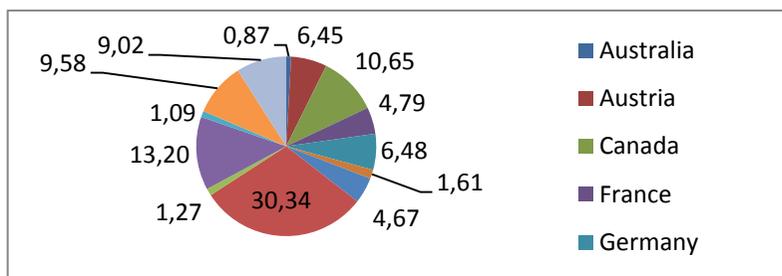


Figure no. 8: The share of emigrants from Romania in the total emigrants from Romania during 1991-2008, by destination country (%)

Source: produced by the authors based on data from National Institute of Statistics 2008, 2010

Conclusions and limits of the analysis

The descriptive analysis revealed the fact that both immigration and emigration flows registered oscillatory evolutions between 1991 and 2008. The general trend of immigration was of increasing, while the one of emigration was of decreasing. Immigration was dominated by the presence of males, of persons aged between 26 and 40 and of persons coming from the Republic of Moldova, while emigration was dominated by the presence of females, of persons aged between 26 and 40, of Romanians and of those who preferred as main destination country Italy. The major limit of the analysis is represented by the fact that, as the used statistical data refer only to legal definitive migration, the analysis does not reflect the real dimension of the phenomenon. Also, another limit refers to the fact that the period of analysis has as final point the year 2008. In this sense, future direction of analysis is represented by updating the series of data - as much as possible - in order to offer a more adequate image of the migration phenomenon in Romania, especially for analysing its evolution in economic crisis period.

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THE INTANGIBLE ASSETS INVESTMENTS CHARACTERISTICS AND THE ACCOUNTING TREATMENT

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In the knowledge-based economy the fundamental determinants of the enterprise value, in the present, have an intangible nature. The intangible investments are the most important factors of the enterprise success. Wealth, growth and welfare are driven nowadays by intangible investments. The knowledge economy is characterized by huge investments in human capital and informational technology. Despite of the increased importance of intangible assets, as the source of the firm` competitive advantages, the information regarding these kind of assets, both available in the inside of the firm and, which is presented to the externals, is pour. In this paper I present the reasons for this situation.

Keywords: intangible, investments, assets, accountancy, value

Cod JEL : G31

1. Introduction

It is widely accepted nowadays that, at the begin of the 21th century, economy has become significantly different from the industrial economy previous to the mid-20th century. Economists consider that the main feature of this new economic environment is the essential role played by intangibles as a fundamental determinant of value creation in business companies.

Investment expenditures represent outlays by the firm made in the expectation of future benefits (Fisher 1930). The assets that are the result of the investments are utilized in the firms` activities in the future periods. These assets can be classified function on their nature in tangible and intangible assets.

In the knowledge-based economy the fundamental determinants of the enterprise value, in the present, have an intangible nature. The intangible investments are the most important factors of the enterprise success. Wealth, growth and welfare are driven nowadays by intangible investments. The knowledge economy is characterized by huge investments in human capital and informational technology.

With the arrival of the new information technologies, the structure of firms have changed dramatically, shifting the focus of value creation from tangible based activities to intangible based value creation (MERITUM, 2002).

2. The accounting treatment of intangible assets investments

Despite of the increased importance of intangible assets, as the source of the firm` competitive advantages, the information regarding these kind of assets, both available in the inside of the firm and, which is presented to the externals, is pour.

To a big extent, this can be attributed to the restrictive requirements imposed by accounting standards, in most countries, for the recognition of intangible investments as assets in the financial statements. The current accounting regulation does not allow companies to capitalize a big part of investments in intangibles and to report these as assets in the financial reports. I refer to intangible assets that are produced by a company. There are inconsistencies regarding the book-keeping treatment of the two categories of intangible assets: internally generated and, acquired from the outside of the firm. Generally, the intangible assets independently acquired from the outside of the firm, are capitalized at the cost implied by their acquisition. On the other

part, the costs associated with developing internally generated intangible assets are treated as expenditures and are reflected in the revenues and expenses situation.

When it comes to the recording of internally generated intangibles, very little has changed during the last decades. Traditionally, the sums allocated to the internally generated intangible assets are treated as expenses not like investments that are capable to generate long term economic benefits. The expenditures on R&D, training, marketing are not treated as capital expenditures. As a result, these funds are not capitalized on the balance sheet. This is happening in conditions in which the value of intangible investments has increased very much during the time. The amount of unrecorded intangibles assets has changed enormously in last years being huge in the present.

As a result, the ability of financial statements to provide an accurate view of the firm's financial position seems of potential for future wealth creation. *The book value* of equity is the accounting estimate of the firm's value resulting from deducting debt from the book value of assets (the accounting estimate of the economic value thereof).

Therefore, the difference between the market value and the book value of equity is explained by the existence of intangible assets that are not reflected in the balance sheet.

The proportion of tangible assets to intangible assets has changed dramatically over the past 50 years. For example, in June 2000, Microsoft's physical and financial assets represented less than 10% of its market value, and those of Cisco only 5% (Lev, 2001).

In knowledge intensive industries a firm's book value is often lower than 10% of its market value, of which the largest part are constituted by intangible assets such as relations to customers and business partners, a company's workforce, patents, trademarks or other intellectual property, organizational capital in form of superior business processes, organization structures and a unique corporate culture (Lev, 2001).

2.Intangible investments from an economic and accounting perspective. The results of research

Remaining this category of intangible assets outside of the financial situations should not be taken as evidence that businesses do not recognize the investment nature of intangibles, as they do. The absence of a great part of intangible assets from financial report is explained by the fact that it is considered that intangible investments have economic properties that, for the most part, do not fit into conventional accounting principles (L. C. Hunter, Elizabeth Webster and Anne Wyatt, 2005).

From an economic perspective, intangible investments are any expenditure not immediately embodied in physical matter, but which are intended to generate long-term benefits.

Intangible investments are only recorded in the accounting system, as assets, if the items meet the two categories of criteria (IAS 38): first, *the asset definition criteria* and, second, *the asset recognition criteria*.

As summarized in table 1, the asset definition criteria for intangible assets comprise three attributes: identifiability, control and, future economic benefits.

IAS 38 states an intangible asset as *identifiable* when it is:

- separable (capable of being separated and sold, transferred, licensed, rented, or exchanged, either individually or together with a related contract);
- or, arises from contractual or other legal rights, regardless of whether those rights are transferable, or separable, from the entity, or from other rights and obligations.

This requires apply whether an intangible asset is acquired externally or generated internally.

It is considered that an entity *controls* an asset if the entity has the power to obtain the future economic benefits flowing from the underlying resource and, to restrict the access of others to those benefits (IAS 38).

The accountancy standards include *future economic benefits* as the main feature of an asset. These may include revenue from the sale of products, services, or processes but, also, includes cost savings or other benefits from the use of an asset. The benefits generated by intangibles are incorporated into the financial accounts, but not the value of the assets unless they are acquired from outside of the enterprise.

Recognition, usually, refers to the technical accounting term of whether the asset is included in firms' financial statements (K.P. Jarboe & R. Furrow, 2008).

The accounting standards stipulate that for intangible "resources" to be included as assets in an entities' balance, they must comply with:

- a) The definition of intangible assets;
- b) The recognition criteria established in accounting regulations.

The accounting regulations agree that intangible assets are non-tangible resources (that is, without physical substance), controlled by entities from previous transactions, that will provide future economic benefits to the entity.

According IASB (2001), an item that meets the definition of an element should be recognized if:

- it is probable that any future economic benefit associated with the item will flow to or from the entity; and
- the item has a cost or a value that can be measured with reliability.

If an intangible item does not meet both the definition of and the criteria for recognition as an intangible asset, IAS 38 requires the expenditure on this item to be recognized as an expense.

In table 1 are reflected the general criteria that must be satisfied for recognizing the intangible assets in financial reports (IAS 38).

The distinguishing characteristics of intangible assets render them in many cases outside this description.

Identifiability

For an asset to be recognized under current accounting rules, it must be able to be separated (divided) from other assets of enterprise and transferable to the other entities without the loss of value.

A major problem with intangible assets is that they are often difficult to identify separately, and thus, may not match one of the fundamental requirements for accounting recognition.

It is difficult to separate intangible assets from other intangible assets and, from current expenditures. Breaking up intangibles into discrete, separable entities is difficult. Certain types of intangible assets are easier to separate than others. This is the case of components of intellectual property.

Transferability is closely tied to the issue of separability. A major question defining an asset is whether it can be transferred to other parties without losing value. In the case of intangible assets this is possible only in some cases, as with intellectual property transfers. However, many assets are purely firm-specific and contain little if any value outside of the enterprise that they belong to (K.P. Jarboe & R. Furrow, 2008). Most firm-specific forms of human capital fit into this category, as do marketing and organizational capital.

Napier și Power (1992) make difference between:

- entry separability;
- exit separability

Entry separability means that the asset can be identified as it is produced or acquired by a firm: it therefore requires that the costs of production or acquisition can be accurately assessed and identified with the asset. The accounting standards require the historical cost of an intangible asset to be ascertainable, as a basic premise for recognition.

Exit separability implies that the asset can be traded separately from other intangibles of the firm or from the firm as a whole.

Belkaoui (1992) distinguishes two main types of intangible assets: identifiable intangible assets such as patents, and unidentifiable assets, such as goodwill.

Identifiable (separable) intangibles are those which can be sold or acquired separately.

Unidentifiable intangible assets are reflected in enterprise GW and can not be transferable separately but only with the sale of the whole enterprise.

There are two basic views of goodwill: it may be understood as the consequence of a firm's above-normal ability to generate future earnings, or as a set of assets controlled by an acquired company but not reported in its financial statements.

The unidentifiable intangible assets obtained with the new company acquisition are named *external GW*. These elements including the clients, the name and location of the business, the market position, the structure of organization, prestige and creativity, human resources, are recognized in financial situation and, are recorded as assets since they are valued in a market transaction. Intangibles that are bought as a complete set, externally through the market, are included as assets since they *have a verifiable cost*.

In contrast, *self-generated goodwill* or, *internal goodwill*, does not satisfy the accountancy requirements and can not be recognized as asset in the enterprise financial report. As a consequence internally investment in brand development, workforce skills and new innovations is expensed.

The Future Economic Benefits:

The accountancy standards include future economic benefits as the main feature of an asset. The intangible asset must have capacity to contribute, single or in combination with other assets, directly or, indirectly, to future net cash inflows.

The most obvious evidence of future economic benefit is a market price. The existence of the transaction and paying a price for a element is a prove of it's recognized utility and of it's capacity to generate economic benefits as a result of utilization

It is considered that any element that is bought and sold on the market can generate future economic benefit. And, any element that creditors accept in settlement of liabilities can generate future economic benefit. And, any element that is used to produce goods or services, whether tangible or intangible, and, whether or not, it has a market price, or is otherwise exchangeable, also generates future economic benefit. Incurrence of costs may be also significant evidence of acquisition or enhancement of future economic benefits.

The current accounting systems are based on transactions. The asset recognition criteria related to the probability of benefits generation is always considered to be satisfied in the cases of intangible assets that are obtained from outside of the firms, separately, or as result of business combination. In this case there is a price that is considered both prove of benefits generation, and a reliable indicator of the value.

Since the accounting data are relied upon by managers and outside investors, the accounting rules favor objective, verifiable valuations such as arm's-length, market-based transactions (L. C. Hunter, Elizabeth Webster & Anne Wyatt, 2005).

In the case of firm's acquisition the value of intangible assets purchased (if the purchase price exceeds the book value of the assets) is reflected in the external GW. Because this type of goodwill is the result of a purchase, the accountancy principle allows recognizing it as a asset in balance-sheet. Thus, the purchase puts a value on the intangibles.

The real world phenomena that do not find the origin in past transaction (the elements of internal GW) are not considered suitable for recognizing in financial report (J. García-García & M. I. Alonso de Magdaleno, 2010).

The condition related to the probability of future economic benefits generation is not considered satisfied in the case of this kinds of assets because does not exist neither a benefits generation prove, nor a reliable indicator of the value.

Thus, the risk of these assets is generally higher than that of physical assets, so the property rights over these assets are often not fully capitalized by the company (J. García-García & M. I. Alonso de Magdaleno, 2010).

It must be rejected the argument that costs are assets. Although an entity normally incurs costs to acquire or use assets, costs incurred are not themselves assets. The essence of an asset is its future economic benefit rather than whether or not it was acquired at a cost.

In the efforts made in purpose of recognizing the intangible assets in the balance sheet there are many problems that must be solved related to determine whether future economic benefit will be truly available and, quantifying it, especially, if obtaining of benefits is far away.

The question that requires answer is: how can be treated an element in the following situations:

- in the case in which the value of estimated future benefits is highly uncertain or, even, doubtful;
- in the case in which the future benefits may appear during the short time;
- in the case in which the duration of obtaining benefits is highly uncertain.

The element must be recognized as asset in balance-sheet, expensed, or reflected as a loose? Expenditures for R&D are examples of items for which management's intent clearly is to obtain or increment future economic benefits but for which there is uncertainty about the extent, if any, to which the expenditures succeeded in creating or increasing future economic benefits (J. García-García & M. I. Alonso de Magdaleno, 2010).

The control

The accountancy standards require that for an entity to be able to consider an element in balance-sheet she must be capable to control an item's future economic benefits.

The necessary conditions to control an element are as following:

- the entity has capacity to obtain future economic benefits as result of owning and exploiting the asset;
- the entity has capacity to restrict access of others to these benefits.

The classical view of control over assets is based on scarcity. To enjoy an asset's benefits, an entity generally must be in a position to deny or regulate access to that benefit by others (J. García-García & M. I. Alonso de Magdaleno, 2010).

An entity, usually, gains the ability to control an asset's future economic benefits through a legal right. But the firm can appeal to other methods for this. One of the methods utilized is keeping secrets through the employer's confidentiality.

L. C. Hunter, Elizabeth Webster & Anne Wyatt (2005) mentioned that, generally, exist a limit regarding the enterprise capacity to control the estimated intangible assets benefits for two reasons:

- the domination of the production process by the people (and not by the equipments);
- the ease of copying non-embodied forms of intellectual capital.

Conclusions:

The accountancy standards has not taken steps to allow for the capitalization of most internally generated intangibles. The economic tension lays in the inherent property rights problem associated with the benefits from intangible investment: it is often difficult to obtain defensible property rights because the intangible asset is embodied, often, in employees who cannot be owned. From an economic perspective, this problem does not change the "investment" nature of the expenditures. As a result, the ability of financial statements to provide an accurate view of the firm's financial position seems to have decreased over the last few decades, along with the increase in the importance of intangibles. The information provided by companies to the financial markets is primarily based on traditional tangible investments in fixed assets, whereas value is more and more relying on investments in intangible assets.

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THE FREEDOMS OF MOVEMENT OF THE SINGLE MARKET

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The European Single Market implies not only the free movement of goods and services, but also the free movement of production factors (the capital and the labor force). The liberalization of goods and services and of production factors movement has determined, on the short term, the appearance of some structural and specialization adjustment processes within the member countries, and on the long term a more efficient allocation of the production factors, an improvement of labor productivity and positive effects in the field of labor force employment.

According to the neoclassical theory, the labor force migrates from regions with low wages and low profit rates, to regions having high wages and high profit rate. Thus, the production factors are used in a more productive way. According to this theory, the factors mobility contributes to the equalization of the wages and to a better factors allocation. Issues such as structural funds, persons' freedom of movement, convergence could be turned into advantages by any member state, and especially by a new member state. From an economic perspective, the causes of labor force mobility, as a production factor, are: the price differences (wage differences, profit rates differences, interest rates differences) – according to neoclassical theory; income difference, meaning saving excess or insufficiency for the capital, according to Keynes approach; differences in the level of economic development, determining unequal changes, according to the monetarists. Romania has become a European Union member at January, the 1st, 2007. The accession road has been a long one, full of challenges, issues, but also satisfactions. The 1st of January has not been the end of a process, but the beginning of a new period for Romania's present history. The author will try to emphasize the freedoms of movement of the Single Market. The humanitarian reasons also determine the migration of the population; these are the refugees, the asylum solicitors, the persons having temporary protection or persons accepted for other humanitarian reasons.

Key words: Economic Integration, Models of Trade with Imperfect Competition, Labor Market Interactions, freedom, movement.

Jel: F12, F15, F16

1. Introduction

From an economic perspective, the causes of labor force mobility, as a production factor, are: the price differences (wage differences, profit rates differences, interest rates differences) – according to neoclassical theory; income difference, meaning saving excess or insufficiency for the capital, according to Keynes approach; differences in the level of economic development, determining unequal changes, according to the monetarists. According to the neoclassical theory, the labor force migrates from regions with low wages and low profit rates, to regions having high wages and high profit rate. Thus, the production factors are used in a more productive way. According to this theory, the factors mobility contributes to the equalization of the wages and to a better factors allocation.

The European Single Market implies not only the free movement of goods and services, but also the free movement of production factors (the capital and the labor force). The liberalization of

goods and services and of production factors movement has determined, on the short term, the appearance of some structural and specialization adjustment processes within the member countries, and on the long term a more efficient allocation of the production factors, an improvement of labor productivity and positive effects in the field of labor force employment (Wallace H., Wallace W. and Pollack M. 2005:201).

Through labor force freedom of movement, a more efficient allocation of this production factor is pursued. Among young people, we can talk about migration in the purpose of education and professional preparation: students or persons in professional preparation. Their migration should be temporary.

Among the migrants, we can also find those working in another country, being immigrant workers or international civilian servants. Other reasons for migration are the reunification and the formation of families, and also the freedom of establishment, in order to work, based on family connections, ethnic origin, entrepreneurs and investors, or pensioners. The humanitarian reasons also determine the migration of the population; these are the refugees, the asylum solicitors, the persons having temporary protection or persons accepted for other humanitarian reasons.

2. The labor force freedom of movement for the members

The Schengen Area: in order to stimulate the persons' freedom of movement, in June 1985 France, Germany and the Benelux countries signed the Schengen agreement. Italy joined in 1990, Spain and Portugal in 1991, Greece in 1992, followed by Austria, Finland and Denmark. The United Kingdom, Ireland and Sweden didn't sign this agreement. According to the Schengen agreement, the control to the internal frontiers of the EU are rarefied and then eliminated, while the controls to the external frontiers are intensified. There is a common policy concerning the visas granting, and the member states cooperate in the judicial and custom field. The labor force freedom of movement implies the following four essential rights: to present itself to a contest in another member state, to be free to move on the territory of another member state in this purpose, to be able to remain on the territory of another member state in case of employment, to be able to definitively live on the territory of another member state. As for liberal professions, they are free to settle down on the territory of any member state.

On December the 21st, 2007, the Schengen agreement was extended on the Czech Republic, Estonia, Hungary, Lithuania, Latvia, Malta, Poland, Slovakia and Slovenia. Romania and Bulgaria still have a lot to do to answer the security criteria of the European Union. Most probably, the two countries will join the Schengen space in 2011. Let's see now some of the consequences of labor force freedom of movement upon the Romanian labor market (Wallace H., Wallace W. and Pollack M. 2005:96).

The changes in December 1989 have brought more simple formalities, in order to obtain a visa for a West European country. Also, at the beginning of the 90, Romania has registered a strong emigration of German ethnics. Thus, from 1990 until 2002, the emigration, as well as the negative natural rise, contributed to the diminishing of Romania's population by 1 million persons, from 23 million inhabitants to 22 million inhabitants. Unfortunately, this movement has continued. The elimination of visas from January the 1st 2002, in the middle of Romania's negotiations for the EU accession, has determined an increase of the number of emigrants, phenomenon which has amplified after January the 1st 2007, when Romania has joined the EU. At this moment, it is estimated that in Romania live less than 20 million people (probably, about 18 million), while more than 2 million people work abroad (about 1 million Romanians are in Italy, 1 million in Spain, and other in Germany, France or the UK). We must start by saying that the Romanians' emigration, in order to find a better life, did not start in 2007, once the Romania has joined the European Union, nor in 2002, when the Romanians did no longer needed

visas for the Schengen states. Even before 1989, there was an emigration movement, both legal and illegal, but having a reduce amplitude.

Attracted by big salaries and a better life, many Romanians, young for their majority, have chosen to leave their country and work abroad. They sent important amounts of money to their relatives in Romania, allowing them a decent living. The Romanians work especially in constructions and agriculture (men), or as housekeepers and in agriculture (women). It is estimated that in agriculture, many of them work illegally. In 2005, the money sent back home by the Romanians living and working abroad has been of 4.14 billion Euros (5.6% of Romania's GDP). The Romania's spectacular economic growth of the last years has been supported, partially, by this important amount of money, sent home by the Romanians working abroad.

The consequences of emigration, for the destination countries, have been rather positive: the EU GDP has raised by 0.17% on the short term and by 0.28% on the long term; the inflationist pressures have diminished in the destination countries; the wages have dropped by only 0.08% due to immigration, while the unemployment has raised by only 0.04% (Sirghi și Vădăsan, 2010:19-25). In the departure countries, the consequences are more controversial on the one hand, the unemployment rate has diminished (only 4.1% in 2008), the pressure on the state budget has diminished as well; the emigration has allowed Romania, for instance, to avoid an economic and social crisis, of a huge amplitude, which could have endangered our integration calendar; the money sent back home have encouraged the consumption, as well as the real-estate sector, both contributing decisively to Romania's economic growth. But on the other hand, Romania is confronted to a lake of qualified labor force: 100 000 work places have not been occupied in 2008, and it is estimated that until 2013, this labor force deficit will reach 300 000 persons.

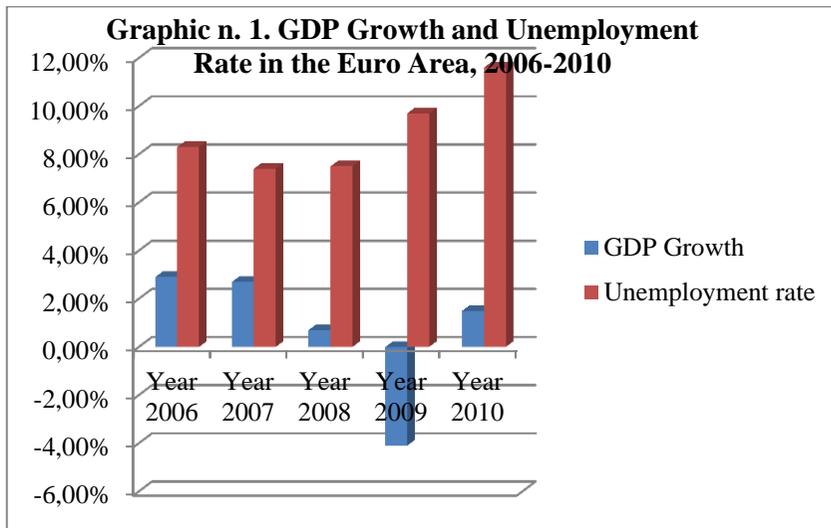
In the present, Romania is the country where investors are encountering the biggest difficulties in finding the needed personnel, with the needed qualifications. As a consequence, many investors have brought foreign labor force: only in 2008, 65 000 work licenses have been granted. Many of those workers come from China, Bangladesh, Republic of Moldavia or Ukraine.

After the integration in the European Union, 16 countries have forbidden Romanians' accession to their labor markets. Since January the 1st, 2009, 5 countries have eliminated these restrictions. By 2013, all EU countries will have to eliminate these restrictions. In this moment, Romanians are free to work in the following countries: Estonia, Finland, Poland, Slovakia, Czech Republic, Cyprus, Sweden, Slovenia, Latvia, Lithuania, Bulgaria, Spain, Denmark, Greece, Hungary and Portugal, while in the following countries there are still restrictions: Belgium (until 2011), Ireland (until 2012), Netherland (until July the 1st 2009), the United Kingdom (until 2011), Germany, France, Austria, Italy, Luxembourg, Malta (until 2013). The member states of European Economic Area (Liechtenstein, Island and Norway) have also maintained the restrictions until 2013.

An important step was the Referendum held in Switzerland, on February the 8th 2009. According to the result, and in spite of a very negative campaign, more than 60% of the voters were in favor of prolongation and extension of the Agreements with the EU, regarding the freedom of movement (including the free movement of Romanian and Bulgarian labor force). Following this positive result, in 7, maximum 10 years, Switzerland will eliminate any restriction.

The present crisis resembles to its predecessor, among other things, by the state interventionism, through money infusions, and through nationalisations.

Concerning the present crisis, the EU, are strongly affected. As one can see in graphic number 1, in the year 2009, the economic growth for both the Euro area negative (-4.1%), while the unemployment rate is sharply growing, to 9.7% .



Source: www.anofm.ro, www.insse.ro, ec.europa.eu/eurostat/

The forecast for 2010 is slightly optimistic concerning the GDP growth rate (+1.5%), but the unemployment rate will continue to grow, to more than 10% for both Euro area. The situation is worsening, and nobody can tell for sure when exactly the crisis will reach its end.

Which are the effects of Romanians' dismissing abroad? On the one hand, the labor force shortage will be reduced; the return of qualified labor force is a gain, but only on the long term. On the other hand, under the conditions of the resent crisis, and taking into consideration unemployment rise in Romania, their return will most probably represent, on the short term, a serious social issue, contributing to an even more higher unemployment rate. Also, the money delivery will decrease, by even 50%, making more difficult the life of those remained in Romania.

The global crisis has affected the EU, as well as Romania. On the Romanian labor market, since December 2008, one has registered an increasing unemployment rate: 4.4% at the end of 2008, 4.9% in January 2009 and 5.3% in February 2009. By the end of 2009, in an optimistic anticipation, the unemployment rate will reach 5.5% (Sirghi si Vădăsan, 2010:18-19). But this is not the only problem Romania's labor market has to face this year. In 2008, some 100 000 Romanians working abroad have lost their jobs, and some more 30 000 Romanians will lose their jobs this year. However, only 14% of them have the intention to come back to Romania in 2009. 33% will remain for 2 to 5 more years abroad, 15% will come back only after 5 years, while 29% have no intention of coming back.

3. Conclusions

As we all know, the first right of the European citizen is to be able to travel, work and live anywhere on the territory of the European Union. The Maastricht Treaty has legitimated this right in the chapter referring to citizenship. The freedom of movement and the equality of treatment, by forbidding any restrictions regarding the labor force for the European citizens have created fear among the "old" members of the EU, concerning massive migratory labor force flows, from the East to the West, in search for better salaries and better working conditions. As a consequence, fearing a massive labor force migration, from East to West, separated agreements have been negotiated, regarding the labor force movement after each candidate country will access the EU, a certain period of transition having been asked in order to liberalize the labor force circulation.

We consider that, in order to achieve the Lisbon objectives, it is imperiously necessary to insure the European workers mobility: the geographic mobility, as well as the professional mobility (the flexicurity). The last barriers elimination out of the way of the labor force freedom of movement has a particular significance. A transnational and European social dialog is necessary. In this context, right insurance during the stage of professional transition and, consequently, the social rights portability are extremely important. This is why, the increase of workers mobility is requested, by improving the way the supplementary pension rights are being gained and kept, and the regulation appliance regarding the social security systems is finalized.

A fundamental priority for the European Union is the development of a European policy concerning migration, which should complete the member states respective policies. In this purpose, the EU aims the accomplishment of a European pact regarding migration and asylum. Such a pact would emphasize a consolidated common policy regarding migration related issues, based, among others, on a more sustained dialogue with the origin countries. The European Union considers as objective the legal migration rise, including the labor force migration, as well as the application of a co-development policy, reflected by specific projects and supported at the European level. In this sense, it is necessary to continue the progress regarding the migration global approach. The cooperation and political dialogue with all the origin and transit countries must be consolidated, and partnerships concerning the mobility, the circular migration and cooperation platforms for migration and development must be promoted. As a general conclusion, we can say that EU membership could be an opportunity, but it depends on each member state to take advantage of it. One must also continue the actions related to the policies plan concerning the legal migration. In this sense, the migrants' rights issues must be rapidly solved, as well as the conditions regarding the highly qualified workers' entrance and stay, the persons detached within the same enterprise, the remunerated persons on probation, the temporary workers. The transition periods, applied to the workers from the new member states, should be eliminated.

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EUROPEAN CROSS-BORDER MERGERS AND ACQUISITIONS- REALITIES AND PERSPECTIVES

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This paper analyses the impact of the economic and financial crisis on merger and acquisition activity in Europe and the latest trends manifested on the cross-border merger and acquisition market involving European companies. Thus, a first objective of this research is to reveal the evolution of the European cross-border merger and acquisition activity in terms of dynamics, volume and structure. Another objective of this research is to reveal the short and medium term perspectives on mergers and acquisitions in Europe. Thus, under the continuous economic recovery of the European countries and the other worldwide economies, the recovery of financial markets and the growth of corporate profits, we shall witness an intensive cross-border merger and acquisition activity in Europe. The expansion engine of these operations seems to be represented by the emerging economies. This research is based on a systematic, logical and comparative analysis of scientific literature and statistical data regarding the cross-border mergers and acquisitions that involve European companies in recent years. This paper is part of the doctoral thesis "Mergers and acquisitions- strategies of growth and development of enterprises. European and national particularities", coordinated by professor Ph.D. Alina Bădulescu from University of Oradea, Faculty of Economics. The doctoral research is supported by The Sectorial Operational Program for Human Resources Development 2007-2013, Contract POSDRU 59/1.5/S/1- "Romanian researchers through modern and efficient doctoral programs".

Keywords: cross-border mergers and acquisitions, firm strategy, external growth, economic and financial crisis, economic recovery

JEL Codes: F23, M10, M16

Introduction

This paper is part of the doctoral thesis "Mergers and acquisitions- strategies of growth and development of enterprises. European and national particularities", coordinated by professor Ph.D. Alina Bădulescu from University of Oradea, Faculty of Economics. The doctoral research is supported by The Sectorial Operational Program for Human Resources Development 2007-2013, Contract POSDRU 59/1.5/S/1- "Romanian researchers through modern and efficient doctoral programs".

In the light of recent events that took place on the global economic scene, this paper intends to analyze the impact of economic and financial crisis on merger and acquisition (M&A) activity in Europe and the recent trends shown on the cross-border activity that involved European companies. Thus, in the first part we revealed some aspects regarding the literature on cross-border M&As. The next part deals with a recent analysis of the European activity evolution on cross-border M&As in terms of dynamics, volume and structure. The fourth part of this paper presents the short and medium term perspectives on M&As in Europe. Finally, there are some conclusions drawn from the research that was conducted.

Research methodology

This research is based on a systematic, logical and comparative analysis of scientific literature and statistical data regarding the cross-border M&As that involve European companies in recent years. Thus, we carried out a quantitative analysis revealing the impact of the economic and

financial crisis on M&A activity in Europe and the latest trends manifested on the cross-border merger and acquisition market involving European companies.

A brief review of the literature on cross-border mergers and acquisitions

In the literature, several studies have examined the field of cross-border M&As. Thus, some researches focused on the macroeconomic determinants of cross-border activity (Neto, Brandão și Cerqueira 2010: 21-57; Manchin 2004: 4; Rossi and Voplin 2004). Martynova and Renneboog (2006: 3-4) or Evenett (2003: 443,445) analysed cross-border M&As since 1990s, period that represented the first truly international merger wave, one of its characteristics being the large the share of cross-border activity in the total volume of M&A. Another research area, in cross-border M&As, is represented by their effects on the corporate performance and on shareholders' value creation (Goergen and Renneboog 2004: 9-45; Gugler, Mueller Yurtoglu and Zulehner 2003: 625-653; Moeller and Schlingemann 2003: 533-564). They discovered that the performance of cross-border deals is lower than in the case of domestic operations.

The impact of economic and financial crisis on European cross-border mergers and acquisitions and recent trends

After a five-year period of continuous growth of merger and acquisition activity, touching the peak in 2007, the European M&As have recorded a downward trend since 2008 due to economic and financial crisis. European economy, as well as other world economies, has been seriously affected by economic recession and financial markets turmoil. Economic and financial crisis has spread rapidly throughout the world, reflecting the interdependence of economies. The year 2008 marked the end of a four-year cycle of steady worldwide growth, in Europe too obviously, which reached climax in 2007 with a value volume of cross-border M&As never seen before. The increase of M&As between 2004 and 2007 was favoured by sustained growth of worldwide economy, liberalization of trade and investment regimes and the adoption of large-scale internationalization strategies by many transnational corporations.

The recession that began in 2008 has forced many potential acquirers to change their expansion plans by means of acquisition. Acquirers wishing to continue the taking-over process were to find out that the access to finance was severely affected. Many bidders who have signed agreements with target companies have sought to renegotiate the transaction or waive it. Thus, many transactions were void. However, as often happens in times of recession, companies with large capital provisions have taken advantage of the opportunities arising on the merger and acquisition market. The year of 2009 recorded the lowest level of merger and acquisition activity, both in terms of their value and number. Europe was severely affected by this recession, and within it, the European Union whose companies were major acquirers, but also main targets on the global market of M&A. The EU registered a pronounced decrease related to this activity. This reflects the strong economic relations that exist, on the one hand, between the European Union and the rest of the world, and on the other hand, between the Member States of the Union. The longest and deepest economic recession in the history of the European Union economy, as it is characterized by the European Commission in the economic forecast of 2009 (European Commission 2009:7), resulted in a notable decline of trade and investment flows between the EU and the world, but also among the Member States.

Diminishing the profits of companies and the stock market drop had severely decreased the value and number of cross-border M&As. At the same time, the decrease of demand for goods and services has prompted companies to restrict their investment plans abroad, both through M&As and Greenfield investments, although the latter declined since 2009. The decrease in cross-border M&As has contributed most significantly to the decline of foreign investment flows in 2009, which decreased by 34% worldwide (65% in value), compared to a 15% decrease in the number

of greenfield investment (UNCTAD 2010a:9). The global crisis reduced the funding available for FDIs and merger and acquisition operations.

According to UNCTAD statistics, the global cross-border M&As in 2008 declined by 30.9% to \$706.5 billion compared to the record level registered in 2007 of \$1,022.7. The decline was more pronounced in 2009, therefore the amount of worldwide cross-border M&As had declined by 64.6% compared to the previous year, reaching only \$249.7. The crisis impact on cross-border M&As is obvious, as seen by different regions and economies. Among developed economies, Europe, and especially the EU-27 economy (which weighs significantly in the total of merger and acquisition activity across Europe) was seriously affected. Thus, net sales in developed Europe cross-border activity declined by 51% both in 2008 compared to 2007 and 2009 compared to 2008 and they reached 133,871 billions \$ in 2009. EU economy faced a 52,3% decline in net sales in 2008 compared to the peak year 2007, respectively 53,7% in 2009 compared to 2008 and reached 116,226 billions dollars, which reflected an emphasis of the recession this year. In 2008 the collapse of M&As that had as target EU companies was more pronounced compared to the one recorded worldwide (30.9%) and by the group of developed countries (34.8%). In 2009, all worldwide regions and economies were badly affected and the downward trend generalised even in countries that had not been affected in the previous year (e.g. in U.S. mergers and acquisitions of companies have continued to grow in 2008 by 37.8% compared to 2007, but in 2009 they have decreased by 82.3%).

Regarding the purchases performed by developed Europe's corporations, these dropped by 36,9% in 2008 compared to 2007, the decline being more pronounced in 2009 when purchases declined by 71,3% compared to 2008, summing up only 102,709 billions dollars. Net purchases realised by EU companies, initially dropped by 42,9%, the decline being more pronounced in this case than for the group of developed countries whose acquisitions have decreased by 32,5% or for Japan whose purchases increased by 85,7%, but less pronounced than in the case of the U.S. whose acquisitions have decreased by 60,9%. In 2009 net purchases realised by UE corporations fall out by 70,7% compared to the previous year at 89,694 billions dollars and the decrease in was even more pronounced than in USA (-66,1%) or Japan (-69%).

Transition economies in South-Eastern Europe were also severely affected, although the amount of their value was much lower than that of developed countries. Practically, on the international merger and acquisition market, the companies located in these countries have played a predominant role of targets of these operations. In terms of cross-border merger and acquisition value in South-Eastern Europe and CIS, in 2008, decreased by 33% compared to the previous year, so that from \$20,337 billion it reached \$7,125 billion. In 2009, the decline was more pronounced, summing up 65%, so that net sales reached only 896 millions dollars. This severely decrease was due to the decline in acquisitions made by the EU-15 companies, which were the main acquirers in the area. Actually, in the last years, firms from UE-15 concentrated their attention on the new member states UE-12 and on the other emerging countries of Europe.

The extent of the decline in cross-border activity was more pronounced in the old member states than in the new ones. The main European bidders came from UE-15 (Great Britain, France, Germany, Italy, Spain), but the global recession produced dramatic changes in the major investors hierarchy. Thus, Great Britain had to cede the leader position in cross-border purchases to France. On the other hand, UE-15 countries represented main targets in European cross-border activity, and the top five countries by net sales value includes Great Britain, Netherlands, Spain, Germany and France. Still, these countries were most affected by the recession, but still Great Britain kept his leader position.

Two thirds of cross-border M&As have involved developed countries, but the share of developing and transition savings, as targets of such transactions, had increased from 26% in 2007 to 31% in 2009 and 34.4% in 2010. European companies were the targets in about 42% of cross-border M&As in the peak year 2007, their share decreasing thereafter up to 35% in 2010.

As purchasers, in 2007 the share of European bidders was 44,4% in the total cross-border volume and it fell to 34,6% in 2010 (UNCTAD 2010:4).

If we look at the EU share in the global cross-border sales, we can observe that the share declined from 52% in 2007 to 47% in 2010 (we mention that the data for 2010 covers only the first five months) and the share of purchases declined from 53% in 2007 to 15% in 2010. USA improved its position both in terms of sales and purchases in the global cross-border activity and Japan improved its position especially regarding purchases. However, UE as entity maintained its global leader position in terms of sales and purchases and is still occupying a place at the forefront globally.

Table no 1. The evolution of UE share in the total volume of cross-border mergers and acquisitions, compared to USA and Japan (in billions of dollars and %)

| Region/Economy | Net sales | | | | Net purchases | | | |
|----------------|-----------|-------|-------|-------|---------------|-------|-------|-------|
| | 2007 | 2008 | 2009 | 2010 | 2007 | 2008 | 2009 | 2010 |
| World | 1022,7 | 706,5 | 249,7 | 125,2 | 1022,7 | 706,5 | 249,7 | 125,2 |
| EU | | | | | | | | |
| Value | 527,7 | 251,1 | 116,2 | 58,8 | 537,8 | 306,7 | 89,6 | 18,6 |
| Share of total | 52 | 36 | 47 | 47 | 53 | 43 | 36 | 15 |
| USA | | | | | | | | |
| Value | 164,9 | 227,4 | 40,0 | 29,1 | 179,8 | 70,1 | 23,7 | 50,8 |
| Share of total | 16 | 32 | 16 | 23 | 18 | 10 | 10 | 41 |
| Japan | | | | | | | | |
| Value | 16,5 | 9,2 | -5,7 | 2,5 | 30,3 | 56,3 | 17,4 | 11,2 |
| Share of total | 2 | 1 | ... | 2 | 3 | 8 | 7 | 9 |

Source: UNCTAD Statistics and own calculations:

http://www.unctad.org/sections/dite_dir/docs/wir2010_anxtab_9.pdf;

http://www.unctad.org/sections/dite_dir/docs/wir2010_anxtab_10.pdf;

Regarding sectorial distribution of European cross-border activity, the impact of the crisis across sectors resulted in a shift in their relative weight in the total value of M&As. The manufacturing industry was the most affected, but the decline was felt also by the primary sector and services (financial services or business services, have recorded a sharper decline) (UNCTAD 2010a: 11). Despite these adverse evolutions in 2008 and 2009, in the first half of 2010, on the cross-border merger and acquisitions market that involved European companies was outlined a revival of operations and a restart of an upward trend. Thus, the value of cross-border M&As increased by 36% in first five months of 2010 (UNCTAD statistics provide data only until May 2010), compared to the same period of the last year. This reflects the upward trend following the economic growth in the countries of target and acquirer companies, corporate profitability growth and share price growth.

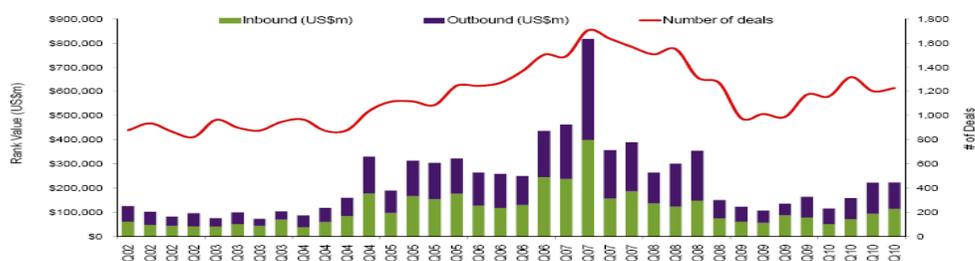


Figure no 1. Evolution of European cross-border mergers and acquisitions

Source: Thomson Reuters, *Mergers and Acquisitions Review, Financial Advisors, 2010: 9*, https://online.thomsonreuters.com/DealsIntelligence/Content/Files/Global_MA_%20Financial_Review.pdf

If UNCTAD statistics provide for the moment data on M&A only for the first half of 2010 (from which general trends can be inferred), the Thomson Reuters company has published a report on merger and acquisition activity for the year 2010. Thus, according to the report drafted by Thomson Reuters company (2010: 9) the year 2010 marked an increase in merger and acquisition activity so that cross-border M&As involving European companies summed up \$716.1 billion, which represented a growth by 35.8% compared to 2009. After a slight decrease in the value of cross-border mergers and acquisitions during the first quarter of 2010, starting with the second quarter and particularly in the second half of 2010, the value of cross-border transactions began to significantly increase. This was due mainly to European corporations, whose acquisitions had increased compared to 2009 by 57.2% to \$388.1 billion.

Short and medium term prospects of cross-border merger and acquisition activity

After the worldwide economy has experienced a deep recession, since 2010 the economic recovery (reflected by the increased production and foreign trade) included most economies, while the EU along with other major economies of the world acted to restore the worldwide financial stability and economic growth. In this context, the prospects for merger and acquisition activity on short and medium term are optimistic, being reinforced by the favourable development recorded in 2010. UNCTAD estimates, in *World Investments Prospects Survey 2010-2012* (2010b: 4), indicate a medium-term optimism related to the business field. Restructuring in the field of industry and privatizing companies (it is expected a new round of privatization within the European countries with large public debt) that were saved during the worldwide turmoil will generate further opportunities in terms of cross-border mergers and acquisitions for corporations.

According to the latest forecast made by the International Monetary Fund, the recovery from recession in Europe continues to make headway but is still modest. However, if the developed countries in Europe record a smaller growth, for 2011 and 2012 being projected increases by 1.7% respectively 1.9%, the emerging states in Europe present a more accelerated growth by 3.7% in 2011 and 4% in 2012 (IMF 2011: 67). Taking into account this scenario, we believe that 2011 will reflect a more dynamic evolution of merger and acquisition activity in Europe and, thus, a continuation of the upward trend started in 2010. This will be encouraged by the fact that the financial situation of corporations has a tendency to improve (corporate profits began to grow), the stock market has increased compared to 2009 and corporate and industrial restructuring is creating new opportunities for acquisitions, especially for the corporations in the emerging countries. By the year 2009, if companies were facing great difficulty in financing M&As, since 2010, the demand for loans to finance external growth operations has increased, fueled by an attenuation of credit standards. The investigation conducted by the European Central Bank in January this year reflects the fact that financing M&As still had a positive impact on the

corporate loan demand, which reflects the desire of companies to resume expansion projects (ECB 2011:7).

In Europe is expected a growth of the operations performed by corporations located in developing countries that are increasingly eager to expand on developed markets. Within the European Union, although the economic recovery is still fragile and unevenly distributed among the Member States, yet this will encourage the corporations in developed countries to expand, in order to enhance the competitive position and access to new markets. Although the developed economies of Europe remain the place where most transactions related to M&As are carried out, there is an increase in the share of these transactions within the European transition economies. We notice a decrease in interest for developed countries concerning M&As and an increase in interest for companies located in transition economies. According to UNCTAD (2010b:12) the top destination regions for investments such as M&As are South-East Asia, the EU-15, North America, Latin America and the Caribbean region, the new EU-12 Member States, South-Eastern Europe and CIS.

Conclusions

The strong decline of cross-border M&A activity in Europe in 2008 and the highlight of the downward trend in 2009 were caused by the reduction of opportunities for companies to invest, as a consequence of restricting the access to financial resources internally (as a result of corporate profits decrease) and externally (due to the reduction of the available liquidity and the increase of funding cost). On the other hand, the market deterioration due to economic recession which practically affected all economies and the unfavourable economic prospects had adversely influenced the companies' predilection to invest. As a result of the global economic slowdown and the recession that affected most economies, the more difficult credit conditions, the sharp reduction of corporate profits and the stock market decline, many companies were forced to abandon their expansion plans and hence the merger or acquisition projects. However, due to the worldwide economic growth that was recorded, the recovery of financial markets, the corporate profit growth, the investment appetite for expansion, national and international development increased significantly since 2010, which was reflected in an increase European cross-border activity. In conclusion, under the continuous economic recovery of the European countries and the other worldwide economies, the recovery of financial markets and the growth of corporate profits, we shall witness an intensive cross-border M&A activity in Europe. The expansion engine of these operations seems to be represented by the emerging economies, whose companies will represent not only attractive targets but also acquirers eager to expand on developed markets.

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SUB-SECTION: ECONOMIC STATISTICS

AN INVESTIGATION OF LONGRUN RELATIONSHIP BETWEEN ECONOMIC GROWTH, INVESTMENT AND EXPORT IN ROMANIA

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The objective of this study was to estimate the long-run relationship between economic growth, investment and export in Romania using trimestrial data from the National Bank of Romania as well as National Statistical Institute. The econometric methodology employed was the Cointegration and Granger Causality test.

First, the stationarity properties of the data and the order of integration of the data were tested using the Augmented Dickey-Fuller (ADF) test. We found that the variables were non-stationary in levels, but stationary in first differences; that is, they are integrated of order one (I (1)). Since we used single equation model(s), the application of Johansen multivariate approach to cointegration was necessary to test for the long-run relationship among the variables. The result showed the existence of a single cointegration equation between the variables. The result of the Granger causality test shows a bidirectional relationship between investment and economic growth and also a bidirectional relationship between investment and exports but the result of the causation between export and growth was statistically insignificant.

Keywords: economic growth, investment, export, Romania, VECM model

JEL codes: E52, C32

I. Introduction

In contemporary economic literature, different points of view have been formulated regarding the economic growth. Considering the different points of view regarding the content of the economic growth, it can be defined as that process of increasing the dimensions of the economic results, determined by the combination and usage of the production factors and underlined throughout macro-economical indicators such as the gross domestic product, the national gross product and the national income in real terms (Samuelson and Nordhaus 2000: 632).

The study of the economic growth has old implications. The preoccupations for the study of economic growth have existed since the beginning of the classical school, represented by Adam Smith, David Ricardo and Thomas Malthus. In Malthus' conception, the balance is realized when the income decreases to a level where the work-force offer grows with a diminished rhythm, and the economy is at a stationary state. The classics omitted in their models the contribution of the technological progress to the growth of the production per capita (Socol 2006: 62).

The Keynesian and Neoknesian models of economic growth consider that the economy is inherently unstable, the intervention of the state being necessary in order to achieve balance. These models propose the utilization of budget and monetary policies to stimulate the economic grows. The Neoclassic theory of economic growth considers that the economy is stable and tends towards a complete use. The Neoclassics start from micro-economy, from the preferences of the households, the companies production functions, the structures of the market, etc. The investments have a short term effect over the national income through the aggregated demand; their effects on the long run manifest themselves through the growth of the potential national

income. On the long run, the technological modifications represent the main cause of economic growth, together with the capital investments and the new technologies (Angelescu 2006: 89).

The concept of economic growth on a long term was introduced by Solow and Swan in a macro-economic model that became a classic, by introducing into the models of growth accomplished by classic economists, Ramsey and Havelmomo, a relation which expresses the population growth and a condition regarding the efficient use of the labor force (Scarlat și Chirita: 60). From that moment, the theory of economic growth evolved rapidly as two generations of distinct models. The neoclassical model of Solow-Swan is based on the exogenous aspect of economic growth, sustaining the realization of a process of economic convergence between the countries. In his study, Solow starts from the following hypothesis: the capital is submitted to decreasing capacities; the countries which have at their disposal the same characteristics of demographic growth, technological progress and rate of investments, will have incomes which will converge towards the value present in the most developed country; the scale capacities are constant; the technological process is exogenous; the economy is perfectly competition; the perfect mobility of the production factors (Marinaș 2010: 79-80).

The interest for the theory of economic growth reignited together with a research of Romer, giving birth to the second generation of economic growth models. Within those models, there are significant improvements, such as an attempt to explain aspects related to dates which had not been discussed in the neoclassical model, a more satisfactory explanation of the differences between the rates of economic growth in different countries, a central attention given to gathering of knowledge; an increased role given to the instruments of the macro-economical policies for the explanation of the growth process (Scarlat and Chiriță: 60).

II. Models of economic growth – a short literature review

This paper presents the relationship between the economic growth, exports and investments in Romania. A series of empirical studies tested the correlation between the dynamics of the exports and the process of economic growth, as well as the possibilities of transfer of the effects resulted from the two variables. Pereira and Xu used for the identification of the causal relation between these, the concept of causality in the Granger sense. According to this model, the exports uphold the economic growth, the estimating of the growth variable being improved through the inclusion of the export variable delayed in time. In a similar manner, the growth variable constitutes a cause of the export variable, if the estimation of the export variable registers a reduction of the forecast error, by including the delayed growth variable (Marinaș 2010: 280).

Starting from the same concept of causality in the Granger sense, Omoke Philip Chimobi studies the relation between the economic growth, investments and export. The role of this model was that it determined a long term relation between the three variables. In estimating this relation the Johansen co-integration test was also used, based on which the conclusion was that there was no long term connection between the three variables. Regarding the Granger causality test, it was found that between the investments and the economic growth there exists a bi-directional relations of causality, which from a statistical point of view was insignificant, and it also resulted that there exists a bi-directional relationship between investments and export (Chimobi 2010: 215).

Ullah, Zaman, Farook and Javid have shown with the help of a VECM model showed that the extending of export leads to an economic growth. They also checked whether there is a uni-directional or bi-directional causality between the economic growth, exports, imports, real fix capital and the income per capita (Ullah and others 2009: 269-270).

Subasat showed that the exports constitute a source of economic convergence, the countries with a medium level of development and with an expansion of export, grow faster than those which are not oriented towards export. His fundamental objectives are to try to obtain control over the structural characteristics which determine “the orientation of export” in order to derive an

indicator for the promotion of export which captures only the effects of the policies, and then in order to attest if this indicator is or not essential for the economic growth (Sabasat 2002: 333).

An analysis of the relation between growth, investments and exports, was accomplished by Dritsakis as well . He studied the relation between the three variables for Romania and Bulgaria, with the help of auto-regressive VAR model. The results suggest the existence of a relation of co-integration between the three variables, as well as a positive impact of the exports and the investments on the real GDP (Dritsakis 2004: 1831).

Regarding the investments, the neoclassical theory suggests the importance of the stock capital increase for the countries that are at a low level of economic development. The influence over the economic growth will be for a medium amount of time, until the moment in which a level of stationary balance of the income will be achieved. The sources for the investments refer to the growth of the savings rate, as well as to the fluctuations of the direct foreign investments. In the case in which these direct foreign investments presuppose also transfers of technology, then the process of real convergence will be a sustainable one. For the new members of the European Union, the direct foreign investments have upheld the process of economic growth, two of the channels for the transmission being represented by investments and exports (Marinaş 2010: 280). Modern theories of economic growth underline the unlimited potential of the technological progress, in order to save all the production factors and to sustain the increasing capacities of the investments (Socol 2006: 62).

III. Methodology

In order to investigate the causality between the nominal GDP (LGDP), direct investments (LDI) and export (LEXP) we used trimestrial deseasonalized data in log for 2000:1 – 2010:4 collected from the Monthly Bulletins of the Romanian National Bank and the INSSE Tempo Online series available online on Romanian Statistical Institutes website. The VAR and VECM models have been largely used in macroeconomics, especially because the variables involved are endogenous and exogenous at the same time. It is known that VAR models are used for stationary data while VECM – for nonstationary ones. We investigated the stationarity of data, in order to establish whether a VAR or VECM is most suitable, then we studied the cointegration between the chosen variables as well as the Granger causality. We used the impulse response function as well as the variance decomposition in order to study the model’s goodness of fit.

IV. The model

First we investigated the stationarity of data. We used the Augmented Dickey Fuller test, including in the equation a constant and a linear trend. Following Canova, the choice of the lag length was established using Schwartz’s Info Criterion, as the AIC criterion has been proven to be inconsistent for more than 20 observations.

Table 1. ADF test for variables in level and first difference

| | ADF test for variables in level | | ADF test for the first difference of the variables | |
|------|---------------------------------|-----------------------------------|--|-----------------------------------|
| | T statistic | Test critical values for 5% level | T statistic | Test critical values for 5% level |
| LGDP | -0.205027 | -3.518090 | -5.934518 | -3.523623 |
| LDI | -1.062859 | -3.544284 | -3.590803 | -3.533083 |
| LEXP | -2.626204 | -3.520787 | -5.001252 | -3.523623 |

Source: Authors’ calculus

ADF test shows that variables in level are not stationary, but all of them are integrated of order 1, I(1), for a 5% level of confidence.

We next investigated the existence of a cointegration relationship between the chosen variables, using Johansen methodology. The Johansen cointegration without deterministic trend test was then conducted. The Unrestricted Cointegration Rank Test (Trace) as well as the Maximum Eigenvalue test indicated one cointegrating equation at 0,05 level for the model without deterministic trend.

Given the results, a VECM Vector Correction Model with 1 cointegrating equation was estimated. Restrictions were placed on the coefficients of each cointegrating relation as well as on the adjustment coefficients, using the normalized cointegrating coefficients and adjustment coefficients. The VEC Granger causality/block exogeneity Wald test showed that the variables with significant impact on the evolution of GDP were both chosen variables, direct investments as well as export.

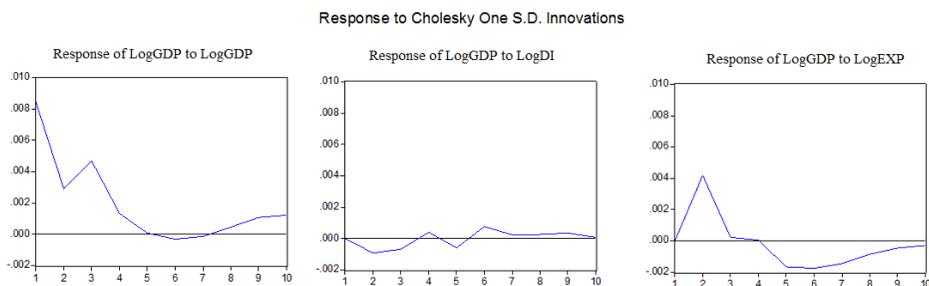
The cointegration relationship can be written as follows:

$$\text{LogGDP} = 0.163234 \text{ LogEXP} + 0.459997 \text{ LogDI}$$

and it reveals a positive correlation on long run between economic growth, exports and direct investments. A 10% increase in exports (in log) determines an increase of 1,6% of GDP in log. The result is consistent with the one of Marinaş. In his VECM model he found an elasticity of 18% of GDP at a increase of 1% of exports.

The VECM model is used in order to investigate the causal relationships between the chosen variables. We found that the model can be written as follows:

$$\Delta \text{LogGDP}_t = -0,29 \Delta \text{LogGDP}_{t-1} - 0,07 \Delta \text{LogDI}_{t-1} + 0,07 \Delta \text{LogEXP}_{t-1} - 0,11 (\text{LogGDP}_{t-1} - 0,08 \text{LogDI}_{t-1} + 0,07 \text{LogEXP}_{t-1} + 3,6)$$



Graph 1. Impulse response functions of LogGDP to a 1% impulse of LogGDP, LogDI and LogEXP

Source: Authors' calculus

Graph 2. Variance decomposition of LogGDP – percent of LogGDP variance due to LogGDP, LogDI and LogEXP

Source: Authors' calculus

We conducted the pairwise Granger causality test with 2 lags. Granger causality tests are defined as joint tests (F-tests) for the significance of the lagged values of the assumed exogenous variable. The estimation result indicated that we reject the null hypothesis for both LogDI and LogGDP and conclude that there exists bidirectional causality between investment and economic Growth at the 5% level of significance. There was statistical significant relationship found to

exist between export and economic growth. Also, with regards to the relationship between investment and export, the result showed that we reject the null hypothesis, indicating that there is bidirectional relationship existing between investment and export in Romania.

V. Conclusions and further implications

The implications of the result is that increase in investment will lead to production of more good which will cause growth in the economy in one hand; and on the other hand, economic growth will guarantee increase in investment. This increase in investment will find development projects such as electricity supply, good road network, good medical care and host of other projects being carried out in Romanian economy. The growth of a country's economy increase the per capita income and subsequently the capability of the citizens to save and reinvest in the economy; hence, a bidirectional causality.

Also Investment which was seen to cause growth will equally enhance export, bearing in mind that increase in export of goods and services will necessitate (cause) Investment in the Romanian economy. It is therefore strongly recommended that policies aimed at increasing the level of Investment be formulated in Romanian economy as a means of engendering economic growth and export which will flow back to as investments.

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SECTION: FINANCE, BANKING AND ACCOUNTING

SUB-SECTION: FINANCE

THE “NEW ECONOMY” AND THE ENTREPRENEUR: REASSESSMENT AND PERSPECTIVES IN THE CONTEXT OF XXI CENTURY

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Abstract

Industrial revolutions, the progress in IT industry, the growth rate of developing new technologies, global competition, liberalization of markets, continue to demand change, globalization of market, economic and financial crisis are just some of the causes that have contributed to the restoration of a new global economic with direct impact on business entrepreneur. Changes socio-economic level paradigm is reflected both in changes to management and organization paradigms enterprise activity in the product market, at work, at the performance that follows the entrepreneur.

In this article we tried a summary of mutations in these paradigms, mutations that will rearrange and reposition the business entrepreneur in the current context of a sustainable economy, based on knowledge, so-called "new economy".

Keywords: „new economy”, sustainable development, enterprise, paradigms, changes, global performance

Jel Classification: D00, D20, D30, D40, D60

1.Introduction

The „new economy" so called "post-modern, post-industrial, post-capitalist", "post-traditional" reflects the current transition from industrial society to a new company "information "or" knowledge "is marked by complex and profound changes in all areas of activity, with major implications for economic, social and environmental process has a scale and speed unprecedented in world history.

Peter Drucker (1999) appreciate that: „We can be sure that the world will result from this rearrangement of values, beliefs, economic and social structures, political systems and concepts, in other words the conception of the world will be different from what anyone could imagine today. In some areas - especially in the company and its structure - the basic transformations have already taken place. The fact that the new company will be a non-socialist and post-capitalist one is practically a certainty. And it is also certain that her primary resource will be knowledge. "

The “new economy" or knowledge-based economy reflects that economy development that exceeded the threshold beyond which *knowledge* is the key resource. What makes this knowledge to become a resource so important? There are many factors which result in this most important being: progress in Information and Communication Technology (ICT), the increase the speed of development of new technologies, global competition, liberalization of markets, changing demand due to continuous growth rate of people middle and high income (which to develop a sophisticated demand for quality products), increasing the importance of quality of life. Dictum:

TIME IS MONEY (characteristic of capitalist society) was replaced with: KNOWLEDGE IS POWER (information society, knowledge society).

At present we can summarize three factors that determine the primordial transformations taking place in society, making the transition from industrial-type economy to the “new economy” based on knowledge, namely: *technical-scientific revolution, globalization and financial crisis.*

Human society has changed a lot and change now increasingly faster. Human society has gradually shifted emphasis from manufacturing to the production of automatic type, from individual knowledge to the group, thus emphasizing the importance of communication.

In summary, we present below the specific characteristics and socio-economic development steps:

Table 1: Characteristics of socio-economic development steps

| Development Stage | Pre- industrial | Industrial | Post-industrial |
|---------------------|--|--|---|
| Production Sector | Extractive | Manufacturing | Processes, services recycling |
| Economic Sector | Primary : -agriculture - mining -Fishing -Wood -Oil and Gas | Secondary: -production commodity consumer -goods-producing durable -constructions | Tertiary: -Transport -Utilities Quaternary -Trade -Finance -Insurance Quintenar: -Health -Education -Recreational |
| Resources Converted | Natural resources: water, wind, animals, human strength | Energy created: electricity Nuclear power | Information: systems computers and data transmission |

Source: W.J.Keegan, Multinational marketing management, Prentice Hall, Inc 1980, p.61

Table 2: Specifics stages of socio-economic development

| Development Stage | Preindustrial | Industrial | Postindustrial |
|----------------------|-------------------------------------|---------------------------------|---|
| Production Sector | Extractive | Manufacturing | Processes, services recycling |
| Strategic Resources | Raw materials | Financial Capital | Knowledge |
| Technology | Force | Technology cars | Technology intellectual |
| Methodology | Common sense, experience, and error | Empiricism, Experimentation | Abstract theory, Simulation models, Decision theory, Systems analysis |
| Perspective temporal | Orientation to the past | Adaptability ad experimentation | Future orientation, predictions programming |
| Axial principle | Traditionalism | Growth economic | Codification knowledge theoretical, satisfaction and motivation |
| Key Concepts | group of individuals, | set of processes, teams, | set of knowledge, |

| Development Stage | Preindustrial | Industrial | Postindustrial |
|-------------------|------------------------------------|--|--|
| | hierarchy, bureaucracy, strategy | goals, ecosystem, marketing, negotiation | team free expression of creativity (no strict targets), innovation |
| Role Information | vehicle along hierarchical pyramid | bond between partners collaborate on projects common | scarce resource, support organization "aware" continuous learning |

Source: own processing based on W.J.Keegan, Multinational marketing management, Prentice Hall, Inc 1980, p.61

2. General characteristics of the "new economy"

The specifics of these stages of socio-economic development have created the foundations for the development of the "new economy" which can be identified by several key characteristics:

A. *The new economy is based on new digital technologies*

In this new economy is intended exploitation of the potential information-based products and services. The main consequence is that the principles governing the information world (the world of intangible products and services) will soon dominate the hard drive world (the world of reality, of atoms, objects, oil and steel and heavy labor).

B. *The new economy is based on knowledge*

Products made in the "new economy" have a new property: knowledge. Their value is given by the logical facet and not physical - the material they contain. Therefore, they may be called "weightless". From money, materials, equipment and human resources, as the main categories used by the entrepreneur, today we come to recognize the paramount importance of a fifth resource which is information.

C. *The new economy is based on innovation*

The new economy is based on Information and Communication Technology (ICT), to alter radically the nature and trajectory of innovation. In the "new economy" usual economic logic, based on turnover and profit, is gradually replaced by a new logic, based on potential for development (innovation) and ensuring the completion of the three main principles:

- access (and answer) instantly;
- personalized service;
- simultaneous presence in several places (ubiquity)
- higher valuation of the assets "intangible" (which often increase the share value of shares of companies over the material assets).

For these reasons the science, technology and education are key factors in the "new economy"

D. *The new economy is based on learning*

The speed of technological innovation and competitiveness requirements asks for a continuous updating of knowledge and revolutionizes the education and training system, requiring the introduction of the new training concept ("life-long learning").

The "new economy" in all its manifestations, such as changing the requirements for many occupations and basic training in different jobs as follows:

- 80% of existing technology will be replaced in the next decade;
- Average life skills (abilities) of a worker (employee) is 3-5 years;
- In terms of technological advances we "getting old" at every 5 years and we need re-training.

Therefore, in the "new economy" learning process has great significance as a cumulative and continuous over time. New information and communication technologies offer new forms of

education and training, distance learning, virtual university, computer training, etc. Learning process should and can take place anytime and anywhere. In the "new economy" learning and initiative are vital and largely determine the effectiveness of the activity.

E. The "new economy" is a global

Developing information and communications technology transform our economy in a global economy in which national economies interact. Trade and capital markets are globally connected and operates continuously (24 hours / day), at a distance and in real time.

F. The "New economy" is a sustainable and socially responsible economy

Currently we assist at the transition from an *uncontrolled development*, which was accompanied by irrational and inappropriate exploitation of resources and raw materials, the size of the profit driven, to sustainable development which has three main dimensions: *economic, social and environmental* development. The enterprises understood that to succeed in business must provide and ensure environmental protection and proper work conditions, pay for collective rights of employees, cooperate to this end with local communities in which they operate, with unions, non-governmental organizations and governmental institutions.

In the context of sustainable development gradually appears the corporate social responsibility concept. This concept defines the direction and attitude of a company for inclusion, voluntarily, in the strategy and its current work, the concerns (projects and activities) with the social and environment in terms of ensuring economic success of the business.

G. The "new economy" and financial crisis. Switching to a "new reconsideration financial economy"

The financial crisis has had an impact on re-establishing a new economic world order. In this context, some authors appreciate that the crisis has produced "breaks" in the history of the world economy, along with a fracture occurring in the economic thinking. Separation of such a model involves both a reform of financial capitalism and the architecture of international relations and building pluralistic development trajectories. (Popescu-Bogdanesti, 2011)

3. The enterprise and the "new economy"

As the main actor of economic phenomena, the enterprise could not remain outside of these concerns to reveal the substance of change. Simultaneously with the development of "new economy" we currently assist to a *change of the companies paradigms*, as follows:

A. *Changing the paradigms of production and commercial processes*, among which the transition to outsourcing, fragmentation and outsourcing activities, relocation of production ("outsourcing ") which allowed the appearance and growth of multinational transnational companies, and the transition from "a mass production (large series)" to " a flexible and diversified production (depending on individual customer requirements) are more important (in the context of this paper).

B. *Changing the organizational and management paradigms*, among which we mention the following:

- from the classic organization specializing single purpose, to the partnerships with networks;
- from "Companies-structures" to "-project companies";
- from "we are separated and we compete" to "we are connected, we cooperate and we compete."

". Encouraging American proverb "if You Can not Beat Them, Join Them" (if you can not win, joining up with) is the current orientation of the world economy at the beginning of the third millennium.

We currently assist at the companies level to an emphasize of the mergers and consortiums process, to relocation of production ("Outsourcing"), to a virtualization of the organization, outsourcing, fragmentation and subcontracting of the activities

C. Changing the work paradigms

We are currently witnessing to a traditional labor paradigm shift from:

- routine work to "work is constantly changing";
- "office (work) first of all " to " work first of all ";
- Fixed-term work program to "flexible work arrangements";
- work (career) life to "career portfolio" which express the diversification of activities, and the professional and occupational mobility and flexibility.
- "fix" workplace to a "mobile "workplace;
- worker goes to work to "work comes to the worker";
- job choice based on location of residence to " you live in a place - you can work anywhere "or" work at distance . "

Management companies are radically. Firms ask for flexible forms of employment, a greater variety of styles even if they are experimental, the ability to perform several types of work, a greater customer orientation and using new information and communication technologies.

D. Changing the customer paradigms

The environment in which firms are currently developing has changed radically in recent years by:

- a) Taking control of the client, this supports more than to be perceived as a member of the community, and increasingly as an individual;
 - b) Changing customer attitudes towards products and services that:
 - it must be adapted / configured to satisfy customer needs;
 - it must be provided in an accessible and practical possible manner;
 - it must be delivered when it is convenient to the client.
 - c) Market globalization; the client often wants to have products / services worldwide.
- These transformations motivate business customer focus.

E. Changing paradigms of organizational performance assessment

From performance based on profit and then return, beginning of XXI century brings the new approaches of organizational performance assessment so that performance begins to be defined in terms of value creation. Defining performance based on value creation has undergone two stages. The first covers the period 2000-2005 when performance was defined by creating value for shareholders (stakeholders) and from 2005 until now when the performance involves the creation of value for holders of interests (stakeholders.)

In the current globalization of world economy, the performing company is "the enterprise that creates added value for its shareholders, satisfied the customers demand, take into account the opinion of employees and protects the environment. Thus, ownership is pleased that the company has achieved the desired return, the customers have confidence in the company's future and in the quality of its products and services and society benefits through policy adopted by the enterprise, environmental protection "(Jianu, 2006)

F. Changing the market paradigm under the crisis

Soros G. thinks that we need a new paradigm, whereas the dominant so far, the liberal balanced markets one , would have proved "false and misleading" and here the problems arising on the international monetary system. Past crises have only test the system and the present crisis has brought humanity into a turning point, where the old policies have no effect. Sand castle

collapses. The moment is dramatic. The dominant balance and market fundamentalism paradigm is unable even to explain the current state of affairs. In this context, Soros G. believes that the time for recognition theory of reflexivity has come. This new theory introduces an element of uncertainty in human enterprises in general and financial markets in particular. (Soros, 2008)

4. Conclusions

The changes we are witnessing at present are unprecedented in human history. To cope with the competitive global marketplace, companies must keep up with these changes. Currently we are witnessing at the change paradigms on which were humanity based for centuries: changing the paradigms of production and commercial processes, the work paradigms, the customer paradigms, the paradigms of organizational performance assessment, the market paradigm under the crisis.

Under these conditions, management of an enterprise must redefine itself and adopt new directions, much more challenging, more flexible, more risky and more opened to the client and to the society as a whole.

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THE OPPORTUNITIES AND CHALLENGES OF MICROINSURANCE

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Microinsurance is a term increasingly used to refer to insurance characterized by low premium and low caps or low coverage limits, sold as part of a typical risk-pooling and marketing arrangements, and designed to service low-income people and businesses not served by typical social or commercial insurance schemes.

As a relatively new field, few studies evaluating the impact of microinsurance projects exist. Of these, even fewer have a rigorous methodology leading to reliable results.

Our research aimed to:

- examine the viability of microinsurance as a mechanism of risk transfer and tool for risk management in developing countries;*
- provide a state of the art analysis of microinsurance for a better understanding of currently operational microinsurance schemes;*
- reflect on the opportunities and challenges of microinsurance in developing countries, highlighting both the potential benefits and limitations of microinsurance as an instrument for transferring risk;*
- consider the interests and perspectives of different stakeholders and the incentives and disincentives for participating and investing in a micro-insurance scheme;*
- enhance dialogue and collaboration on this topic between and within the commercial insurance sector and the disaster risk reduction communities;*
- assess the opportunity of introducing microinsurance in Romania.*

Reflecting on the opportunities and challenges of introducing microinsurance in Romania, there is absolutely necessary to understand both the supply side (current insurance market) and the demand side (risks faced by low-income persons and the coping strategies used to manage these risks). The majority of the primary research was conducted on-site in Romania, in Oradea and its environs, during the month of December 2010. Qualitative research techniques were utilized, including focus group discussions (FGD) and guided individual interviews with members of both the public and private sector, as well as with international non-governmental organizations, such as the World Bank, and IMF.

The research revealed the main risks faced by low-income households, and the fact that microinsurance is a mostly unknown concept in Romania. There is a clear need and demand for microinsurance in Romania. The potential market is estimated to include approximately 4.3 million persons in 2008.

Keywords: microinsurance, microfinance, low-income, direct sales, performance

JEL Code: G22

1. Definitions of microinsurance

Microinsurance is part of the broader concept of microfinance, which includes a variety of “micro” financial services targeted to lower-income households.

In definition, microinsurance is not very different from traditional insurance, except that it targets a different segment of a population. In reality, however, this entails an entirely different way of thinking about insurance: new, simpler products, alternative distribution channels and marketing instruments, as well as a focus on efficient operations.

Microinsurance is a financial arrangement to protect low-income people against specific perils in exchange for regular premium payments proportionate to the likelihood and cost of the risk involved (Churchill C. 2006: 2).

This definition is essentially the same as one might use for regular insurance, except for the clearly prescribed market: low-income people.

The author of this definition adds that microinsurance does not refer to: (i) the size of the risk-carrier (some are small and even informal, others very large companies); (ii) the scope of the risk (the risks themselves are by no means "micro" to the households that experience them); (iii) the delivery channel: it can be delivered through a variety of different channels, including small community-based schemes, credit unions or other types of microfinance institutions, but also by enormous multinational insurance companies, etc.

Though the concept of microinsurance is gaining in popularity across the globe, there is no commonly accepted definition. We can define microinsurance by the following characteristics:

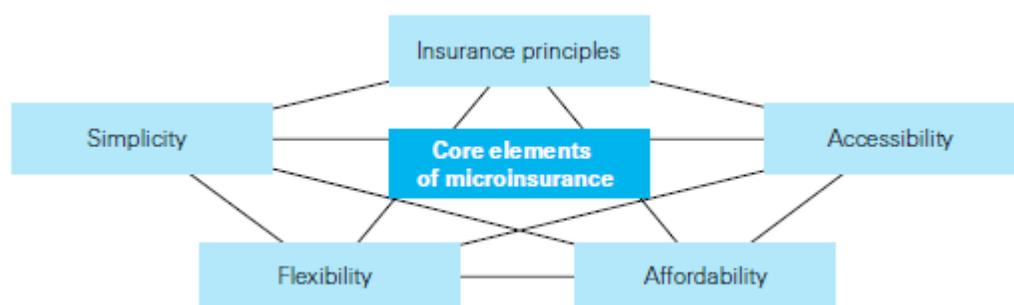


Figure 1. Core elements /characteristics of microinsurance

Source: Swiss Re Sigma No.6/2010 – “Microinsurance-risk protection for 4 billion people”, p.2

Insurance principles: it is based on insurance principles and involves payment of premiums by the policyholders (or on the policyholder’s behalf by governments, developmental agencies) in exchange of the promise of indemnification by the insurer in the event of covered loss.

Accessibility: Microinsurance targets the segment of society with low and instable income who would not otherwise be able to afford conventional insurance.

Affordability: Premiums and coverage are kept at a low level in order to make products affordable for the target population. Premium subsidies provided by governments or developmental agencies also help to ensure products are affordable.

Flexibility: Since the low-income segment of the society is not homogenous cluster, microinsurance products require customization to meet the community requirements in a effective way. For instance, premium collections, can be tailored to suit the irregular income stream of policyholders.

Simplicity: Microinsurance should be structured simply in terms of product design, underwriting conditions, premiums collection, policy language and claims handling. This takes into consideration the lack of actuarial data in many cases and help to make the products easy to understand and more acceptable.

The low-income households are facing the following main risks by: death or serious illness of a breadwinner, loss of the year’s harvest due to natural disaster, and property loss.

2. Microinsurance delivery models

Methods and models for delivering microinsurance products depend on the organization, institution, and provider involved. In general, there are four main methods for offering microinsurance. Each of these models has their own advantages and disadvantages.

-Partner agent model

A partnership is formed between the micro-insurance scheme and an agent (insurance company, microfinance institution, donor, etc.), and in some cases a third-party healthcare provider. The micro-insurance scheme is responsible for the delivery and marketing of products to the clients, while the agent retains all responsibility for design and development. In this model, micro-insurance schemes benefit from limited risk, but are also disadvantaged in their limited control.

-Full service model

The micro-insurance scheme is in charge of everything; both the design and delivery of products to the clients, working with external healthcare providers to provide the services. This model has the advantage of offering micro-insurance schemes full control, yet the disadvantage of higher risks.

-Provider-driven model

The healthcare provider is the micro-insurance scheme, and similar to the full-service model, is responsible for all operations, delivery, design, and service. There is an advantage once more in the amount of control retained, yet disadvantage in the limitations on products and services.

-Community-based/mutual model

The policyholders or clients are in charge, managing and owning the operations, and working with external healthcare providers to offer services. This model is advantageous for its ability to design and market products more easily and effectively, yet is disadvantaged by its small size and scope of operations.

3.The microinsurance market

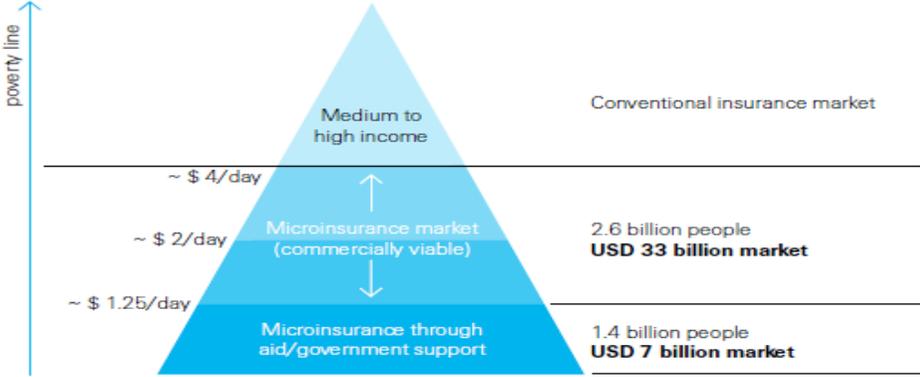
A range of players and institutions are involved in the microinsurance supply chain. They include insurance regulators, risk carriers, administrators, delivery channels, technology platforms, and related service providers. The risk carriers are mainly comprised of insurance providers, including private and public insurers, non-governmental organizations, mutuals and community organisations

The microinsurance market can be categorized in two broad segments, based on the consumption level of the people and their ability to afford premiums (Re Sigma No.6/2010 : 9). Those living above the international poverty line of 1,25 USD/day, and up to 4 USD/day represent the target market segment for the commercially viable microinsurance. For this group, it is possible to have an independent market-based approach, whereby microinsurance products are sold at a price that is still affordable to the clients, but also commercial sustainable.

The other segment is at the bottom of the income pyramid, which includes people living below 1,25 USD/day, also referred to us as the extremely poor population. The population falling into this category earn so little that they find it hard to afford even basic necessities for their families, let alone the cost of commercially viable micro-insurance products. However there are other approaches to extend social protection and micro insurance programs to this group. For instance, government can introduce large scale social security measures on their own or subsidise microinsurance premiums through public private partnership programmes.

It is estimated that 2,6 billion people fall in the range of 1,25 USD/day and 4 USD/day (Re Sigma No.6/2010 : 9). This is the potential target for various commercially viable microinsurance products. On the other hand, some 1,4 billion people live on less than 1,25 USD/day and require support from governments and developmental agencies to access microinsurance products. In total, up to 4 billion people can potentially benefit from microinsurance and/or public private partnership. This translates into 2 to 3 billions policies insurance products. In USD terms, the

potential market is valued up to USD 40 billion. The current market size, however is far less. It is estimated that the current penetration of the microinsurance is close to 2%-3% of the potential market, which translates into around USD 0,8-1,2 billion of direct premium.



Note: \$ amounts refer to the poverty line in 2005 Purchasing Power Parity International dollars (PovertyNet/ World Bank). The data may differ from other sources due to various possible reasons including number of countries covered.

Figure 2. Potential market estimates of the global microinsurance market

Source: Swiss Re Sigma No.6/2010 – “Microinsurance-risk protection for 4 billion people”, p.9

South Asia has the lowest ratio of low-income individuals living under \$4/day to the total population. The entire Asia-Pacific region represents 70% of the world’s low-income population.

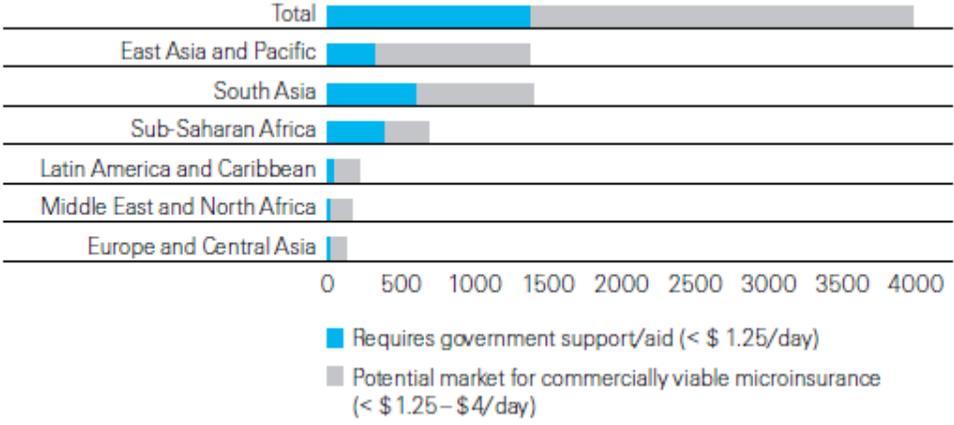


Figure 3. Low income population by region (data in millions)

Source: Swiss Re Sigma No.6/2010 – “Microinsurance-risk protection for 4 billion people”, p.10

Sub-Saharan Africa along with the Middle East and North Africa are the next major regional markets with 865 million low-income individuals. Latin America and Caribbean, where microinsurance is much more developed compared to Africa , accounted for some 5% of the low-income population. The incidence of extreme poverty is highest in a South Asia and Sub-Saharan Africa, totaling almost a billion people.

The concept of microinsurance is relatively new in Central and Eastern Europe(CEE) and Turkey, even though there are an estimated 73 million people living under \$4. The five markets (The Russian Federation, Turkey, Romania, Ukraine and Poland), account for nearly 90% of the low income population in the region, and can be considered major markets for microinsurance products. Moldova and Albania, on the other hand have the highest proportion of low-income population, with 4 million people.

4.The oportunity of introducing microinsurance in Romania

The purpose of the present study was to assess the oportunity of introducing microinsurance in Romania. To address this key question, an understanding of both the supply side (current insurance market) and the demand side (risks faced by low-income persons and the coping strategies used to manage these risks) was necessary. The majority of the primary research was conducted on-site in Romania, in Oradea and its environs, during the month of December 2010. Qualitative research techniques were utilized, including focus group discussions (FGD) and guided individual interviews with members of both the public and private sector, as well as with international non-governmental organizations, such as the World Bank, and IMF.

In Romania it is estimated that 4,19 million people fall in the range of 1,25 USD/day and 4 USD/day in 2008, conform to Development Research Group of the World Bank(World Bank). This is the potential target for various commercially viable microinsurance products. On the other hand, some 0,11 million people live on less than 1,25 USD/day and require support from governments and developmental agencies to access microinsurance products. In total, up to 4,3 milion people can potentially benefit from micoinsurance and/or public private partnership.

The research revealed the following main risks faced by low-income households: death or serious illness of a breadwinner, loss of the year's harvest due to natural disaster, and property loss. Currently, most households use self-insurance and informal insurance as their primary risk management tools; savings and the purchase of fixed assets are utilized ex-ante, while borrowing or migrating for work are used to cover expenses ex-post. Clearly, the effectiveness of such strategies is limited.

However, most low-income persons do not currently consider insurance as a viable risk management alternative. There are many ways to explain this: firstly, there is a lack of financial education among the population about the purpose and benefits of insurance. Secondly, there is a widespread lack of trust in institutions. In addition, most low-income households feel they do not have sufficient financial resources, perceiving insurance as an "extra" or even "wasteful" expense, or as a luxury product. Finally, most insurance firms do not offer any products targeted to the lower-income population, nor are making a marked effort to reach out to this segment.

Currently, most insurance firms offer a traditional product range, many relying on automobile and other compulsory insurances. Direct sales through intermediaries (agents and brokers) is very common, and marketing is primarily executed through traditional mass media (television, radio, print advertising). One of the main issues with the current product offering is that most products are not affordable, but also payment is required in full and upfront.

Microinsurance is a mostly unknown concept in Romania. There is no specific microinsurance legislation, although the government has expressed openness to the possibility of developing one in the future. Microfinance, however, is quite well-developed and regulated, which is often a prerequisite for the successful launch of microinsurance into a new market.

5. Conclusions

Microinsurance supports the insurance sector's long-term development. With favorable trends, such as rising personal and household income, improving economic fundamentals and increased efforts on poverty reduction, it is expected that a high percentage of the low-income households

will move into the middle income segment in the near future. This socio-economic transformation will offer huge business opportunities to the financial services industry.

There is a clear need and demand for microinsurance in Romania. The potential market is estimated to include approximately 4.3 million persons in 2008 conform to Development Research Group of the World Bank(World Bank). A microinsurance product would need to offer both quality and flexibility, at a reasonable cost and with a flexible payment plan. The recommended microinsurance products which are addressing to the low-income persons in Romania are personal accident, credit life, agriculture and property insurance. Furthermore, trustworthy and far-reaching distribution channels which would reliably provide access to the maximum number of people is important. For Romania, the recommended distribution channels are microfinance institutions and SCAs.

Premium payments and claims disbursements could also be handled through the Post Office, which has the widest and most accessible branch network of any institution in Romania. For operations, the partnership model is recommended, whereby Zurich would liaise with an on-site partner, who would in turn coordinate the respective delivery channels and manage regulatory compliance.

Finally, investment in financial education is necessary for the success of microinsurance. Raising the financial education and helping to build an insurance culture fosters a favorable environment for all parties involved – buyers and suppliers. Therefore, it is recommended that educational programs be implemented in collaboration with the government as well as international organizations, trade associations and rural organizations.

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USING SPLINE FUNCTIONS FOR THE SUBSTANTIATION OF TAX POLICIES BY LOCAL AUTHORITIES

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The paper aims to approach innovative financial instruments for the management of public resources. In the category of these innovative tools have been included polynomial spline functions used for budgetary sizing in the substantiating of fiscal and budgetary policies. In order to use polynomial spline functions there have been made a number of steps consisted in the establishment of nodes, the calculation of specific coefficients corresponding to the spline functions, development and determination of errors of approximation. Also in this paper was done extrapolation of series of property tax data using polynomial spline functions of order I. For spline implementation were taken two series of data, one referring to property tax as a resultative variable and the second one referring to building tax, resulting a correlation indicator $R=0,95$. Moreover the calculation of spline functions are easy to solve and due to small errors of approximation have a great power of predictability, much better than using ordinary least squares method.

In order to realise the research there have been used as methods of research several steps, namely observation, series of data construction and processing the data with spline functions. The data construction is a daily series gathered from the budget account, referring to building tax and property tax. The added value of this paper is given by the possibility of avoiding deficits by using spline functions as innovative instruments in the public finance, the original contribution is made by the average of splines resulted from the series of data.

The research results lead to conclusion that the polynomial spline functions are recommended to form the elaboration of fiscal and budgetary policies, due to relatively small errors obtained in the extrapolation of economic processes and phenomena.

Future research directions are taking in consideration to study the polynomial spline functions of second-order, third-order, Hermite spline and cubic splines of class C2 .

Keywords: fiscal policy, budget deficits, spline functions, budget justification, debt crisis

JEL codification: C29, H72

I.Introduction

After about two years from the financial crisis debut, local governments from everywhere are preoccupied to ensure the financial resources needed to finance budget deficits and to ensure quality public services provided for the interests of beneficiaries.

The financial crisis has left deep scars in local communities. Financial pandemic has spread rapidly throughout the economic system. Budget revenues have fallen dramatically, budget deficits have become chronic and in front of these realities the local authorities had to identify solutions to avoid the financial collapse .

Often local authorities have had to turn to central government to finance budget deficits or to support throughout the budget transfers some categories of public services. The dependence of

central government proved to be mostly harmful. This is because local authorities could not avoid political influence in their own public policies. In this way there was created a financial dependency on central government, which had had an impact on the quality of public services provided. The explanation for this financial dependence is not justified only by the economic crisis. There is another reason that explains this phenomenon resulting from the manner in which it was understood the financial autonomy of local governments written in the European Charter on Local Autonomy in Strasbourg. The common denominator of financial autonomy is that local governments have the property tax as a revenue source for their own budgets. But this proved to be insufficient compared to the funding needs on public services that local governments have to ensure. The solution identified to introduce a new type of tax in the configuration of financial resources available to local governments has proved to be a useful solution yet insufficient. It is about shared taxes which are included in own revenues of local governments in Romania, does not fully cover financing needs of their local communities. Therefore the needs for financing, most often over the financing capacity of local governments are the result of transferring competences, duties and responsibilities regarding public services. It is about public services such as preuniversity education, health and social protection, local police, evidence of the population and lately the public health services.

In this way budget transfers were maintained as a last minute solution for decentralized financing of public services which are useful but only turns local authorities into simple financial resources cashiers who runs the operations of receipts and payments. There has been tried budgetary balance solution by means of balancing allowances contained sharing of income tax (currently 22%) and also for balancing amounts allocated by the central government to local governments, but the criteria allocating these amounts are subject to dispute between the Ministry of Finance and local governments interested in obtaining an opportunity to exploit the maximum amount in the allocation on these financial resources.

Therefore the central government in the process of budget elaboration divides financial resources into two major categories namely: own revenues and transfers from the budget. Also own revenues include income tax on property taxes, income tax shared revenues from concessions and assets of local governments which are public property. Most of the times own income does not exceed 50% of the total revenues available to local governments, which confirms the theory that local governments are financially dependent on central governments and has a poor financial capacity which is relatively low compared to the funding needs that local governments generally have.

Budgetary transfers even though they are significant in amount, they have most cases fixed destination so that local governments operates receipts and payments transactions which runs between the central government and local governments.

There is a natural question and in the same time legitimate: are there interested local governments to ensure a prudent and efficient management of own financial resources? And the answer, especially in times of financial crisis, can only be yes.

But managing their own financial resources can not be ensured without a budget process governed by modern tools and techniques that allow the decision-makers (local governments) to measure the level of these financial resources, to identify new alternative tax bases and then through the mechanisms of public funds to ensure financing of public services.(1)

The key element in the budget process is the budget formulation stage. Either it is known that the planned financial resources is equal to the financial resources consumed. The simple rule of budgetary balance. What did the science of public finances so far? has provided series of structured budgeting methods into two categories namely: traditional methods and modern methods budgeting. A brief recap of their category indicates which in classical methods included direct method of increase / decrease and modern methods which include zero base approach or rationalize expenditures budgeting method.

These methods(2) had the disadvantage that are relatively unpredictable because are based throughout the series of data from the previous period of time and do not take into account the various correlations that may occur between different variables within in portfolio of any local budget revenues . Moreover, in the process of budget forecasting for time periods of three or five years, these methods have proved to be highly unnecessary as there had long-term low predictive power.(3)

The major disadvantages have been the motivation of developing this work, which was necessary to identify other ways to approach the predictions in the planning of budgetary resources to prove his worth. For this was an innovative area was identified in the science of public finances namely the use of spline functions.

II. What are spline functions and how they can be applied in the substantiating of fiscal and budgetary policies of local governments?

II.1. Brief history of spline functions. State of knowledge in the field of spline functions.

The notion "spline" comes from ancient times, from a mechanical device used by draftsmen in draw smooth curves. The term spline function in mathematics was first used by Schoenberg in 1946.(4)

In 1946, mathematicians began to study the shape of splines and derivatives of polynomial formula known as the term spline curve or the term spline function.(5)

This has led to widespread use such computer aided design functions, particularly in the areas vehicle designs. IJ Schoenberg had given the name of spline function after its resemblance to the mechanical used by draftsmen.

The word "spline" comes from term used by shipbuilders, referring to pieces of thin wood. In the past 40 years, functions have become very popular in computer graphics, computer animation and computer aided design field. It is difficult to find any industrial product, no spline substance . Also, they are widely used in studies of mathematics such as interpolation approximation. Spline gives another way to represent the class of functions. For decades, mathematicians had used for the polynomial calculus. In the early 20th century, with advances in approximation theory, spline functions had started to appear. The basic idea is simple. In essence, they consist of portions of polynomials with local support.

In the late 1950, two French mathematicians, Pierre Bézier from Renault and Casteljau Paul from Citroen, had independently developed spline-based computer aided design systems for cars.(6)

In last decades a very important place in the scientific field is taken by spline functions, with its crowd forms a linear space. They present the major advantage to be easy programable leading to final numerical solutions. Also it important the fact that polinomyal spline functions have the property to minimize a seminorma of spline interpolation function odd degree, the using Hilbert space techniques can be defined as a unique spline element solution of a variational problem. This allows to obtain important properties of all multitude linear spline functions such as spline functions of polynomial, trigonometric, exponential, L-spline functions, etc. Chebyshev type. One can thus study the convergence of spline interpolation functions to the function which interpolates in usual rules Chebyshev and L2, and the order of convergence.(7)

Spline functions are characterized by their shapes subintervals between two nodes (which can be various known functions) and certain conditions for connecting the nodes.

Spline functions in recent years had found wide application, the main purpose being the interpolation. For spline interpolation was not deducted an expression of the error of approximation, a straightforward manner, as polynomial interpolation. It was retained only the statement that continuous function can be approximated as well all the interval $[x_1, x_N]$ when the number divisions increases, ie, spline interpolation is always convergent.. Because the derivative

of order m , $s(m)$, of a polynomial spline function is a step function (constant on intervals) while step function as well approximates continuous function splines on the interval when the number of divisions increases, we may give error assessment based on the maximum deviation between the derivatives $f_{(m)}(x)$ and $S_{(m)}(x)$ suppose that $f_{(m)}(x)$ exists and is continuous.(8)

Spline functions are used mostly in the industrial world. There are very few areas of production and engineering where these interesting functions are not used, and their use continues to grow at a rapid pace.

Robin Forrest describes "lofting", as a technique used in airplane industry during the World War II to build splines from thin wood for airplanes. Later the „lofting conic” was discovered, which replaced so called splines in the early 1960 due to JC Ferguson`s work at Boeing.

At Boeing, these functions are used not only to represent geometrical models, for shape and curve modelling but also at the engineering analysis.(9)

Engineering analysis and simulation is very important especially for a big engineering company such as Boeing. The examples are various, from sophisticated simulations for fluid dynamic calculation to simple codes of linear analysis which uses simple physics models. Some codes are used to calibrate the calculations, while others use B-spline, which forms a base for any kind of space given by the spline function as finite elements. In the finite element case, engineering codes create spline approximation to ordinary differential equations, equations with partial derivatives, integral equations and algebraic, being a popular approach done by Boor and Swartz in 1973.(10)

II.2.Spline functions algorithm

To clarify the spline functions algorithm we start from several features considered as working hypotheses to explain this rational mechanism with the possibility of applying in economic sciences, namely:

a) we consider a series of data with the values $(x_1, x_2, \dots, x_{n-1}, x_n)$ which are in the same time a division $\Delta \cdot a = x_1 < x_2 < \dots < x_{n-1} < x_n = b$ of the interval $[a, b]$;

b) the space of spline function is considered as:

$$S_m^k(\Delta) = \left\{ s, s \in C^k[a, b], s|_{[x_i, x_{i+1}]} \in P_m, i = 1, 2, \dots, n-1 \right\} \quad \text{with } m \geq 0, k \in N \cup \{-1\}$$

where m represents the spline degree and k the smoothness class of spline function`s space .

If $k = m$ then function $s \in S_m^m(\Delta)$ are polynomials.

For $m = 1$ and $k = 0$ we obtain linear splines.

The division points of the interval $[a, b]$ are called nodes, and in each node we know the value of the function $f(x_i)$ from $y_i = f(x_i)$;

If we note $s(x_i)$ the spline function with which approximate the function $f(x_i)$ on the interval $[a, b]$ then we have to identify the form of the function $s(x_i) = f(x_i)$ which take values $(x_1, x_2, \dots, x_{n-1}, x_n)$.

In the interpolation approximation we suppose that (x_i, y_i) are known. If due to various reasons the nodes are affected by errors then the interpolation criterion is inadequate.(11)

With other words spline function $s(x_i)$ approximate the function $f(x_i)$ on the $[x_i, x_{i+1}]$ interval with the following conditions:

1. the restrictions of spline functions on the subintervals $[x_i, x_{i+1}]$ are polynomial of m degree, $s|_{[x_i, x_{i+1}]} = p_{m,i}$;

2. $s(x_i)$ is derivable $(m-1)$ times on the interval $[a, b]$;

3. When connecting the nodes, each node is conditioned by:

$$p_{m,i}^{(k)}(xi + 1) = p_{m,i+1}^{(k)}(xi + 1), k = 0, 1, \dots, m - 1, (1)$$

wich means that on the x_{i+1} frontier between the two subintervals, the polynomial from left side of $p_{m,i}$ and its first $m-1$ derivatives must have the same values with the polynomial from the right side of, $p_{m,i+1}$. Outside the interval $[a, b]$ the function $s(x_i)$ it can extend throughout polynomial of degree $\leq m$. (12)

The three cumulative conditions defines the spline function $s : [a, b] \rightarrow R$ wich is known in the scientific literature as polynomial spline function of m degree. (13)

In these conditions the polynomial spline functions can substantial contribute in the economic field in interpolating problems but also in approximation of functions wich describes the economic processes and phenomena with direct influence in economic variables predictability and identifying the financial risk helping the managers to administrate the resources in the public sector. (14)

In the scientific literature there are three categories of polynomial spline functions known, 1st degree, 2nd degree and 3rd degree.

The **polynomial spline functions of first degree** have the following expression.

$$S(x) = S_i(x) = s_{i,0} + s_{i,1}(x - x_i), x \in [x_{i-1}, x_i] \quad (2)$$

with the coefficients $s_{i,k}$ wich are determined throughout the condition:

$$S(x_i) = y_i, i = \overline{0, n}; \quad (3) \text{ și } S_i(x_i) = S_{i+1}(x_{i+1}), i = \overline{1, n-2}; \quad (4)$$

The spline functions of first degree, also applied in this paper approximate with remarcable results, series of data with linear distribution and increasing evolution.

The coefficients of polynomial functions are determined from the two specific conditions of spline functions namely that value of the spline function in nodes is equal with the value of the function $y_i = f(x_i)$ and from the continuity condition of spline function in each end of the $[x_i, x_{i+1}]$ interval;

The **second degree polynomial spline** function use also in problems of interpolation and approximation have the expression:

$$S(x) = S_i(x) = s_{i,0} + s_{i,1}(x - x_i) + s_{i,2}(x - x_i)^2, x \in [x_{i-1}, x_i] \quad (5)$$

with the coefficients determined from the conditions:

$$S(x_i) = y_i, i = \overline{0, n};$$

$$S_i(x_i) = S_{i+1}(x_i), i = \overline{1, n-1}; \quad (6)$$

$$S_i'(x_i) = S_{i+1}'(x_i), i = \overline{1, n-1}; \quad (7); \quad S_0'(x_0) = 0; \quad (8) \quad (15)$$

The polynomial functions of second degree is introducing two suplimentary conditions in order to find the coefficients namely, the condition for the first derivatives in the continuity points of spline functions and the local extremum condition for one of the extremities of second degree spline wich usually is chosen in x_0 .

The **polynomial spline function of third order** has the expression:

$$S(x) = S(x_i) = s_{i,0} + s_{i,1}(x - x_i) + s_{i,2}(x - x_i)^2 + s_{i,3}(x - x_i)^3, x \in [x_i, x_{i+1}] \quad (9)$$

with the following conditions needed to determine the coefficients:

$$S(x_i) = y_i, i = \overline{0, n};$$

$$S_i(x_i) = S_{i+1}(x_i), i = \overline{1, n-1};$$

$$S_i'(x_i) = S_{i+1}'(x_i), i = \overline{1, n-1};$$

$$S_i''(x_i) = S_{i+1}''(x_i), i = \overline{1, n-1}; \quad (10)$$

$$S_i''(x_0) = S_{n-1}''(x_{n-1}) = 0; \text{ or } S_1'(x_0) = y_0', S_{n-1}'(x_{n-1}) = y_{n-1}'$$

Spline functions of third-order polynomial best fit the functions whose graphical representation is sine wave.

Additional conditions also refers to local conditions for two extreme ends of the second degree polynomial spline function.

The specialized literature has established and developed series of Spline functions along with the polynomial, as outlined above, with different applications especially in technical sciences. In the category of spline functions used for interpolation we know the cubic splines, the spline functions with Hermite interpolation on intervals, cubic splines of class C^2 etc.(16)

II.3. Spline functions mechanism in the public finance

The mechanism resumes to present the algorithm of application of polynomial spline functions in public finance. This mechanism was applied on series of data at a local budget level, in comparison with other techniques studied in the econometric field such as linear regression.

These steps are presented below for the polynomial spline function of first order.

Step I: Establishing the nodes $x_i; i = \overline{1, n}$; Usually the nodes are established randomly, equidistant, for every determined interval $[x_i; x_{i+1}]$ spline functions to achieve accurate approximation;

Step II: For each interval $[x_i; x_{i+1}]$ we establish the form of the spline function $S_i(x_i)$ using the expressions described above for the polynomial spline functions of first order;

Step III: Determination of coefficients $s_{i,k}$ from the spline function conditions, to take value in the delimited nodes in Step 1 and from the continuity conditions on the interval $[x_i; x_{i+1}]$;

Step IV: Establishing the form of the spline functions from regarding the coefficients determined for each interval and verifying the error of approximation using the relation:

$$e_x = f(x_i) - f(s_i) \quad (16)$$

Step V: Establishing the spline function used for prediction by calculating the average of the spline functions for each interval $[x_i; x_{i+1}]$ which they can estimate the values of function $f(x_i) = y_i$ when x_i is known for the future period.

Table no.1 – The algorithm of applying spline functions for series of data registered in economic process and phenomena analysis

The steps mentioned above are not limitative. They describe first-order polynomial spline functions adapted to the needs of economic researchers to estimate and study the predictability of economic phenomena and processes.

II.4. Using possibilities of polynomial spline functions of first-order in tax policies substantiation of local authorities

Nowadays tax and budgetary policies are very important for local governments which are aware of the importance of financial resources.

Budget deficits, public loans, public services, all of them are depending on tax policies. Unfortunately the tax policy is based almost entirely on the property tax which proved to be insufficient to satisfy the public needs of local communities. Although apparently were part of fiscal policies, shared taxes, are not in direct "coordination" of local authorities. This is because the shared taxes are collected by the central authorities after which the shares are allocated to local communities.

Based on these considerations we tried to realise a group of fiscal policies based on their role in stimulating the economic development. These attempts led to dividing the fiscal policies into the following category, namely:

Agressive fiscal policies: which are characterized by the fact that the tax rate and tax base are established at extreme values, imposed by law so they don't have a stimulative effect for the business environment neither to economic development.

Stimulative fiscal policies: are policies which are characterized by the fact that the tax rate and tax base plays a great role in the business environment stimulation. In this sense the local authorities provides tax incentives depending on the investment values and number of jobs created in order to stimulate the investments in the region.

Neutral fiscal policies: are those policies which have on their base the property tax but having values that doesn't change the taxpayer's behaviour.

Also budgetary policies includes the expenditure policy administration which are based on cutting the operational expenditures or based on supporting the long-term investments which leads to the local economic development.

Regardless of the theory of fiscal policy budget how spline functions are used in the substantiation of the fiscal policy? The answer is not simple. It can be formulated on two different directions, namely: by using the $r_i \times B_i$ method or predicting the budgetary revenues collected on the entire budget.

The first way, which is used at substantiation of property tax revenue it has to be known the base for a period of time, minimum one year in order to establish the future collected tax.

Polynomial spline functions of first-order will have the expression:

$$S(B_i) = s_{1,0} + s_{1,1}(B_i - B_{ii}), B_i \in [B_i, B_{i+1}]$$
 with the conditions imposed for the coefficients ($s_{i,k}$) of spline functions regarding the equality of the values in nodes and the continuity condition through nodes $S_i(B_{ii}) = S_{i+1}(B_{ii})$. (17)

This way of using spline functions determines the substantiation of fiscal policies depending on tax base. That is way local authorities have to identify a benchmark for the collected revenues from the property tax, and have to identify ways to increase the tax base at the a certain level proposed to realise.

The second direction, within fiscal policy of local authorities aims to predict the collected taxes from property when there is registered certain values of building tax. In this way using a polynomial spline function of first-order allows to establish certain property tax when building tax projection is known.

Regardless of the way spline functions are used, they permit approximating the evolution of tax property or other categories of revenues with a greater accuracy than other means known in the economic field (ie. econometry).

III. The research results obtained by applying functions in the substantiation of fiscal-budgetary policies

III.1. Research methodology

In order to realise the research there have been used as methods of research several steps, namely observation, series of data construction and processing the data with spline functions. The data construction is a daily series gathered from the budget execution, referring to building tax and property tax, and in the end the process of data was made according to the methodology described at 2.3.

III.2. Research results obtained through series of data processing using polynomial spline functions of first-order

To study the use of spline functions were considered two types sets of data from the budget execution for the year 2009 of Oradea Municipality (due to its easy acces at the database), respectively the **property tax** and **building tax indicators** registered in **February** 2009 and verified the appliance of spline functions in order to size the revenues for next month (**March**). The reason why past series were chosen is to verify the accuracy of using spline functions in extrapolations facing them with the real data registred in March 2009 for property tax.

From the given series of February were determined the polynomial spline functions of first-order wich is relevant for the evolution of tax property depending on building tax.

There were identified four nod, established at a range of seven days and were determined four polynomial spline functions of first-order for each week of February. Each spline is related to a week, taking equidistant range between the nod. Also were established the function wich describes the series through the **ordinary least squares (OLS)** method in order to compare the results of research using the extrapolation for OLS and for polynomial spline function of first-order.

In order to verify the accuracy of extrapolation using spline functions were considered three cases to reflect de difference between the function determined with OLS and polynomial spline functions of first-order.

Case I

Last spline function on February has been considered $S_4(x_i)$.

$$Y = 1.29872X + 123675$$

Case II

We consider the average of four spline functions resulted for each week

$$Y = 1,316065X + 10685$$

Case III

The function resulted from linear regression has been determined (Ordinary Least Square method)

$$Y = 1,28617X + 154722$$

In order to underline the efficiency of these 3 methods, throughout Gretl software, we have compared the extrapolated values for the property tax with the real values of property tax for March.

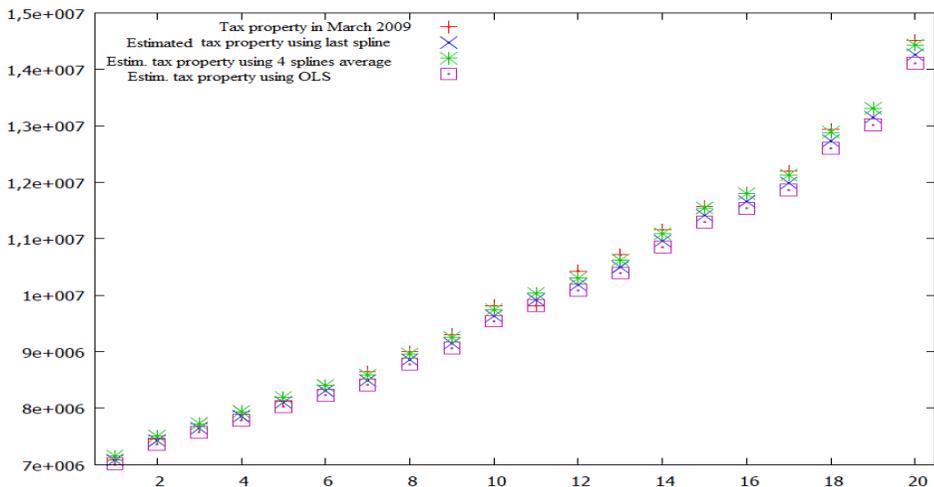


Fig.no.1 Comparison between the expected values fo March 2009 and real values,
Source: Budgetary Account Oradea 2009

We can notice that approximating the revenues from property tax depending on building tax for March 2009 was realised with the greatest accuracy by the average of 4 spline functions resulted from the February 2009 series.

Also the function resulted using OLS method proved to be less efficient to describe the trend for the next period of time.

To underline the efficiency of these three methods were calculated the errors.

$$\varepsilon Y = Y - \hat{Y} , (11)$$

where: Y – real property tax, ε – error, \hat{Y} - estimated property tax;

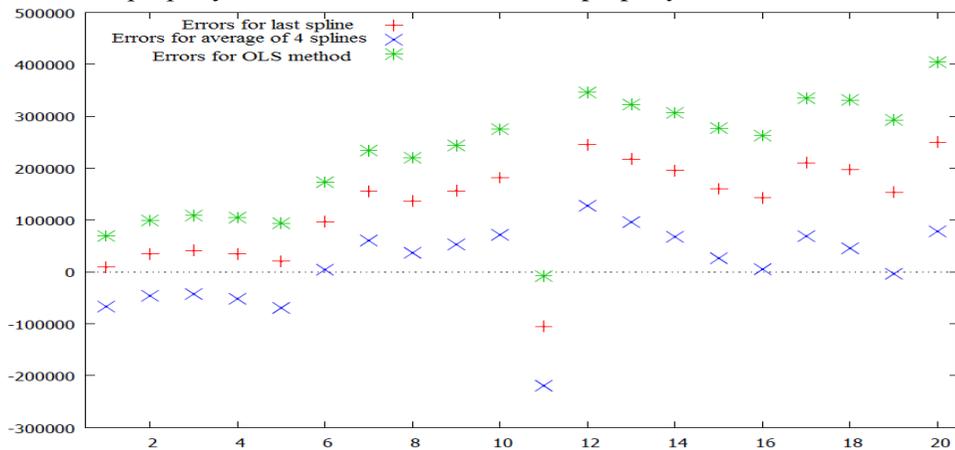


Fig.no.2 Resulted errors from extrapolation
Source: Budgetary Account Oradea 2009

We can notice from Fig.2 that the smallest errors are given by the average of 4 splines method, the evolution of errors being close to zero. Also for the first week from March the better extrapolation is done by the last spline resulted from the last week of February, though the average of four splines proves to be the most accurate method.

The linear regression using OLS proves to be less efficient, the errors achieving high values. In order to underline the utility of spline functions we have built 2 series of data. By using MATLAB programming language we have generated the function which approximate the

distribution of variables fixing equidistant nodes and points of interpolation in the nodes for a better approximation.

We observe in Fig.no.3 the fact that spline functions is approximating the most efficient way in comparison with the regular polynomials. The polynomial of 6th order is decently approximating but in the end spline function is most accurate. The secret of splines is using polynomials of 3rd order on the intervals (2000-2500,2500-3000, ... , 4500-5000) known as cubic splines.

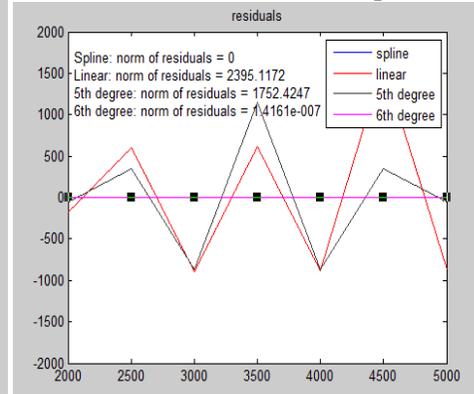
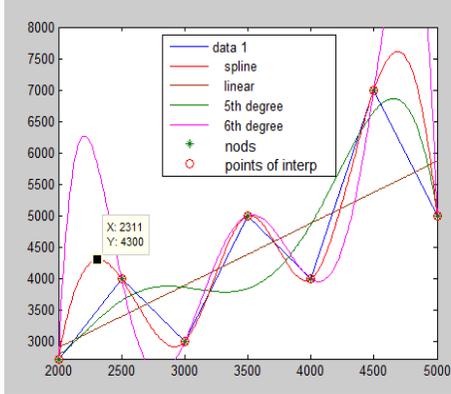


Fig.no.3 Comparison between spline functions and regular polynomials Source: author
author

Fig.no.4 Error comparison between splines and regular polynomials Source: author

Also in the fig.4 we can observe the residuals being insignificant for the 6th order polynomial and even zero for spline functions.

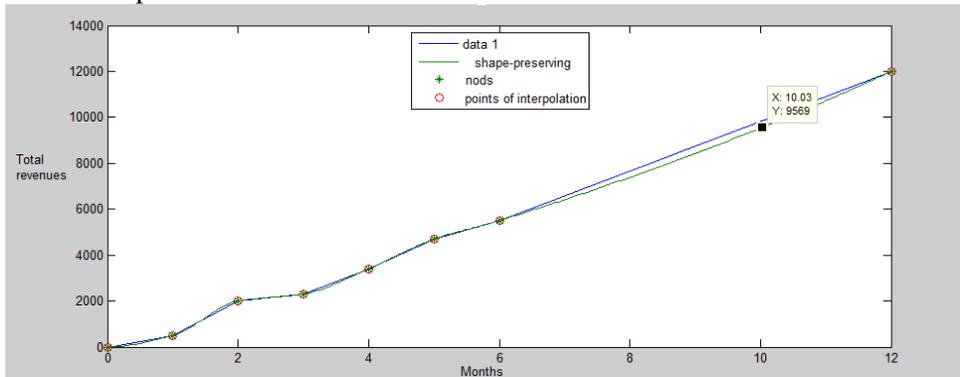


Fig.5 Monitoring the budget execution Source: author

As well, monitoring and controlling the budget execution can be made using polynomial spline functions by fixing a node at the end of a year. We know the values of revenues collected in the first 6 months and we can compare the revenues in month 10 with the collected revenues in order to see the difference between the estimated with the collected revenues. This method helps the public manager to size the expenditures for the next period in order to avoid budget deficits.

IV Conclusions

As a result of simulations made on real and theoretical data the opportunity of using polynomial spline functions as innovative instruments in sizing financial resources as well in other economic fields.

The accuracy of results obtained in the process of budget sizing, due to small errors of approximation, recommends spline functions as modern instruments in sizing the resources of budget.

Therefore, spline functions can be used for public **revenues predictability**, for finding the **trend of expenditures** in accordance to the **Case II** presented earlier also **tracking deviations recorded in the budgetary execution** of the planned budget. The two approaches of using spline functions increase the efficiency of public management. Using spline functions can result in avoiding incontrollable budget deficits and treasury deficits wich have an impact on taxpayers who will support the cost of public loans.

Using splines in the process of budget elaboration may lead the managers to be more aware of budget deficits and can take decisions according to the situation.

Regarding the tax policies of local authorities, by using splines can be established the tax policy wich has to be adopted when are establishing the revenues from property tax.

The polynomial spline functions has the advantage of easy calculation, free of specific complex tests used in linear regression.

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INCREASE IN THE ROLE OF THE FINANCIAL SYNTHESIS REPORTS FOR ACCESSION OF THE EUROPEAN STRUCTURAL FUNDS

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European integration is supported through important financial resources in order to sustain the investment effort for aligning the business infrastructure and increase in the business competitiveness in order to fulfill the European Union standards.

The financial management, a basic component of the general management, has as scope to realize complex financial analysis in order to substantiate the decisions for investments and financing which should ensure the maximization of results, ensuring also the elaboration of the project budget as an essential document in the identification of the needs for resources and for obtaining the non-reimbursable financial sources.

An essential role in the investment decision making, having as support European funding, is realized by the financial-accounting reporting documents such as balance sheet, profit and loss account, table of the treasury flows, which together with a realistic established actualization rate ensures the relevance and efficiency of the financial indicators: Net present Value(NPV), Internal Rate of Return(IRR), the investment recovery period, the benefit/cost ratio.

This study has as its goal to realize a critical analysis over the main simulation methods and techniques for forecasting annual return based on its growth rate, which should ensure the success of the implementation and operation of an investment realized through European structural funds respecting also the requirements for minimization of risks. In this research it is shown the importance of proper generation/modeling of the annual turnover in an investment project. Several methods were presented and case study was realized. Since the annual turnover constitutes the basis for the entire financial analysis it is very important that a realistic growth rate is used. Otherwise the provisions within the financial analysis of the investment (including CBA), the project implementation strategy and later the plan for the utilization of the newly realized investment might prove difficult to be fulfilled.

Key words: Structural funds, Financial Statements, Annual Turnover, Annual Growth rate

JEL Codes: G30, O16, G34, G38

Introduction

European integration is supported through important financial resources in order to sustain the investment effort for aligning the business infrastructure and increase in the business competitiveness in order to fulfill the European Union standards (European Commission, 2009).

The financial management, a basic component of the general management, has as scope to realize complex financial analysis in order to substantiate the decisions for investments and financing which should ensure the maximization of results, ensuring also the elaboration of the project budget as an essential document in the identification of the needs for resources and for obtaining the non-reimbursable financial sources.

An essential role in the investment decision making (European Commission, 2008) having as support European funding, is realized by the financial-accounting reporting documents such as balance sheet, profit and loss account, table of the treasury flows, which together with a realistic established actualization rate ensures the relevance and efficiency of the financial indicators(Droj

L., 2010): Net Present Value(NPV), Internal Rate of Return(IRR), the investment recovery period, the benefit/cost ratio.

This study has as its goal to realize a critical analysis over the modeling of the annual turnover an essential element in the financial analysis over an investment realized through European structural funds respecting also the requirements for minimization of risks.

The fundamental element of the financial modeling for an investment project is the accurate estimation of the annual turnover. The factors which should be taken into consideration for estimation of the volume of sales are:

- a) The tendency which is registered in the evolution of sales for the last period (the trend analysis). Extrapolation of the past tendency is a method which is often used, but not always in a realistic way, and in this way the modeling and prevision based on a global annual turnover, determined only by the past evolution can be erroneous, being necessary also a thorough analysis
- b) the discomposure of the annual turnover on product categories or services and analysis of the evolution of sales on each category.
- c) The analysis of the global level of the market of products and services, making estimations over the market share, which is depending also by the production capacity of the company, quality of products, the applied price strategy, competition, opportunity of external financing(credit), promotion campaigns.
- d) Dimensioning of the annual turnover at the level of the sustainable growth rate, will generate an insufficiency of funds, and the company will use external financing through loans, thus changing the degree of indebtedness, which will lead to higher costs related interest.

Generation of the Annual turnover - Literature Review and Research methodology

The existing theory (Dragotă, V., Ciobanu, A., L., Dragotă, M, 2003 and Higgins, Robert C., 1995) and financial practice is recommending the following methods for prevision of the annual turnover:

(A) Usage of the historic data

Assuming that there is a connection between the growth rates of turnover a company registered in the past and their future development, aggregation methods involve several alternatives:

(a) Using the average growth rate, projected growth rate of turnover is the average (simple or weighted arithmetic) growth rates recorded in the past. Simple arithmetic mean is:

$$\bar{g} = \frac{\sum_{t=1}^T \text{growth.rate}_t}{\text{no. periods}} = \frac{\sum_{t=1}^T (CA_t - CA_{t-1})/CA_{t-1}}{T}$$

Disadvantage of this method is that all periods analyzed are given the same importance. This drawback is eliminated by using the weighted average, which gives higher rates closer to the time periods forecast. Weighted arithmetic mean is:

$$\bar{g} = \frac{\sum_{t=1}^T \text{growth.rate}_t \times t}{\sum_{t=1}^T t} = \frac{\sum_{t=1}^T ((CA_t - CA_{t-1})/CA_{t-1}) \times t}{\sum_{t=1}^T t}$$

Depending on the average (simple or weighted arithmetic) growth in turnover, you can determine the projected turnover for next period:

$$CA_{prev(T+1)} = CA_T (1 + \bar{g})$$

Outlook depends on the length used as a source of information for extrapolating the average growth rate of turnover.

(b) Using the growth rate estimated by linear regression, assuming that the rate of growth recorded over time, based on a trend, so that the future growth rate is determined by the trend foreseen; regression is between turnover and the time using the method of least squares.

$$CA_t = \alpha + \beta \cdot t + \varepsilon_t,$$

where $t=1,2,\dots,T$;

α = amount of annual turnover when 0;

$\beta=\partial CA/\partial t$ represents the absolute change in annual turnover in a certain period of time;

ε =error (deviation) CAreal (CA_t) over the estimated Annual turnover(CA) estimated through by the β and free term α ($\alpha+\beta t$), respectively

$$\varepsilon_t = CA_t - (\alpha + \beta t)$$

Parameters α si β of the regression is determined based on data recorded from 1-T, so that errors be as small. By estimating the regression coefficients it can be determined the estimated turnover for the next period:

$$CA_{T+1} = \alpha + \beta(T + 1)$$

The deficiency of the linear model is given by the fact that the model, although it specifies an increase in the monetary units (ΔCA) is not appropriate for forecasting future growth.

$$\Delta CA / CA_{t-1}$$

Using historical data to estimate future growth in annual turnover is a useful but is not presents sufficient information. The empirical analysis demonstrates that it is unlikely that firms that have registered faster growth in certain periods are able to continue the same pace in future periods.

The relevance of the past data for forecasting future data depends on the establishment of the company and the business environment in which it acts; stability is influenced by the following factors:

-the volatility of growth rates is represented by change (dispersion) of growth rates compared to average growth rate calculated for a given sample size T (the records are from the period $t = 1$ at $t = T$)

$$\sigma_g^2 = \frac{\sum_{t=1}^T (g_t - \bar{g})^2}{T-1}$$

where : σ_g^2 = growth rate variation of CA

$g_t = \bar{g}$ = growth rate of the CA in the year t

\bar{g} = average growth rate registered in the period 1, T

-Firm size-measured in percentages- with increasing firm size becomes more difficult to maintain higher growth rates.

- Economic cycle - if the company's activity is influenced by economic change is essential when choosing data analysis - if there is a period of economic census, one can expect "increase" negative, so the forecast is irrelevant.

- Structural changes - the growth rates recorded are the result of the policy mix adopted by the company: investment policy and dividend policy. In case that the company changes one of these policies, the information by that time become irrelevant for predicting future developments.

(B) Using the sustainable growth rate

The rate of increase in turnover can be calculated:

$$g_t = \frac{CA_t - CA_{t-1}}{CA_{t-1}}$$

Increased turnover involves increasing proportion of the asset that corresponds to an increase equal to the liability. The concept of sustainable growth rate refers to the rate of increase in turnover to generate the maximum possible without financial imbalance, taking into account the following assumptions:

-The firm is unwilling to seek issuance of new equity shares; increasing profit is achieved by incorporating

$$\Delta CPR = \text{Reinvested Profit} = \text{Net Profit} - \text{Dividends}$$

- The company seeks to maintain the current capital structure (ratio of debt / equity = L = constant), increasing debt cannot be achieved only by increasing the proportion of equity

$$\frac{\text{Financial.Debits}}{\text{Equity}} = \frac{\text{Financial.Debits} + \text{New.loans}}{\text{Equity} + \text{Re invested Profit}}$$

-The firm seeks to maintain current dividend policy (dividend distribution rate = d = constant), the undistributed profits (left to the investment within the company) is (1-d), sustainable growth rate will be:

$$\begin{aligned} g_t^* &= \frac{\Delta ACTIV}{ACTIV_{t-1}} = \frac{\Delta Equity + \Delta Debits}{\Delta Equity_{t-1} + \Delta Debits_{t-1}} = \frac{\Delta Equity(1+L)}{Equity_{t-1}(1+L)} = \\ &= \frac{\Delta Equity}{Equity_{t-1}} = \frac{\text{Reinvested.Pr ofit}}{Equity_{t-1}} = (1-d) \frac{\text{Netprofit}}{Equity_{t-1}} = (1-d) R_{fin}^{13} \end{aligned}$$

There are three possible situations:

-the actual growth rate of annual turnover is higher than the sustainable growth rate - this can not be achieved only by relaxing one of the hypotheses: either resort to attract additional resources by issuing shares or debt increase or decrease rate of dividends, this strategy is not recommended to be used for a long term as it leads to excessive debt or shareholder discontent;

- actual growth rate is lower than the annual turnover rate with sustainable growth - the company does not use all available resources, so that opportunity costs are incurred;

- the actual growth rate of turnover is equal to the rate of sustainable growth – optimal option, so it can be use to forecast turnover rate with a sustainable growth:

$$g^* = \frac{CA_{prev} - CA_{actual}}{CA} \quad CA_{prev} = CA_{actual}(1 + g^*)$$

Investment decisions are an important part of the financial planning process, opportunities for capital expenditure, even they may seem financially attractive, can be rejected if would not lead to achievement of the proposed targets. Proper perspective on investment analysis is that strategic plans should create an umbrella to achieve operational and capital budgeting.

Growth and its management presents specific problems in financial planning, many executives saw growth as something to be maximized based on an increase in market share and profits. From a financial perspective, growth is not always a blessing, can substantially affect the company's resources and if are not taken adequate measures to control it, could lead to bankruptcy. It is regrettable that companies which pass the market test with their products, are failing because they lack sources of funding for management growth. Size of the growth rate can be analyzed by defining a sustained growth rate and by indicating a maximal rate of increasing company's sales without affecting the financial resources.

Management should analyze all the options when the target growth rate exceeds the rate of sustained development and increases falling below the level of support, ignoring the financial limit growth to preserve power.

Case study – Evaluation of the residual value and of its influences over the IRR in case of a Romanian production company

Financial analysis as component of the financing plan is intended to fundament the performance and sustainability of the proposed investment, the financial support, long-term sustainability, financial performance indicators in order to justify the financial assistance(Droj, 2010). Approval and implementation of investment with financial assistance from European structural funds needs the elaboration of different investment alternatives(European Commission, 2008) for a period of 5 years plus the period of implementation as follows:

- Inertial scenario – which forecasts with no investment option based on the present work
- Scenario with investment - which forecasts the activities and cash flow after realization of proposed investment: with and without financial assistance from structural funds.

The financial statements elaborated in order to fundament the investment process include(Guvernul României, 2010):

- funding needs for the business plan / project
- financial resources during the implementation period and after the structural funds assistance
- the balance sheet, profit and loss calculation of liquidity (cash flow) annually, estimated during the analysis.

Management generally is interested in the profit and loss forecast, profit being considered as a measure of performance while financial management is interested in estimating future financial needs. The projected revenues are interpreted in the context influence over the balance sheet in order to determine the optimal size of external financing.

Based on the financial contract presented by Guvernul României(2010) there are different situation for returning of grants as following:

- Reasons during investment implementation period:
 - false statements on the investment conditions
 - lack of proper justification and non-realistic expenditure
 - breach in the principles of sound financial management
 - non-contractual provisions for monitoring, information and publicity
- Reasons during investment operation period (5 years):
 - closure of business, relocation or maintenance of the investment for less than 3 years after the project completion
 - failure activities and not fullfilment of the objectives of the application form

In order to avoid the risk of return grants, investors must make a thorough analysis of objectives and results expected from the investment, according to the application form on:

- tangible or intangible, acquired by the project
- modernized production-area (agreed by the project)
- increase in turnover
- number of jobs created and maintained.

Based on projected turnover the required financial analyses should be forecasts. The most effective way of forecasting the balance sheet and profit and loss is correlated with the future turnover; some elements are dependent, varying in proportion to sales volume, while others are independent, due to other factors. Considering the methodology presented in the previous chapter, below we generated an annual turnover modeling for an existing Romanian company which tried to access European funding.

Table 1. Modelation of the Annual Turnover

| Indicator | Year 0 | Year I | Year II | Year III | Year IV | Year V |
|---|------------------|------------------|------------------|------------------|------------------|------------------|
| Annual turnover | 7,421,224 | 7,725,075 | 8,057,275 | 8,404,875 | 8,852,475 | 9,307,775 |
| Production Sales | 7,419,073 | 7,722,924 | 8,055,124 | 8,402,724 | 8,850,324 | 9,305,624 |
| Sale of Goods | 2,151 | 2,151 | 2,151 | 2,151 | 2,151 | 2,151 |
| Yearly forecast the annual turnover growth rate | - | 4.09% | 4.30% | 4.31% | 5.33% | 5.14% |

Source: own calculation

As observed in the first year after realization of the proposed investment will be obtained an increase with 4.09% of the annual turnover, which later will stabilize and will have annual growth increase rates between 4.30%-5.33%, in close correlation with the expected annual growth rate of the industry. Since realistic annual growth rate was proposed for the annual turnover in the years which are following the investment, the company was capable to maintain and even surpass the forecasted growth rate.

Conclusions

The previous realized analysis shows the importance of proper generation/modeling of the annual turnover in an investment project. Several methods were presented and case study was realized. Since the annual turnover constitutes the basis for the entire financial analysis it is very important that a realistic growth rate is used. Otherwise the provisions within the financial analysis of the investment (including CBA), the project implementation strategy and later the plan for the utilization of the newly realized investment might prove difficult to be fulfilled. Further studies should be carried out, especially in Romania, regarding the best method which should be adapted for Romanian case studies, taking into considerations all the particularities of the Romanian companies.

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THE IMPORTANCE OF THE JURIST AND ECONOMIST GHEORGHE N. LEON IN THE EVOLUTION OF FINANCIAL SCIENCE

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The economical-financial problems have always constituted a challenge for all the decisional factors at the state level and not only, thus the financial sciences – which also aim to regulate the relationships to create, assign and use the financial funds of the state and of the public institutions, destined to satisfy the social-economical needs of the society – recorded a great doctrinal interest.

Thus, a series of jurists and economists had understand the necessity and opportunity of knowledge in the domain of financial science, of the financial law, taking into consideration the fact that the difficulties which they have met at those times obliged them to take the responsibility to make every simple citizen and every person with political or administrative responsibility by the state understand the problems of public administration.

In approaching the given subject I have chosen to use some of the methods of scientific research, respectively: the historical method (financial science being presented succinct through the process of its evolution along the years), interpretation methods and a combination of quality and quantity approach, namely the method of analyzing archive documents and the studies of professor Gheorghe N. Leon.

In these contexts have asserted and developed himself in the university and political environment, Gheorghe N. Leon, having a rich activity of intellectual creation, approaching in his works the complex aspects of the science of financial law. Thus, starting with the rules and principles of this domain, Gheorghe N. Leon had realized a veritable incursion in the history of finances and in the theory of taxation, public and budgetary credit.

Analyzing a part of his scientific works, we can affirm that a personality with such a complex structure, like Gheorghe N. Leon is hard to define, but surely, through the prism of his works and through his long-lasting and rich scientific activity, his name can be mentioned among the personalities of the academic education in the domain of financial science.

At the same time we can affirm that in this actual period, when public finances represent an essential component of social-economical life of any nation, the scientific process of the most economists, the process of approaching notions and concepts specific to this domain was and remains fully justified.

Keywords – financial science, economical-financial politics, inter-war period, legislation, financial problematic

Code JEL: Economic History N00-General

The preoccupations of professor Gheorghe N. Leon in the expansive and extremely captivating domain of finances (of the financial study, in general) had concretized themselves in valuable works, appreciated by specialists, taking into consideration his great contribution in the development of the earlier mentioned research domain.

Spending most of his life with didactical activity, Gheorghe N. Leon have passed all its levels. After graduating at the Faculty of Law from Iasi (in 1911) he obtains his scientific doctor's title

in economical sciences at the University from Jena (Germany), in 1914, the subject of his work being the study of direct taxation in Romania („*System der direkten Steuern in Rumänien*”). The study is dedicated to the critical exposition of the direct taxation system in Romania, discussions upon the optimal tax liability, being often subject of specialty researches. His work was remarkable because of its coherence and its responsible approach of research upon taxes, considered to be privileged instruments of public expenses „(1)”.

We can observe that Gheorghe N. Leon was a part of the category of young people with high hopes aiming towards the Central and West-European social and intellectual model. In that period finishing doctorate studies at a University from abroad have constituted a guarantee for social success, for a career and even a certification of intellectual competences. On the other hand, an important role in the formation of the young Gheorghe N. Leon had his father, professor Dr. Nicolae Leon, former rector of the University of Iași (in 1918 and between 1920-1921).

The first part of his university career of professor Gheorghe N. Leon have started at Cluj-Napoca. At the beginning of the university year 1919/1920 of the University Dacia Superioară, Gheorghe N. Leon, who will become a great personality of the Romanian economical and judicial education, begins his teaching activity at the Faculty of Law from Cluj as a professor, working by the financial and statistics department.

Even though the researches of Gheorghe N. Leon were often in the attention of lawyers and economists – those refined observers of the special phenomena of Romanian economics and finances – there are only a few syntheses upon them, and some aspects, especially the works published before beginning his didactical activity remain without much study upon them. Generally those critics and people who embrace the scientific opinions of professor Gheorghe N. Leon publish only some general reflections which cannot fully cover his various studies. Because of these facts his work must be reevaluated and confronted with some contemporaneous value criteria, there must be a detailed study upon the not well-known or „ignored” aspects of the intellectual creation of Gheorghe N. Leon.

Among the first studies published by Gheorghe N. Leon there is a study from 1914 entitled *Bosnia and Herzegovina under the Austrian-Hungarian reign* (Leon 1914), dedicated to the analysis of the evolution of the earlier mentioned territory in the period of the Austrian-Hungarian dominance – an investigation considered by the author to be necessary from an objective point of view to know „what are we allowed to do and what not in the conquering battle against a nation which still has aspirations for free life and autonomy of existence” (Leon 1914: 3). In the same time, it can be useful for any country also the observation of the administrative organizing models or that of the economical sector approached by the „neighbor” reign upon the occupied territory.

For the beginning there are relevant those three directions established by the author and the scientific argumentation, respectively: the population, the administrative and political organization and the economical development.

The author Gheorghe N. Leon discusses the economical life from the mentioned territory, the eternal subject of the economical relations being actual in any moment and by any community. Taking into account that the judicial regulations are a part of the ordinance concept of the economical relations (and taking into consideration the judicial formation of Gheorghe N. Leon), one of the approached problems was one related to the interferences between the economical action sphere and judicial action sphere. The author introduces at that moment the possibility of an association between these two notions, with some many intersections even in the specialty literature or the practice of today, especially because in the same time with the evolution of economical-social relations, this has become an actual and interesting subject. This way appear the premises of analyzing this necessary association between the economical and judicial domain, association which always causes complex and different opinions. The author outlines with great talent the essence of this indissoluble relation between the two spheres, affirming, for example

that no one will be able to fully understand the agrarian life of a nation „without knowing the judicial principle upon which the law of propriety is based” (Leon 1914: 16), that no one will be able to reach the aspects of the commercial life in a certain country “without knowing the principles based on which it was created” (Leon 1914: 16).

After examining the case in study chosen by the author, namely: Bosnia and Herzegovina in the period of the Austrian-Hungarian reign there are accentuated the structural changes suffered by this and the realized progress.

In conclusion, we can affirm that the work of Gheorghe N. Leon represents an actuality in any moment because the sources and the understanding of the economical and social-cultural growth of a country are important factors for the definition of the development strategy of any society. On the other hand the factors and models of economical growth have constituted a preoccupation of the researches of all times.

In 1915 Gheorghe N. Leon publishes the work *Mining politics in different states and its relation to the mining politics in Romania*, affirming that „mining was always an important factor in the economical and cultural history of the nations”.

For the profound study about the complex and specific phenomenon of mining, the author tries to make clear the meaning of some notions, and to eliminate some contradictory interpretations he creates some definitions (for example, the author tries to define the general meaning in judicial terms of – mining activity, mining politics etc). The examination of the essential particularities of these terms from the mining domain continues to show interest not only from scientific point of view, but also from the practical point of view. This way, even nowadays the legislator outlines through the Law of mining „(2)” some legal definitions regarding for example to: mining activity, mining, radioactive ore, mining products, mineral resources etc.

Usually the state has an active role in the economical life. In our concrete case, regarding to the stimulation of validating the natural resources of the country, its interventional measures were composed by the creation of legal norms for the development of mining activity, the establishment of some institutions for mining education, taking some measures to assure transparency in the mining activity.

The author accentuates in this discussion another part of the problematic of mining, respectively the considerations of the interests of the state in this domain, accentuating that the following categories must be distinguished: interests of economical nature; interests of political-social nature; interests related to the private economical sphere; interests regarding to the national economy.

To offer for the specialists a perspective upon the ensemble of relations in the mining law, Gheorghe N. Leon – showing us a great documentation – outlines the historical evolution of these relations and of the systems of mining proprieties in different states (beginning with the system of Roman law and reaching some case studies from the English, French or Romanian law).

In every situation there must be clarified the aspects which are related to the interference between the object (the mineral resources) and the subject of mining law. Mainly, the above mentioned object could belong: to the proprieties of the surface (of the land) – the system of accession; to the state – the system of domain, the state owing the propriety rights upon the mineral resources, based on a collective title; to the „discoverer” – the system of concession.

The author states that in the matter of study of mining law from Romania we can discuss about three periods, respectively: the period of traditional laws (from the very beginning until the laws of Calimachi and Caragea), the period of written laws (from 1818 until Mining Law from 21 April 1895) „(3)” and that of the modern law (beginning with 1895).

The work of Gheorghe N. Leon contains for example a new element in the content of the Organic Regulations, namely the fact that the legislator is conscious about the need to assure the continuity of the mining of mineral resources taking into account environmental protection and the renewal of the environment in case that it is affected by the mining activities.

The necessity of promoting these ideas, admitted a long time ago, can be found everywhere. We can discover the actuality of this subject also nowadays, when, though there is a regulation frame which addresses itself to the resorting institutions, to mining operators, there are difficulties signaled in taking responsibility in the matters of the environment (for example in rehabilitation of mines etc.) and in the matters of registering the environmental degradations caused by these activities.

After a critical analysis of the Romanian legislation in this domain, the author suggests some measures to make more efficient the reform process in this sector, like: promoting the principle of free mining; promoting the system of concession, but a concession realized by respecting of some special regulations adopted in this matter; the institution of mining monopole; administrating mines as a propriety of the state and developing mining activities through particular companies (renting); the institution of the possibility that the state owns a part of the profit (represented by its rights for the benefits of the concessions, resulted from mining) or taking part from the mining activity, not only by benefits.

Proves of his constant preoccupation and even of his passion in approaching the problems from the domain of mineral oil are his works *Romanian oil and the new law project of mining* (Leon 1943: 303-313), respectively *Romanian oil and the politics of the state*.

Taking into consideration the appreciations of the time, according to which the legislation of mining from 1929 must have been modified, Gheorghe N. Leon in his work *Romanian oil and the new law project of mining* presented his own arguments for realizing these steps.

After serious theoretical and practical observations „(4)”, which were scientific discussed, the author presented the situation of the oil mining operations. Showing a great knowledge in the discussed domain, he was pleading for the modification of the law project of the judicial frame of the moment. The idea of reformation of the special regulations from the oil mining domain was based on economic (and also politic) realities of the country. Practically, there was a necessity of approaching under different complex and objective aspects of the politics of the state in the matter of oil mining. In the authors opinion the general directions of this politics must follow: „to assure the production sources and to assure the national security in the hands of the state, for the benefit of the nation; to create some resources for the necessities of the future; to assure the control of the state upon mining and oil industry” (Leon 1943: 304). Gheorghe N. Leon felt himself responsible to draw the attention of his contemporaries upon the fact that in states like Mexico, U.S.A., England, in the mining zones of *British India* and *Netherlands India* there was a unitary politic in this sector, and respectively one to assure „the ownership of the oil resources” for the conational under the control and guidance of the state (Leon 1943: 304). This measure directly aimed the participation of the nation by the resources of the country and it was in great balance with the necessity of preventing and fighting the forced and uncontrolled exploitation of some limited natural resources. Even more, the economists and politicians representants of this power had a great fight to create strategic reserves to assure future needs, the history of fighting for oil revealing us the fact, that one of the applied strategies was buying territories and of concession of mining of the territories belonging to other states. Even the American president Warren G. Harding – 1921-1923 – promoted the formula „Exploit as much oil as you can from other countries” (Leon 1943: 306).

In these circumstances, the author affirms with conviction that the new law must create a connection between oil mining politics on one hand and the politics of the state, on the other hand. The national priority is to assure some responsibilities in the matter of sustaining an intense participation of the national capital by the mining and distribution of oil, under the control of the state.

In 1918, the proof of the power of the scientific-practical thinking of Gheorghe N. Leon is materialized under the form of a rich study upon expropriation – his research being important even in the conditions that the analyzed institution appeared as a restriction of the right for

propriety. The work contains an exposition and an analysis of the doctrine and legislation in the matter of expropriation, the author suggesting for those who are interested a useful working instrument for the solution of some problems of the sensitive field of the special ways of giving birth to the proprieties of the state (this way we can mention requisition, confiscation, vacant successions etc).

In the text of the work there were developed and explained general notions regarding to the right of expropriation and some scientific ideas developed by the author related to the judicial justifications of expropriation or related to extent of the compensations. We must outline the fact that along the time in the literature of this domain there were announced a lot of definitions of the notion of expropriation, but the dominant conception was that expropriation was an „intervention” in the sphere of private law, especially regarding to propriety rights. Even more, this intervention was considered to be an administrative one. We also mention the fact that only through a legal disposition could a propriety right be restricted, but the concrete cases of expropriations could be established by the administrative power, in some limits established by law.

In 1918, continuing to observe the social-economical evolution and analyzing the financial problematic, Gheorghe N. Leon published the work *The financial problem and the matter of money*. We must also mention the professionalism and dedication of the author by dealing with this subject, which brought him the well-deserved acknowledgement, the work being awarded by the Romanian Academy (Leon 1930: 304).

Synthesizing the objectives treated by the author, we can point the central idea of the study and namely the existing relation between currency and public finances. In addition, there was discussed the solution to mobilize the soil – declared by some specialists of the time to be a saving one to dissolve the financial crisis.

In that moment the actuality of the subject was perceived also related to the negative impact of the World War upon the budgets of the belligerent states.

In the opinion of the author the preoccupations of the politicians with attributions in the domain of public finances must aim the preservation of the normal limits of currency emission and of accumulating gold to cover the existing currency. Besides, cautiousness in the matter of currency politics was and remains an essential characteristic, because the appearance of a currency excess generates negative effects like inflation etc. A substation importance in the study is represented by the presentation of the key-moments of the evolution of the currency system, because the anterior experiences can contribute to its future efficiency. This way, respecting the limits of an objective analysis, the author presents the continuous success or in other cases the recognized failure of some currency systems, like: the system of John Law – beginning in France in 1716; the reform project of Jacques Necker – in France 1789 etc.

Also related to currency politics we must observe that the author offers special attention to the fighting of the tendency of some doctrines to confuse two different notions: one being *currency* (money) and the other being *credit*. It is presented and proved through arguments a part of the economical theory and practice, which can be framed in the etatist school, for example the conceptions of Walter Federn or of Georg Friedrich Knapp etc.

The observations of Gheorghe N. Leon related to the functions currency standard can be sustained even nowadays, because regardless of the acceptance of money, its roles are concretized as: instrument of transactions; standard of values; reserve of values (Basno, Dardac and Floricel 2003: 8).

On the other hand, the author suggests that currency has a key position in the functional mechanism of the economy and related to the currency system, reflects upon the benefits of the currency system based on the standard of gold.

The conclusion of Gheorghe N. Leon was that, the *fiduciary currency* had no capacity to eliminate or reclaim the effects of a financial crisis, because to sustain the system of public finances there is a need for real and not fictive values.

In the virtue of the sharp correspondence with the social-economical and political realities, Gheorghe N. Leon considers to be opportune the exploitation of the ideology of socialism in comparison with the accentuation of the model of individualism – these two notions being established through the prism of the impacts which these have upon the economy. The professor shared his conceptions related to the economical-financial principles of the socialist doctrine in the content of two works: *Socialism and economical individualism* and *Public administration and socializing*.

Gheorghe N. Leon, a personality with mature economical thinking, presents himself opened to embrace the possibility to solve the problems of the state with the help of social politics.

Keeping the same idea, through the prism of the diversity of the problems of economical life with which the state had to confront in the inter-war period and which limited its development, professor Gheorghe N. Leon proposes a concrete study upon the concepts of *public administration – private administration*, namely upon the phenomenon of *socializing* (nationalizing).

Thus, in his work *Public administration and socializing* the author attributes to the private administration (private domain), beyond abstract theoretical notions, a great importance for the existence of public administration. In reality, a large part of the incomes of the state is originating from taxes and fees upon particular incomes.

From the study it is clearly outlined the conclusion that a dangerous factor for the prosperity of the collective can be constituted by the „elimination fight” between public administration and private administration – in the opinion of Gheorghe N. Leon, it would be ideal the co-work of these two sectors (public-private) for the general benefit of the nation.

To have a complete imagine upon the implication of professor Leon in the study of the essential characteristics of the Romanian economy and finances, we must also mention his works *The history of public economy in Romania* and *Elements of financial science* through which there are outlined a series of principles of regulations from the studied domain, which are systematized by the author, illustrating this way the normative fundament of the economical-financial life.

The professor had a great contribution related to the presentation of the historical evolution of the Romanian public finances, publishing the work *The history of public economy in Romania* in a moment when the financial history of Romania was not well-known.

Structured on two parts (Part I *Public economy by Romanians before the foundation of the Participates* and Part II *Public economy in Muntenia and Moldova from the foundation until XVII century*) the work deals with the natural evolutionary process of Romanian finances (the system of expanses and incomes, for example the system of services, domain incomes, customs etc). In choosing the subject, the author uses also his own experiences with the difficulties to create exhaustive documentations of a lecture of financial law for the students from Cluj „(4)”, because of the lack of some detailed researches in the domain of history of Romanian finances – this way he tried to cover the well-know lack, in university education, of some bibliographic sources elaborated for the above mentioned problem.

The complex sphere of public finances was presented in the work *Elements of financial science*, the first Romanian study of financial science, in which, based on some detailed researches the author realized: *in the first volume*, a history of public finances, a presentation of its structure and the evolutionary perspectives of the public incomes and expenses and also a sketch for the announces reform in the system of indirect taxation, and *in volume II* there are conceptual clarifications upon the notion of budget and its executions, namely upon the notion of public credit.

Under the prism of his own research and processing methods used in his works, Gheorghe N. Leon in his work *How to write a book. With special attention for political economy*, militates for analyze and synthesis, induction (based on observing facts) and deduction (based on the generalization of the consequences of some actions), statistical method etc. Furthermore, the professor reveals the fundamental importance of the research methods in the scientific process, stating that: „the method is indispensable for scientific research. Without its help, the most elementary truths can avoid our attention. No one must rely on his good senses, on the brightness of his own intelligence... because one can easier succeed with not so much intelligence, but prepared with a good method, as with a bright intelligence but without any method”. Undoubtedly our study cannot cover the multitude of researches developed by professor Gheorghe N. Leon, of the controversies and common opinions related to the revealing of the importance of his works in the development of the Romanian economical-financial sciences. But by mentioning in our discussion a part of his works there are outlined a series of theoretical and practical aspects presented by professor Leon in an extremely captivating and important domain.

Notes:

„(1)”We must mention the existence of an objective review of the work, realized by a professor of University from Vienna, E. H. Vogel who had written: „In his interesting critical conclusion upon the taxation system from Romania, the author proves that the indirect taxes in an agrarian state like Romania are very variable, because of the relation of climate and crop, and because of it the disproportion between the incomes of direct and indirect taxes announces a need for a reform of direct taxation. The praiseworthy work offers us an interesting view in the matter of taxation research from Romania and not only and it is a literature full of value” (Leon 1930: 3-4).

„(2)”Art. 3 from Law No. 85 from 18 March 2003 – law of mining, published in the Official Monitor of Romania No. 197/27.03.2003, with the ulterior modifications and completions.

„(3)”The mining Law from 21 April 1895 was important for the development of the mining industry in Romania, organizing mining activities, offering guarantees for the invested capital. Following the argumentations of the legislator it is outlined the idea that the exploiting of mines, the creation and development of the different industries from our country made it necessary to adopt this law. Only by establishing, offering guarantee and regulating the relations between capital, the owner of the territory and the specialists of the domain, we could hope in the development of mining.

„(3)”Gheorghe N. Leon mentions that his was sent abroad by the Institution of Geology from Romania (under the management of prof. L. Mrazec) to study the problem of mineral oil related to the economical and political interests of the country.

„(4)”The professor had taken into consideration the creation of the work *Elemente de știință financiară*.

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WEATHER INDEX- THE BASIS OF WEATHER DERIVATIVES

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This paper approaches the subject of Weather Derivatives, more exactly their basic element the weather index. The weather index has two forms, the Heating Degree Day (HDD) and the Cooling Degree Day (CDD). We will try to explain their origin, use and the relationship between the two forms of the index.

In our research we started from the analysis of the weather derivatives and what they are based on. After finding out about weather index, we were interested in understanding exactly how they work and how they influence the value of the contract. On the national level the research in the field is scares, but foreign materials available.

The study for this paper was based firstly on reading about Weather Derivative, and then going in the meteorological field and determining the way by which the indices were determined. After this, we went to the field with interest in the indices, such as the energy and gas industries, and figured out how they determined the weather index. For the examples we obtained data from the weather index database, and calculated the value for the period. The study is made on a period of five years, in 8 cities of the European Union.

The result of this research is that we can now understand better the importance of the way the indices work and how they influence the value of the Weather Derivatives.

This research has an implication on the field of insurance, because of the fact that weather derivative are at the convergence point of the stock markets and the insurance market.

The originality of the paper comes from the personal touch given to the theoretical aspect and through the analysis of the HDD and CDD index in order to show their general behaviour and relationship.

Keywords: Weather derivatives, Weather index HDD, CDD

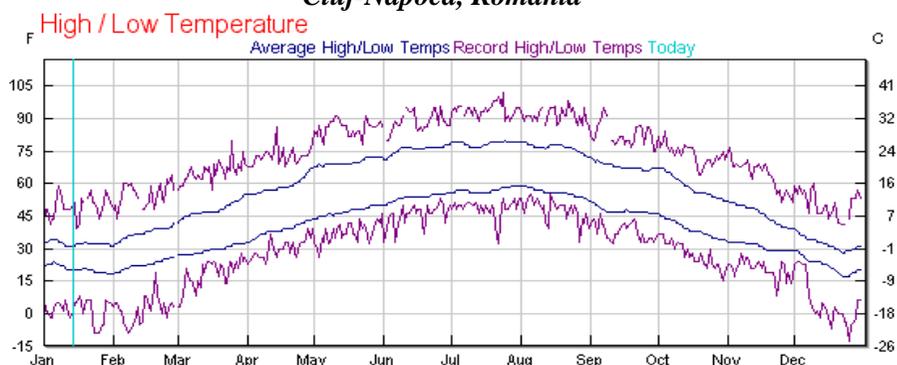
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Weather index - the basis of Weather Derivatives

In order for giving protection against the consequences of extreme weather events, Weather derivatives have as underlying assets a variety of weather variables. Weather Derivatives can be structured accordingly to one or more variables. The most common used variable is *temperature*, either hourly, daily minimum or maximum, or as a daily average. By international consensus, in most countries, the average daily temperature is the arithmetic mean of the maximum and minimum temperatures recorded for a period. In some countries, however, the average daily temperature is calculated as weighted average of values recorded per two day. The time of day when the recording of these temperatures takes place, the method of determining these temperatures can also vary from a country to another. To participate in the weather derivatives market transactions it is needed to examine in detail the meteorological measuring system practiced by each of the country in which weather derivatives are composed and then traded. It is generally known that in the U.S. the measurements are made in Fahrenheit degrees, and in the rest of the countries they are made on Celsius scale.

As an example of heat minimum and maximum values, the chart below shows the minimum, maximum and daily average recorded in Cluj-Napoca, Romania, in 2008.

Chart 1. Evolution of daily minimum, maximum and average daily temperatures, in 2008 in Cluj-Napoca, Romania



Source: Data processed by author using information available on www.wunderground.net

In this chart we graphically illustrated thermal maximum and minimum records in Cluj-Napoca in the year 2008. The dark blue line shows the average temperature in its two forms, maximum and minimum. The purple line stands for the daily fluctuations of the temperatures and turquoise vertical line, represent the value in the day that the data were extracted.

This chart shows the evolution of the minimum and maximum daily values, and also of the daily average, thus we are able to observe the trend manifested by the weather indices. For Cluj-Napoca, the temperature reaches its highest level in July (about 40C) and the minimum is recorded in late December (approx.-24C).

Alongside the temperature, wind and rain measurements can also underpin weather derivatives. Protection against **wind currents**, for example, are of interest to wind "farms" that want to contract these weather derivatives to protect themselves against the decline in wind speed, or in the construction industry, which would have to stop work in the winds blows too strong(e.g. for "sky-scrapers"). These contracts can be also used to replace traditional insurance policies for events such as damage caused by powerful winds, protection of future investments against events as *abundant rainfall* in the agricultural sector or *drought* for the hydro-electric industry. Protection of these events are relevant as are heavy snow falls of interest to mountain resorts, municipalities that must clean the roads in winter, but also for companies that sell products related to the cold-season, such as sport equipment or winter car-tires.

These are contracts that are based on such variables as *the number of sunny hours in the day, the temperature of sea water or river flows*.

In order to plan and build such a weather derivative we require accurate and reliable weather data.

Correlation between relevant meteorological variables and their impact on economic activity that needs protection will vary from one weather event to another and from a company to another. Thus, the contracts will be individualized and constructed on indices that accurately reflect both probability of occurrence and its effects.

Meteorological indices can be defined as the number and characteristics attributed to a phenomenon, process or other complex weather events. Indices that are most commonly used as base for weather derivatives contracts are indices of daily temperature, average temperature index, average cumulative index and heat index weather event. In this paper we will explain the importance of daily temperature index.

Daily temperature index

Using Daily indices is rooted in the energy industry and they are so constructed as to show domestic demand for heating or cooling. Weekly and monthly records of the index can be used also for monitoring and planning further needs, its costs and the heating cost for buildings which have performing air-conditioning systems. Annual records may help in predicting future expenditure for this purpose.

It should be noted that the United States, where the temperature is measured on the Fahrenheit scale, the core temperature (base temperature) for contracts is of 65F (18.33C), and in other countries, where they use the Celsius scale, the basis temperature is set at 18C (64.44F).

Heating Degree Days (HDD)

The Heating Degree Days is a measure designed to reflect the daily need of heating of a home or office space, and thereby is a way of measuring how cold it is (if it is colder the heat demand is higher). There are a variety of ways of defining HDDs used by the energy industry, thus reflecting the differences in consumption between cities, showing that there is a correlation between the ways of defining heat necessity and how well the index reflects the demand. The most common definition of the HDD index for the weather market is:

$$z_i = \max(T_0 - T_i, 0) = (T_0 - T_i, 0)^+ \quad (1.1)$$

Where: T_i - the average temperature in day i

T_0 - base temperature¹¹determined by the contract

During this paper we will assume that the formula depicted above is the calculating formula for HDDs. On a period of N_d days is defined as the sum of daily HDDs during the study:

$$x_{HDD} = \sum_{i=1}^{N_d} z_i \quad (1.2)$$

The daily heat is higher in winter and weaker, almost zero, during summer. In many locations where the heat daily index is of interest, average temperature are recorded in certain periods do not exceed the 18C/65F limit, so the HDD index is always positive.

¹¹ Base temperature= temperature that by its variation determines the Heating Necessity or Cooling Necessity. This temperature is often regarded of having the optimal value of 18C(65F)

Table 1 Monthly average number of HDD used in the period 01.01.2006 to 31.12.2010, for 8 European cities. Data are related to a contract with the base temperature of 18C.

| Month/City | London | Amsterdam | Stockholm | Paris | Vienna | Budapest | Bucharest | Sofia |
|-------------------|---------------|------------------|------------------|------------------|---------------|-----------------|------------------|--------------|
| January | 374 | 475.2 | 581.2 | Id ¹² | 505.8 | 494 | 547.6 | 535 |
| February | 335.8 | 421.2 | 496.6 | Id | 401.4 | 389.2 | 411 | 442.6 |
| March | 315.2 | 383.8 | 444.2 | Id | 323.8 | 287.8 | 302.8 | 339.2 |
| April | 245.4 | 246.2 | 290.8 | Id | 176.2 | 148.8 | 154.4 | 183 |
| May | 173.2 | 190 | 187.6 | 37.2 | 119.2 | 84.2 | 67 | 101.2 |
| June | 79.8 | 96.2 | 125 | 12.6 | 44.4 | 33 | 17 | 42.4 |
| July | 39.6 | 44.8 | 61 | 3.2 | 26.4 | 21.2 | 6 | 28 |
| August | 59 | 95.8 | 89.8 | 9.4 | 42.6 | 30.4 | 8.2 | 28.6 |
| September | 108.8 | 127.4 | 257.8 | 19.8 | 129.4 | 162 | 131.6 | 95.2 |
| October | 200 | 231.6 | 409.8 | 41.6 | 305.8 | 274 | 263.6 | 271.8 |
| November | 308.4 | 315 | 474.6 | 66.8 | 363.4 | 340.6 | 413 | 322.6 |
| December | 423.4 | 473 | 596.2 | 111.8 | 501.2 | 511.2 | 561 | 505.6 |

Source: Authors processing data available on www.degree-day.net

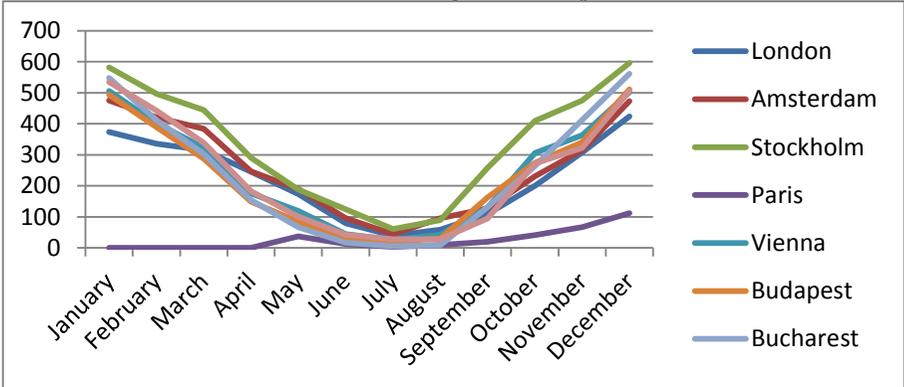
¹² ID – Incomplet Data

Our purpose is to highlight the monthly HDD values. In the study we chose to analyse cities from Europe, in order for the information to be relevant to the study. The data from (Tabel1) shows eight cities from the EU. In the selection process we tried chose the cities in such a way to minimize errors from the calculations. The period of study is of five years, from 01.01.2006 to 31.12.2010,

Processing the data presented difficulties for Paris, because of the lack of data for this location, only the data of 2010 are available. This lack of data explains why the general data for Paris are less than for the cities nearby, one such example is London.

We can also see that the highest values were recorded in January and December. From (Chart2), we note that this index is at maximum level in Stockholm in December. At the opposite point is London, which presents the lowest values for all the studied period. Although the graph shows that Paris would have the lowest value, we can't prove it because of lack of data.

Chart2. Chart interpretation of Tabel1.



Source: Data processed by the author using information available on www.degreeaday.net

The use of HDDs in the construction and trading of weather derivatives are used in the USA and Europe, and rarely in Japan.

Cooling Degree Day (CDD)

The daily cooling requirement is mainly used to measure summer energy demand for cooling, so determining how hot is (if it is warmer, the CDD need is higher). Heating systems are powered by electricity or gas, but cooling systems are mainly powered by electricity. This is one reason why CDD's are more relevant to the electricity market. Because electricity is generated recently from natural gas, the CDD's are becoming relevant to the gas industry also. The number of days that require CDD's is calculated:

$$z_i = \max(T_i - T_0, 0) = (T_i - T_0, 0)^+ \quad (1.3)$$

As for the HDDs, the index is the sum over a period Nd of CDDs during the studied period.

$$x_{CDD} = \sum_{i=1}^{N_z} z_i \quad (1.4)$$

Tabel3. Monthly average CDD numbers for eight European cities, in the 01.01.2006-31.12.2010 period. Data is consistent for contract with a base temperature 18C

| Month/City | London | Amsterdam | Stockholm | Paris | Vienna | Budapest | Bucharest | Sofia |
|-------------------|---------------|------------------|------------------|--------------|---------------|-----------------|------------------|--------------|
| January | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| February | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.4 |
| March | 0 | 0 | 0 | 0 | 0.4 | 0.6 | 1.2 | 2.4 |
| April | 4.6 | 4.2 | 2.8 | 4 | 10.2 | 16.6 | 23.2 | 16.6 |
| May | 17 | 8.8 | 7.4 | 7.6 | 27.2 | 46 | 64.4 | 59.8 |
| June | 36.8 | 32.8 | 27.6 | 25.2 | 64.6 | 78 | 145 | 103 |
| July | 50.6 | 63.4 | 76 | 75.8 | 121.8 | 151.2 | 194 | 145 |
| August | 38.6 | 38.6 | 32.6 | 36.8 | 91 | 122.6 | 239.6 | 152 |
| September | 12.2 | 8.2 | 2.6 | 12.4 | 23 | 28.2 | 73.4 | 59.2 |
| October | 1.6 | 2 | 0 | 5.4 | 3 | 4.2 | 5.4 | 9.4 |
| November | 0 | 0 | 0 | 0 | 0.2 | 0 | 3.2 | 3.4 |
| December | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 |

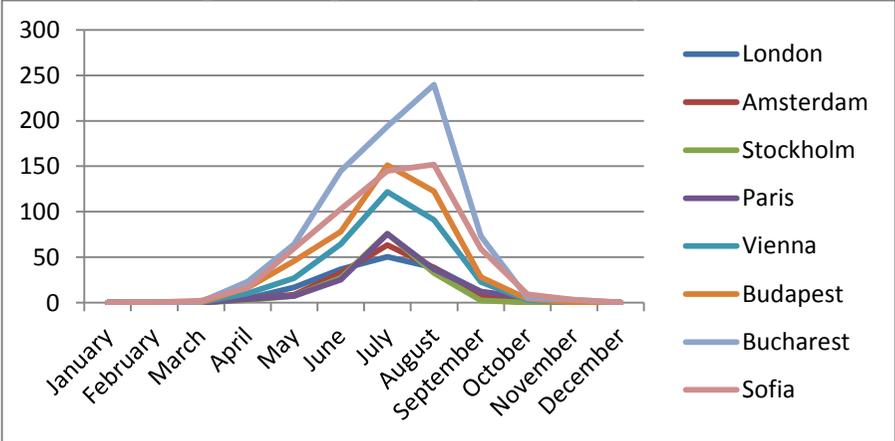
Source: Data processed by the author using information available on www.degree-day.net

In this analysis we used the same location as for the Heating degree days. London is the main market for weather derivatives in Europe; thus taking into account the nearby cities that show interest in these derivative contracts, as Paris and Amsterdam. I chose Stockholm to exemplify the developments and use of thermal indices in Scandinavia. Vienna, Budapest, Bucharest and Sofia have been selected because they are located in Central-Eastern Europe.

(Tabel3) emphasizes that the daily allowance of coolness, the figures show the opposite then in the case of the HDD index. The CDD index grows in value over the warmer months, reaching its peak in July and August, and in January and December the index is almost null.

From (Graph4) we can see that the maximum value is recorded in August in Bucharest and the lowest in Stockholm also in August. Here we see the formation three groups of cities: Bucharest – which is separated with the highest values; followed by Sofia, Budapest and Vienna, and the lowest values are in the third group formed of London, Amsterdam, Paris and Stockholm. The lowest of the low values are recorded by London and Stockholm. This fluctuation can be also explained through Geography, by the cities situations on the meridians.

Graph 4. Interpretations of the values of Tabel3



Source: Data processed by the author using information available on www.degreeday.net

Derivatives based on CDD’s are usually traded in the U.S., however, they are rarely trade in Europe and Japan.

The relationship between and HDD and CDD

The total amount of HDD’s and CDD’s sites in a given day is shown by the insignificant deviation of the average core temperature: in one day neither HDD nor CDD are zero, or when both are zero then the day temperature is equal with the normal values recorded. Thus, it is apparent that neither HDD nor CDD can have a negative value.

Conclusion

The analysis conducted in this paper, shows that the most common indices used in weather derivatives contracts are the HDDs and CDDs.

In my opinion, this is because weather events can be easily reported as temperature fluctuations in different periods, fluctuations that are accompanied by additional weather phenomena’s. Examples would be the case of the low temperatures, which often are accompanied by winds; moisture that is accompanied by rain and atmospheric pressure increase, or excessive heat that can cause drought.

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FISCAL DECENTRALIZATION AND FISCAL AUTONOMY IN THE EU MEMBER STATES

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In the process of fiscal decentralization sub-central governments have gained access to different fiscal resources, but the autonomy in setting the taxes is a key issue when analyzing the degree of decentralization. In this paper we calculated an index of tax autonomy for the EU Member States based on the OECD methodology of classification of sub-central taxes according to the degree of control over these taxes. We have shown that the design of intergovernmental fiscal relations is significantly different among the Member States, and taking into consideration the discretion over sub-national taxes provides a valuable insight on the fiscal decentralization design.

Keywords: fiscal decentralization, tax autonomy, intergovernmental fiscal relations

JEL codes: H71, H77.

Introduction

When analyzing the degree of decentralization we must take into account two important aspects. First, it must be identified the division of responsibilities and resources between different levels of government. The degree of fiscal decentralization is, thus, determined by the volume and importance of responsibilities and revenue assigned to subnational governments. Second aspect, refers to distribution of decision-making powers, i.e., the degree to which decisions to collect and allocate public resources are decentralized. A state in which local authorities have a real autonomy in allocating their expenditure and collecting revenue is more decentralized than another state where local revenue and expenditure are set centrally, although the vertical distribution of public expenditure and revenue is identical in the two states (Stegărescu, 2005: 304).

The indicator most widely used in literature to measure the degree of fiscal decentralization is the share of local expenditure or revenue in total government expenditure, or, respectively, in consolidated general government revenue. Although it is an imperfect indicator of the degree of decentralization, in order to have a standard variable, calculated on the basis of uniform definitions among states, it is used in most studies on the causes and effects of fiscal decentralization (Ebel and Yilmaz, 2002). This indicator's major advantage is, on the one hand, the availability of statistical data, and, on the other hand, the comparability of the results.

An important limit of this indicator refers to the impossibility of determining the vertical structure of decision-making powers. It shows only the revenue and expenditure of subnational authorities, without providing any information on the decision regarding taxation and spending by destinations. Thus, there are many situations where some public spending is performed locally, but the expenditure destination is predetermined by the central government, and they appear in statistical data as expenditure of local government. Also, statistical data do not provide qualitative information on the nature of revenue included in local budgets, because they make no distinction between conditional and unconditional grants, or between tax levies independently

determined and imposed by national legislation. In the analysis of intergovernmental grants, is equally important the distinction between those allocated on the basis of objective criteria using allocation formulas, and those allocated on a discretionary basis.

For these reasons, the share of revenue or expenditures of local budgets in general consolidated budget revenue or expenditure tends to overestimate the degree of fiscal decentralization. Thus, to capture more accurately the degree of decentralization, numerous studies over time have been introduced also non-fiscal variables. For example, Treisman (2002) in order to measure fiscal decentralization has used, along with fiscal variables, a number other variables such as: the number of levels of government, election decentralization or even the share of local public employees in total government employees. Arzaghi and Henderson (2005) have built a decentralization index based on nine variables, including: the vertical structure of government, requirement that local or regional representatives are elected democratically, autonomy in setting local taxes or the ratio between conditional and unconditional transfers.

In this framework, since the share of local revenue and expenditure in total public revenue and expenditure tends to overestimate the degree of fiscal decentralization, in order to have a more accurate descriptor a more detailed analysis of the structure of local tax revenue is necessary.

OECD methodology for classification of tax revenues

In the fiscal decentralization literature there have been several studies that have attempted to quantify the degree of fiscal autonomy of sub-central governments (Pola, 1999; Blankart, 2000; Stegărescu, 2005). Among them is the most detailed study is the one made by the Organization for Economic Co-operation and Development, *Taxing Powers of State and Local Government*, which provided a methodological framework for classification of sub-central taxes according to the degree of autonomy in their determination.

The concept of “tax autonomy” captures various aspects of freedom sub-central governments have over their own taxes. It encompasses issues like sub-central government’s right to introduce or to abolish a tax, to set tax rates, to define the tax base, or to grant tax reliefs. In a number of states taxes are not assigned to one specific level of government but shared between the central and local governments. Such tax sharing measures deny a single local government any control on tax rates and bases, but collectively local authorities may negotiate the sharing formula with central government. Thus, to classify the sub-central tax levies according to the degree of autonomy over them, must be taken into consideration: the powers conferred by law to local authorities to set tax rates, to evaluate the tax bases and to administrate the tax revenue.

Assuming that only taxes that can be set independently and on which local authorities have legislative powers ensure real fiscal autonomy, tax revenues are classified into five categories depending on the degree of control over them. Categories are ranked in decreasing order from highest to lowest taxing power. Category (a) represents full power over tax rates and bases, (b) power over tax rates, (c) power over the tax base, (d) tax sharing arrangements, and (e) no power on rates and bases at all. In order to capture the more refined institutional details the (d) category was further divided into four subcategories to illustrate the many different rules for governments to determine and change their own share.

Local or regional authorities have greater autonomy on revenue included in categories (a) to (d.2.) and on the other, from (d.3.) to (e) they have no control. Basically, the latter are very similar to intergovernmental grants.

Table 1 Classification of local taxes according to the degree of autonomy

| | |
|--------|---|
| (a) | SCG set the tax rate and the tax base; |
| (b) | SCG set the tax rate only; |
| (c) | SCG set the tax base only; |
| (d) | Tax sharing arrangements: |
| (d.1.) | SCG decide the revenue split; |
| (d.2.) | Revenue split can be changed only with the consent of SCG's; |
| (d.3.) | Revenue split may be changed unilaterally by a higher level government (by legislation); |
| (d.4.) | Revenue split may be changed unilaterally by a higher level government (determined annually by budget laws) |
| (e) | CG determines tax rate and tax base. |

Source: OECD, *Taxing Powers of State and Local Government*, OECD Tax Policy Studies, nr.1, 1999, pp.11.

The study mentioned above preceded to allocation of tax revenues in each of the five categories, and then to calculate the percentage of each category in total, achieving such a detailed structure of tax revenue according to the degree of autonomy in setting them. Of course, this grouping of tax revenue does not fully reflect the degree of local financial autonomy. For example, even if local authorities can determine both the level of tax rates and the tax base, such autonomy may be restricted by law, imposing certain limits that they can choose tax rates between or some assessment criteria of the tax base and, in this case, the revenue generated by these taxes are still falling into category (a). However, we believe that this methodology for the classification of tax levies is a very useful tool to assess local autonomy.

The structure of local and regional taxes in the EU Member States

The structure of public sector internal financial relations and tax legislation differs greatly from one state to another. For this reason, it is impossible to use uniform rules for allocating tax revenues between the five categories. To ensure proper division of taxes, in addition to a detailed structure of tax revenues, also knowledge of tax law provisions in each state is necessary.

Since 1999, the Organization for Economic Co-operation and Development publishes periodically in the report entitled “*Fiscal Relations Across Government Levels*” detailed information on the structure of tax revenue in OECD member states. Thus, we used the results from its latest publication, “*The Fiscal Autonomy of Sub-Central Governments: An Update*”, 2009, for Member States of the European Union. The latest revenue structure, extracted from the mentioned report, is that for the year 2005. For countries that are not part of the OECD, we have taken information from an earlier report, “*Fiscal Decentralization in EU Applicant States and Selected EU Member States*”. It was completed to evaluate the status of fiscal decentralization in states that joined the European Union after 2004.

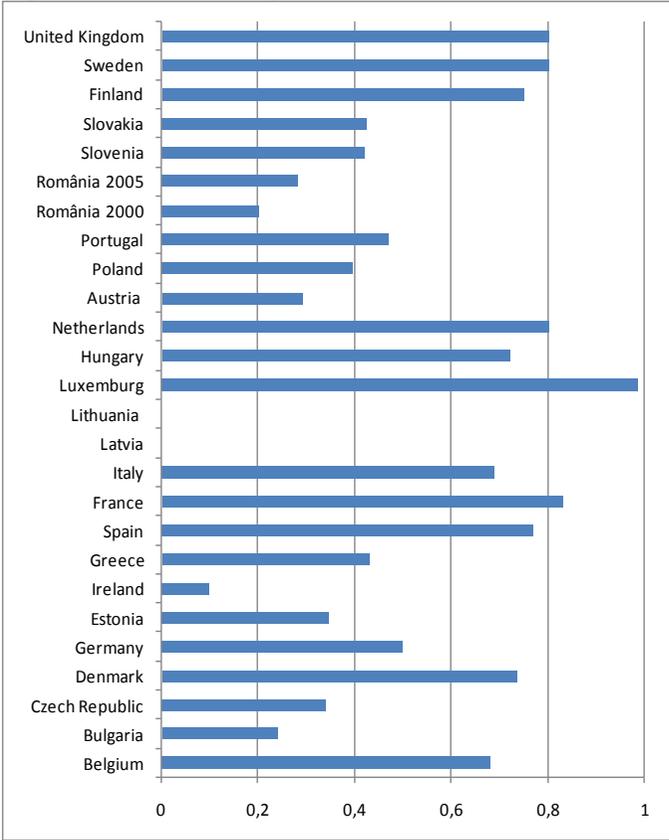
To ensure comparability of results achieved in the case of Romania, with EU Member States we calculated the structure of tax revenue for 2005 and 2000 to show their evolution. Thus, we classified each type of tax in one of five categories, then, using data on local budgets from the Statistical Yearbook of 2007, we calculated the percentage of each category in total.

The tax autonomy index

Using the calculated structure of tax revenue we built an index of tax autonomy for the EU Member States. The index's values indicate the degree of local and regional governments control over their own tax revenues, ranging from 1, signifying a complete autonomy in determining

local taxes, and 0, no control over taxes, i.e. all taxes are set by the central government. In this setting, we multiplied the shares of each taxes that fall in the (a) category with 1.00, (b) with 0.8, then, categories (c) to (e) with 0.7, 0.6, 0.5, 0.3, 0.2, 0, and, respectively, 0.1. For federal states we calculated an average of indices obtained at regional and local level, weighted by the tax revenue volume raised by these two levels of government.

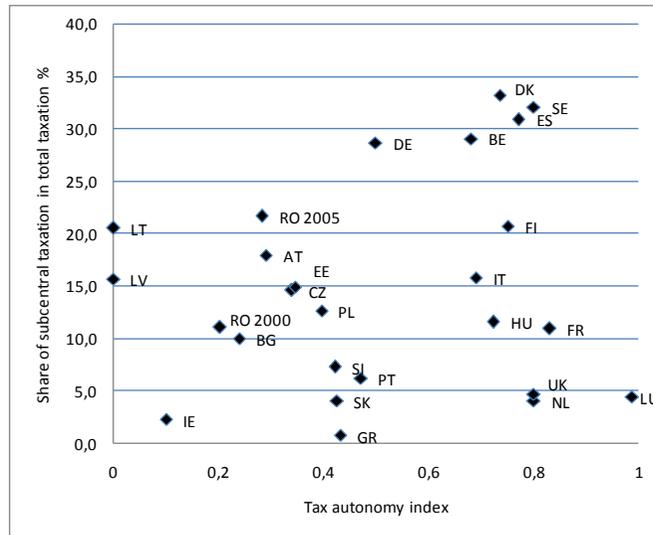
Figure 1 Tax autonomy index in the EU Member States



As shown in Figure 1, there are significant differences in terms of fiscal autonomy of local and regional governments in the EU Member States. In Lithuania and Latvia all local taxes are determined by the central level, while in Luxembourg, local authorities enjoy almost complete freedom to set taxes. In this state 98.5% of local tax revenues are in category (a), local authorities having exclusive competence to determine tax rates and tax bases. Other states where local authorities have greater control over local taxes are France, Britain, Netherlands and Sweden. In Romania, the index increased from 0.2022 in the year 2000 to a value of 0.2825 in 2005. The most important factor contributing to this change is represented by changing the methodology for determining the share of splitting the income tax, which in 2000 could be modified through the annual state budget law, and in 2005 they had a fixed level, established by legislation (Local Public Finance Act).

In Figure 2 we grouped the EU Member States both in relation to the importance of subnational taxes and on the basis of tax autonomy. Tax revenues of local budgets include, in this case, also revenue from tax sharing arrangements. Their distribution by level of government is taken from the Eurostat report, *Taxation Trends in the European Union, 2009 edition*.

Figure 2 Tax autonomy index and the importance of sub-central tax revenues



Thus, we can group the Member States in four categories:

- states where local governments receive a large share of total taxation and have high autonomy in terms of their determination, such as: Sweden, Denmark, Spain, Belgium, Germany and Finland;
- states with a high volume of tax revenue available to subnational governments, but they have limited powers in setting those taxes, like: Lithuania, Austria and Romania;
- states where local authorities have significant powers to set taxes, but their tax revenues are modest, such as Luxembourg, Netherlands, Britain, France and Hungary;
- states where subnational governments have only a small share of total tax revenue and also have limited decision making power to determine them, such as Greece, Ireland, Bulgaria, Slovenia and Slovakia.

Conclusions

Fiscal decentralization tendencies are obvious in the majority of EU Member States in the recent years, and, thus, increasing subnational governments' responsibilities requires more tax revenue at this level. But since traditional local taxes (property taxes, user charges) are insufficient to meet the requirements, many subcentral governments rely heavily on various tax sharing arrangements and intergovernmental grants. In this setting, fiscal decentralization literature shows that the common measures of fiscal decentralization, i.e. the share of local expenditures and revenues, clearly tend to overestimate the degree of fiscal decentralization.

We have shown that regional and local governments in the EU have little discretion over their own taxes. Typically, in the old EU Member States subnational governments have superior control over their own taxes. In the federal states such as Belgium and Germany the local governments have greater autonomy in setting taxes than regional governments, while in Spain and Austria regional authorities enjoy greater taxing powers.

The correlation between different measures of decentralization is weak. For instance, some states with high share of local taxes permit only little discretion over the tax rates and tax bases, while others enjoy great tax autonomy but have limited fiscal resources. Thus, the design of fiscal relations across levels of government varies greatly among EU Member States and there is no single pattern of fiscal decentralization.

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APPROACHES REGARDING THE TAX EVASION IN ROMANIA

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In any economy, the main purpose of the tax system is to provide a solid and stable source of government revenue. On the other hand, a tax system should aim to enable the country's economic development and support disadvantaged groups. Achieving these objectives should be accompanied by a continuous preoccupation of the tax administration to increase its efficiency. In this process, a particularly important factor consists in reducing the tax evasion, given that it contributes to a diminution in terms of efficiency within the state structures, while being a factor of corruption. Over the past 20 years, in Romania, the presence of tax evasion has reached relatively large dimensions in both the economic area and the underground economy, where the phenomenon is widespread. Taking the road from the particular to the general, distinguishing the legal tax evasion from the fraudulent one, this paper aims to answer the question: Why is it necessary to control the tax evasion phenomenon and how to do this? This question aims at achieving the following objectives: distinguishing between the legal and the fraudulent tax evasion and the methods used by taxpayers to circumvent the tax obligations.

First of all, reaching the objectives was assured by consulting a significant amount of work, that is to say publications of scientific claim, while making use of analysis, induction and deduction, significant volume of quantitative information was examined and submitted to professional reasoning. In literature, there are many Romanian and foreign authors reporting on the tax evasion issue while as far as specialised magazines are concerned, there are just a few discussing about the social protection issues or about the European experience in the tax adjustment whereby the states have gone over the years, such as: the Romanian Economic Journal, the Annals of the American Academy of Political and Social Review of Social Innovation and other authors such as Saguna & Tutungiu (1995), M. Duverger (1965), Carmen Corduneanu (1998), Hoanță (2000). Research results and general conclusions on the issue of tax evasion in Romania are listed at the end of the paper.

Keywords : fiscality , tax evasion, blak labor, romanian taxpayer, the State

JEL Code: H26, K31, K36

1.Introduction:

Taxation has been and is still an objective necessity, despite being inappropriate for taxpayers. Holding backwards a millennial history, accompanying, in time, the birth and development of the state, the tax is one of the most controversial public institutions. Even though it was deemed to be established by the citizens' general consent, the taxpayers opposed the tax burden of the payment, through legal and less legal means in an effort to protect the most important part of their personal income. The literature offers a multiple of interpretations on the concept of tax evasion. One of them defines tax evasion as "all legal and illegal procedures whereby, all those interested peculate, in whole or in part, their taxable material obligations established under the tax laws." (Saguna & Tutungiu, 1995: 45). Another meaning of the concept of tax evasion was given by M. Duverger (1965:77), who considered that this phenomenon "refers to all manifestations of fleeing from tax" in this sense, tax evasion taking place when "the one who is supposed to pay the tax,

doesn't do it, without its obligation to be passed on to a third party." The tax evasion consists in the theft of taxpayers to pay their respective tax liabilities, partially or wholly, using legal loopholes or using clever maneuvers, in order to conceal taxable material. But regardless of how this phenomenon is defined, tax evasion is, ultimately, failure of the taxpayer to assume their tax liability.

The means of concealment employed for avoiding tax obligations can be divided in two categories: extrapolation of legislative failure or even the possibilities left by the legislature in certain illicit intentions and processes. In terms of how it can be accomplished, the relationship that exists between this phenomenon and the current legislation, tax evasion, there are two forms of manifestation: licit tax evasion (shelter built at law) and illegal tax evasion (fraudulent) or fraud tax. In terms of space, it can be identified the national tax evasion (tax lawful and unlawful tax) and the international tax evasion. (Hoanță, 2000: 52).

2. Research Methodology

The demarcation line between the unlawful tax avoidance and the lawful one is necessary and useful, because it gives the possibility, at least theoretically, to estimate the size of the phenomenon, in the two forms of manifestation.

Moreover, this distinction helps to sensitize policy makers and the administrative search and determine appropriate means to limit and control the phenomenon.

The licit tax evasion is the theft of a lawful part from the taxable matter, without this being considered offense or crime. It involves the exploitation of the existing regulatory framework in the sense of a smart capitalization of the inconsistencies, contradictions or equivocations of some legal proceedings in order to avoid legal obligations to the state. In some cases, the intentionality of action, coupled with the fact that it seeks to avoid paying tax obligations, leads to the conclusion that this form of tax evasion attracts the fault of the involved economic subject.

However, it is not the system of punishment that comes with the tax fraud, given that the accused one has not violated any laws, but basically took advantage of the existing legislation (or a lack thereof), "using a combination unforeseen by the legislature and, therefore, which was tolerated to escape from view." The "guilty" one of producing legal tax avoidance is therefore only the legislature. (Saguna & Tutungiu, 1995: 34). The frequency of this type of fraud is higher in the periods when new laws are introduced or changed and when the state uses intentionally tax incentives to promote policies towards certain socio-professional categories or in certain fields. In practice, lawful acts of tax evasion, based on a favourable interpretation of the law, are very diverse, depending on the inventiveness of the taxpayer and the largeness of the law. In Romania, tax evasion was done lawfully, being often based on tax incentives granted by government (rescheduling, postponement or exemption from taxes, increases and penalties relating thereto) and the omissions in the regulation of taxes and fees. Of course, this form of tax evasion can be avoided by correcting and improving the legal framework which has become possible, but often the existence of political, economic and social circumstances determines a tacit tolerance of evasion.

The fraudulent tax evasion (tax evasion) is a form of aggravated circumvention being studied, analyzed, and sanctioned by monetary and custodial measures, whenever it is discovered. This consists in a total or partial illegal concealment of taxable material with the purpose of eliminating or reducing the tax obligations which are incumbent on them. It was considered that this is a "cancer" that affects society and politics and, in some opinions, it would be about 25% of the budget of developed countries, reaching impressive percentages in emerging countries (Clocotici & Gheorghiu, 1996: 56).

This type of evasion is outlined in two forms: the traditional evasion (avoiding partial or total payment of tax obligations, or by completing and submitting incorrect documents, or by failure to produce the required documents by applicable law, failure to produce employment contracts

generate the black employment, declaring the minimum wage to a salary achieved much higher), legal evasion (hiding the true nature of an organism or a contract, although signed, the contract work is not declared at ITM), accounting evasion (creating the impression of accurate accounting records, using false documents in order to increase spending, reduce revenues, reduce taxable income and therefore tax liabilities due the state, per diem expenses, related to fuel the journey within the documents) and the evasion of the assessment (reducing the inventory value, increasing amortization and provisions in the overstatement of profits with the purpose of an increasing future profit). (Gliga, 2007: 45)

In relation to tax regulations, in the case of the taxpayers various tendencies and motivations are manifested in order to evade tax obligations. The extent to which tax evasion arrived in our country makes this phenomenon to be so real that its presence became daily in all lucrative spheres. It can be stated without exaggeration that in the period after 1989, a social norm of tax evasion was gradually but surely established, the Romanian taxpayer, regardless of his financial or social status, trying and succeeding, most of the time, to evade tax payment.

The proliferation of tax evasion in Romania was supported by a number of factors, including a tax law characterized by the presence of gaps, inconsistencies, vagueness and lack of stability over time as well as the late appearance of a law to combat tax evasion (Law no. 87 / 1994 came into force in the late 1994). Until 2004, there was no tax code or a tax procedural code which would have been essential to the tax legislation, as it has as purpose to limit the effect on tax evasion. At that time, there were too high incumbent taxes compared to the Romanian taxpayer's real capacity to pay, the revenue to GDP in 2008 being the lowest (32.8%) of all EU member countries in the context of an increasing corruption in society. In Romania, the most used tax fraud techniques established afterwards the carried out control actions, grouped by categories of tax duty are (Gliga, 2007: 48):

- **The income tax:** reducing the tax base by including expenses on cost categories without supporting documents or legal basis (fines, penalties, etc.) , the registration of oversized or over-permitted by law expenditure, the deduction of the shareholder's personal expenses or interest rates on loans from the companies of their employers, failure to record the total income, the transfer of the taxable income to the newly created company within the same group, in the period of their exemption from the tax payment, along with loss records by the parent company , calculating the tax on profit by the incorrect application of the law, no-calculation of the tax revenues from economic activities by certain nonprofit organizations, not recording differences or income tax obligations in the accounts established by the audit;

- **The value added tax:** the misapplication of the deduction system, not including certain operations which fall within the VAT tax base or not including all invoices in the tax base calculation, not highlighting and not transferring to state the VAT for the advances received from customers, failure to register as Payer once the minimum threshold was surpassed, the issuing of tax receipts and VAT invoices without the trader to be paying and without incurring and transferring VAT, "computation error", etc., are just some of the methods used to defraud the VAT;

- **The Wage tax:** tax exemption for all amounts paid to employees as wage income, not withholding and paying the taxes due on those wages on account of those workers employed on civil conventions or laborers, failure to pay the tax obligations on wages, non-compliance on the tax law, aggregation, tax exemptions and discounts, etc.

- **The Excise tax:** not including all taxable amounts in the tax base, reducing the tax base by undervaluation of imported goods, by using double customs documents, not calculating the excises for alcohol concentration changes, not including the excise tax in the sale price of the products which require excise, not highlighting the excise duty in accounting, avoiding excise duty by changing the names of the products demanding excise and transferring them to a product category which doesn't owe excise taxes, having reduced rates (for mineral oils, alcohol, etc.).

- *Other taxes and fees owed to the state or local budgets*: highlighting in accounting, buildings at lower values than the actual ones, failure to submit declarations regarding heritage buildings, means of transport in possession and owned terrains or under management operators, declaring erroneous data, Failure in constituting and paying the dividend tax and its wrong calculation, individuals not declaring their incomes for various activities, etc.

3. Research results:

Table number1 shows the data published by the National Tax Administration Agency on fiscal discipline at the national level (in Romania) but also the attitude of the competent bodies in the discovery and punishment of fraudulent tax evasion, data concerning the number of checks and their results for the period 2003- 2009. It may be noted that although the number of checks performed by the control decreased during the period 2003-2009, the frequency of cases of tax evasion has increased. Of course, fewer checks lead to a lower probability for a taxpayer's evasion to be discovered and more than that, it doesn't have a positive impact on the degree of tax compliance of the romanian taxpayer.

Table number 1. The evolution of tax evasion in Romania over year 2003-2009

| Nr. Crt. | Indicator | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|----------|--|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| 1 | Number of checks | 446.822 | 273.020 | 286.903 | 259.032 | 278.623 | 282.764 | 276.544 |
| 2. | The number of identified cases of tax evasion | 195.425 | 120.077 | 115.158 | 181.630 | 195.982 | 198.603 | 212.559 |
| 3. | The frequency of tax (%) (2/1*100) | 43,70 | 44,00 | 40,10 | 70,01 | 70,33 | 70,23 | 76,86 |
| 4. | The total value of the identified tax evasion (thousands of Ron) | 798.900 | 982.350 | 1.746.304 | 1.552.673 | 1.774.060 | 6.728.000 | 9.910.000 |
| 5. | The total number of applied penalties (thousands of Ron) | 1.804.700 | 1.984.522 | 1.137.326 | 1.044.421 | 1.257.745 | 1.036.000 | 2.418.000 |
| 6. | The additional drawn amount of money (thousands of RON) (4+5) | 2.603.600 | 2.966.872 | 2.883.630 | 2.597.094 | 3.031.805 | 7.764.000 | 12.328.000 |

Source: National Tax Administration Agency, and the author's own calculations

As far as Cluj County is concerned, the table number 2 and table number 3 are displayed below in accordance with the ITM Cluj activity reports for the 2007-2010. It is noted that since 2009, both the number of employers, including the contracts during the year and the number of employees have decreased. This leads, of course, to a decrease in the number of employers found to be practicing undeclared income, along with an increase number of people identified as working illegally. Analyzing national campaign for detecting and combating undeclared work in Cluj County, in various fields, there is an identification of a large number of unauthorized workers in the construction industry. Based on statistics, national campaigns in certain sectors, which didn't use black labor, did not even refer to this area in the coming years.

Table number 2 . The evolution of black labor in Cluj County

| Nr. Crt. | Criteria | 2007 | 2008 | 2009 | 2010 |
|----------|--|---------|---------|---------|---------|
| | | years | | | |
| 1 | Number of verified employers | 3.200 | 3.066 | 3.509 | 2.504 |
| 2 | Number of employers discovered to practice black labor | 523 | 567 | 551 | 176 |
| 3 | Number of employees discovered to practice black labor | 1.430 | 1.212 | 1.891 | 576 |
| 4 | Applied penalties (thousands of lei) | 2.126 | 1.788 | 1.929 | 1.112 |
| 5 | Number of employers existent in records at the end of the year | 22.840 | 23.517 | 21.485 | 19.690 |
| 6 | Number of contracts recorded during the year | 106.113 | 104.011 | 69.011 | 53.701 |
| 7 | Number of contracts active at the end of the year | 152.106 | 156.506 | 136.278 | 129.304 |

Source: A representation belonging to the authors and which was made in accordance with the ITM Cluj activity reports, 2007-2010

Table number 3. Black labor as a result of the national campaign to identify and combat illegal work in Cluj County

| Nr. Crt. | Fields identified | 2007 | 2008 | 2009 | 2010 |
|----------|--|-----------------|---------------------|---------|-------|
| | | years | | | |
| | | Number of units | Number of employees | | |
| 1 | Car wash | NO | 2.229 | 1940 | NO |
| 2 | Constructions | 3.791 | 60.117 | 136.278 | 1.129 |
| 3 | Forestry, logging, wood processing | NO | 66 | 1.629 | NO |
| 4 | Mountain units | NO | NO | 45 | NO |
| 5 | Milling and baking | 1.420 | - | NO | NO |
| 6 | Textiles | 22 | - | NO | 22 |
| 7 | Manufacture of alcohol | NO | - | NO | NO |
| 8 | Ensuring a decent and healthy work environment | NO | 57 | NO | 11 |
| 9 | Commerce | NO | NO | NO | - |

Source: A representation belonging to the authors and which was made in accordance with the ITM Cluj activity reports, 2007-2010

Conclusions:

Tax evasion is not a phenomenon specific only to Romania, or to countries with emerging market economies. The phenomenon is as old as the very existence of tax itself is.

The tax evasion doesn't fit into time or space boundaries. However, the extent of this phenomenon represents significant differences from one country to another, generally considering that in countries with unstable and dysfunctional economies, where corruption is manifested in full economy and tax evasion are "at home".

Tax evasion has consequences, primarily at the macroeconomic level, consisting in state's deprivation of income and thereby the opportunities for maneuver are decreased in both the economic and social fields.

On the other hand, entities that avoid paying taxes, having lower costs, will compete unfairly with those who meet their tax obligations and the first ones will distort the smooth operation of free market mechanisms, undermining some industries. Accepting and generalizing this phenomenon would undoubtedly lead to the suppression of the state.

Despite this, in modern times, this is impossible, given the fact that the private initiative was never able to provide social and economic balance to a nation. Now, more than ever, it is universally acknowledge that, during the global economic crisis, the market economy is not a business model to ensure continuous prosperity to those who adopt it.

In conclusion, tax evasion is equal to a "cancer" and it affects the civil and political society which would be around 25% of the budget of a developed country, reaching an impressive percentage in developing countries. Hence, the state must maintain a fair level of taxation in order to keep away the tax evasion phenomenon and to provide diversified and sufficiently severe penalties, fighting for this cause.

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OPTIMIZING LOCAL BUDGET BALANCING IN ROMANIA

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The importance of the local public finance is growing in accordance with the increasing proportion of the decentralization process. The mechanism of resource allocation, and especially the allocation criteria used, constitutes subjects of debate. Our objective pursued is to assess whether the avoidance of the first step for balancing the allocation of funds can provide enhanced fairness in balancing the local budgets across the country. Local budgets in Romania receive significant resources from the state budget in the form of amounts and quotas distributed from certain taxes, which are revenues for the state budget. Some of these amounts are designed to balance the local budgets. The distribution of funds from the state budget to the local budgets requires two steps. Firstly, the amounts are divided by county, secondly, these amounts are directed within the county especially towards localities which have a lower financial standing. Given the significant disparities between counties, we believe that this mechanism does not ensure fairness in the allocation because the funds distributed according to the first step may not use fair criteria to meet the requirements for balanced local budgets. Therefore, we intend to simulate a balanced allocation of national funds for eliminating the first step that produces the most significant inequities. Direct application of the second step of allocation, with its two phases, will provide more funds serving those local administrative units for the income tax per capita is lower than the national average. Comparing the values allocated for the year 2011 with those obtained in the simulation we will examine changes that occur after the application of this method which seems to be more equitable and appropriate. This work was supported by CNCSIS–UEFISCSU, project number PNII–IDEI 1780/2008

Keywords: local budget, budgetary resources, budget balancing, resource repartition

JEL: H71

Introduction

The decentralization process entailed the need to increase the financial resources of local authorities in order to correlate the expenses with payments (Tudor 2009: 336). A very practical and efficient option to supply the local budgets is the redirection of part of public revenues from the state budget to local budgets. The allocation mechanism is governed by the local public finance law and it envisages two steps: allocation by counties and then, distribution of public resources within the county. (Leonardo and others 2006: 52-54). Taking together, the steps create disturbances in resource distribution leading to inequities between the budgets of municipalities, towns and villages. This mechanism can be adjusted, however, changes might be influenced by the persuasion coming from the interested beneficiaries: the local authorities with high economic potential require the need for reimbursement the significant public resources, while the poorest local authorities need these resources for survival (IPP 2001: 50-51).

While at the macroeconomic level, the allocated amounts for the local budgets are strictly related to the revenues, at the local level, various situations of unfairness among local administrative units may occur due to the current distribution criteria. We consider that the two step division is one of the main causes for the inequities produced. We are pursuing to analyze the negative effects of applying the two steps allocation procedure as compared to the direct assignment.

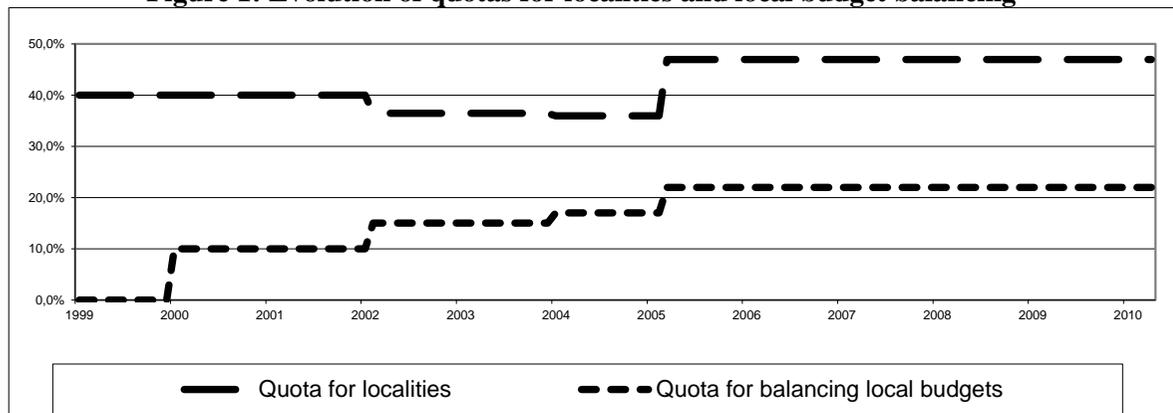
Afterwards, we will quantify the influence on the local budgets when applying the repartition exclusively on the basis of allocation criteria and methodology set out in the current second step of resource distribution.

Our analysis does not apply to amounts allocated to counties, Bucharest municipality and its sectors due to the repartition quotas that are different from those established for towns and communes. Also, the study does not intend to determine the impact of tax collected on allocated resources, as this indicator depends almost on the ability of the local authorities to collect its resources.

Quotas from income tax to balance the local budgets

The income tax received from the state budget in each administrative-territorial units shall be allocated in a quota of 56% share directly to the administrative territorial units where the income tax was collected (44% for the budget of town or commune and 12% for the county budget) while a percentage of 21% is redirected to the county fund to balance the local budgets. In case of Bucharest municipality, there is a special quota system (22.5% allocated to local budgets of the sectors, 44.5% to the local budget of Bucharest and 10% for the local budget balance). The evolution in time of the quotas has taken in consideration the needs and possibilities of the state budget. The evolution of these quotas is presented in the figure below.

Figure 1: Evolution of quotas for localities and local budget balancing



Source: Miricescu et al. 2010:108

The funds redirected to balance the local budgets, i.e. the percentage of 21% from income tax, are divided between the county budget (27%) and other local budgets. From the amounts redirected to towns and communes, 20% of the resources are allocated in projects assigned by the County Councils, the rest of resources being subject to the allocation mechanism in two stages.

In 2011, the volume of income taxes redirected to the local budgets is of 13.32 billion lei, in close correlation with the income earned by individuals from various sources of income. The evolution of income tax in the last five years is shown in the table below.

Table 1: quotas from income tax for local budgets (2007-2011)

| Year | 2007 | 2008 | 2009 | 2010 | 2011 |
|--------------------------------------|-------|-------|-------|-------|-------|
| Quotas from income tax (billion lei) | 10,85 | 13,37 | 15,31 | 14,67 | 13,32 |

Source: Yearly budgetary laws

VAT amounts to balance the local budgets

A significant part of the value added tax is shifting to local budgets for the financial support of expenditures specific to the responsibilities decentralized at the local level. In addition to the destinations clearly provided for the law, there are lump sums to balance the local budgets. In the last years, these amounts represent about 2 billion lei, as indicated in the table below.

Table 2: VAT amounts for local budgets (2007-2011)

| Year | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|-------|-------|-------|-------|-------|
| VAT amounts for local budgets (billion lei) | 12,77 | 15,06 | 17,62 | 17,00 | 13,12 |
| VAT amounts for balancing local budgets (billion lei) | 1,54 | 2,40 | 2,00 | 2,00 | 2,00 |

Source: Yearly budgetary laws

The resource allocation for each local budget is done in two steps. Initially, funds are divided per counties in an indirect proportion with the financial capacity of each county and in a direct proportion with its surface. When determining the financial capacity, consideration must be given to the following indicators: income tax per capita collected in the previous year and the number of population. This distribution takes into account the overall situation of each county and does not take into account the individual cases which may significantly influence the overall media. Tying the financial capacity with the number of population in a high proportion will put too much emphasize on the social nature of the key distribution (Cioponea 2008:71).

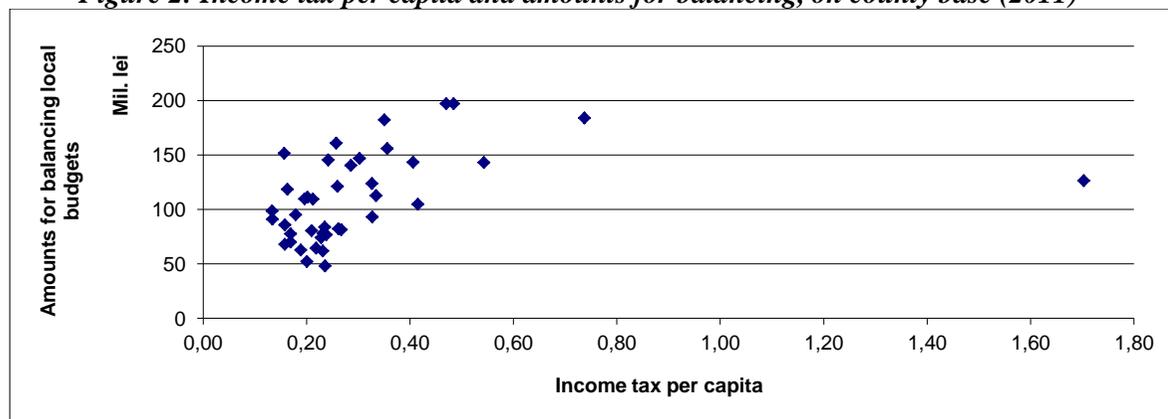
The in-county allocation of funds previously distributed in discriminatory conditions to all the counties takes place only in the second step. This step has two phases. The first phase covers only the localities which have the income tax per capita lower than the average recorded at a county level. The distribution criteria are the number of population and the surface of the in-city lands. Their assigned amounts, combined with those from the previous year may not lead to exceeding the county average. Thus, savings are made by applying the threshold criterion. The savings are redistributed to all localities with sufficient financial capacities and inversely proportional to its number of population.

The local public finance law provides also for granting of amounts derived from other taxes collected from the state budget. Up to now the mechanism has been applied only to VAT, but it will be extended to other taxes as local authorities will take over new powers (György and György 2011:69).

Allocation of resources in 2011

The quotas of income tax to balance the local budgets are allocated in the county in which the income tax were collected. Currently, there are notable disparities between counties in terms of receipts from income tax, such as the income tax per capita in the county which has the highest value (Ilfov County) reported to the county with the lowest value (Vaslui County, with 12.74), as shown in the figure below.

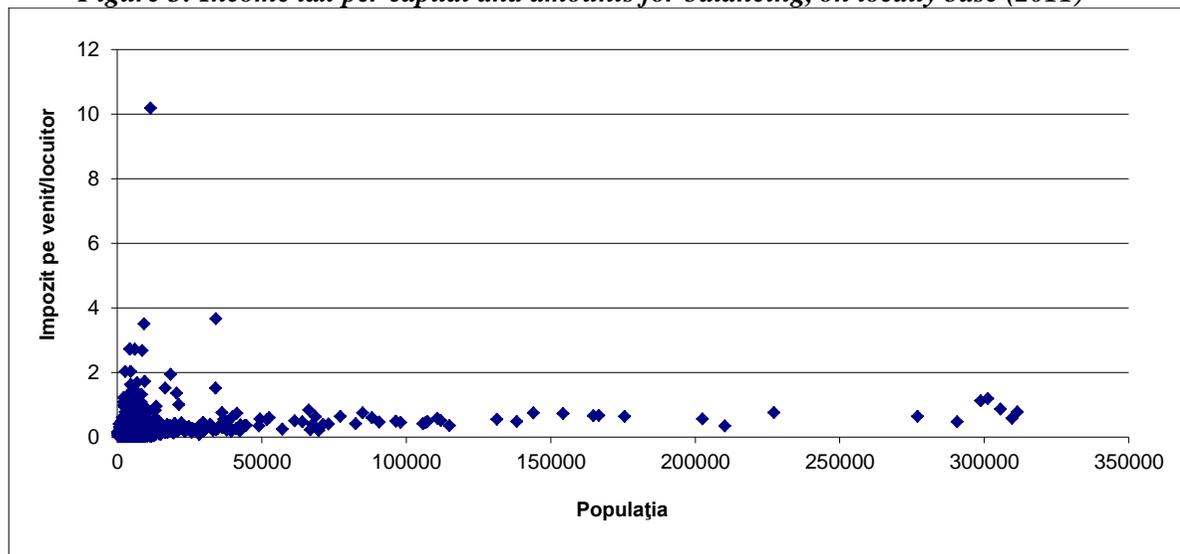
Figure 2: Income tax per capita and amounts for balancing, on county base (2011)



Source: calculations based on MAI data

The allocation of quotas for balancing the local budgets without considering the financial situation of each administrative unit favors the units from the counties having an income tax per capita higher those having an income tax per capita lower. Balancing local budgets in a county with resources collected in the same county only perpetuates the state of wealth or poverty in the respective county. Differences between localities are significant (values range from 13 to 10,191 lei per capita) and, likewise, there is no direct correlation relationship between city size (measured by number of inhabitants) and the amount of income tax per capita.

Figure 3: Income tax per capital and amounts for balancing, on locality base (2011)



Source: calculations based on MAI data

According to the criteria for allocating quotas to balance the local budgets broken, only those localities having the income tax per capita lower than the average county were included in the first stage. Under the current methodology, localities in Vaslui County with an income tax per capita of 140 lei are not eligible for the first phase of distribution, while towns in Ilfov County with an income tax per capita of 1,700 lei are eligible because they are below the average of Ilfov county. In these circumstances, in 2011, above the average county were included 241 localities (between 1 and 15 municipalities in each county), industrial and major commercial centers in the county. Due to the large variation of the income tax per capita along the counties, we can not draw a clear conclusion on the categories of localities which were above or below the average per county.

VAT quotas to balance the local budgets were allocated to counties based on their financial capacity. Although counties with high economic potential have been disadvantaged in determining the due amounts, they were not removed from the list of beneficiaries.

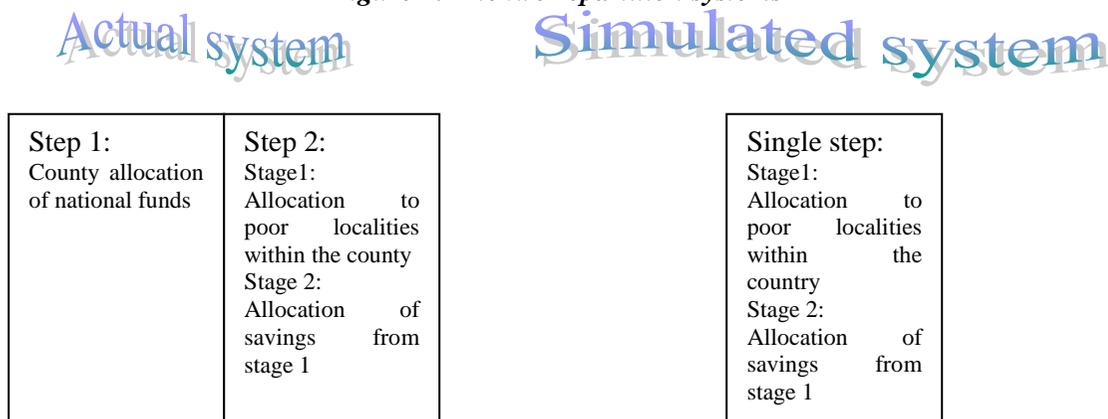
The amounts allocated to balance the local budgets have varied according to the following indicators: financial capacity, income tax collected in the previous year, number of population and surface. The smaller amounts of 5,000 lei came from each of the villages Oancea (Galati) and Călnic (Gorj). The largest amounts were allocated to municipalities like Medgidia (11.28 million lei), Hunedoara (12.37 million lei) and Turda (14.53 million lei).

Determination of amounts allocated to local budgets through a single national fund

The great shortcoming of the current distribution method is the fragmentation process in two steps, a mechanism that does not provide for a real support to the poor counties, but a mere slender advantage. We aim at balancing recalculation of benefits (allowances deducted from

income tax and VAT quotas) based on a unique methodology by eliminating the barrier constituted from the administrative boundaries of the county. Further on, in the diagram below we present the differences between our proposed methodology and the existent one.

Figure 4: The two repartition systems



Thus, we simulate the entire distribution of values established at national level (excluding Bucharest) in 2011, amounted to over 4.5 billion lei (1.2 billion lei allocated to counties and 0.7 billion lei will be allocated for projects of the county). Subsequently, the amounts actually distributed in the two phases are 2.6 billion lei. Applying a consistent methodology, we do not intend to separate quotas and the amounts deducted accordingly. Distribution rules are set by the local public finance law for the distribution of payments in the county by following two distinct phases.

Summarizing the data at the national level (available for 3180 municipalities), the average income tax per capita is 316.22 lei. In these conditions, 204 localities are above the average while the rest of 2976 is below average. The major part of the 204 locations with the indicator over the average are situated in developed counties (72.5% of localities in Ilfov County, 20% of localities in Constanta county, 11.5% of the localities in Prahova County) and to a minor extent, in poorer counties (one locality in the county of Calarasi, Salaj, Botosani, Vaslui, Buzau and Iasi).

Eliminating the first step in the distribution of funds, the beneficiary localities have been reclassified by replacing the quotas of rich units with those of the poor counties. Thus, 50 municipalities are eligible for funding in the first stage, while other 87 are not eligible, due to the income tax per capita lower than the national average.

Following the first phase of distribution, public funds were allocated to eligible local budgets amounted to 2.2 billion lei (i.e. 85.4% of the total). The remaining amounts were spent entirely in the second stage by all the budgets of administrative territorial units. Thus, Otopeni (it is the largest city tax income per capita) received only 1749 lei, while Hunedoara was distributed 8.37 billion lei. It can be noted that the margin is much reduced, suggesting a fair distribution.

Following the simulation, a number of 1420 local budgets received smaller amounts, and the remaining 1760 received larger amounts. Differences between the two methods vary from locality to locality. The reductions were registered in a percent over 99% (in 15 localities, all from Ilfov county). The increases occurred in a percent of 1627% for Ocele town (Vâlcea). Analyzing the absolute values, significant reductions were found in Medgidia (11.08 million lei)

and Turda (9.90 million lei). Also, Barlad received significant amounts (6.68 million lei) and Roman (5.70 million lei).

Compiling the data by county, it can be noted a reduction in the amount allocated to those localities that had income tax per capita higher than the national average, redirecting public funds to those administrative units, having the indicator under this threshold (see figures below).

Figure 5: Reduction of allocation for counties using single step repartition

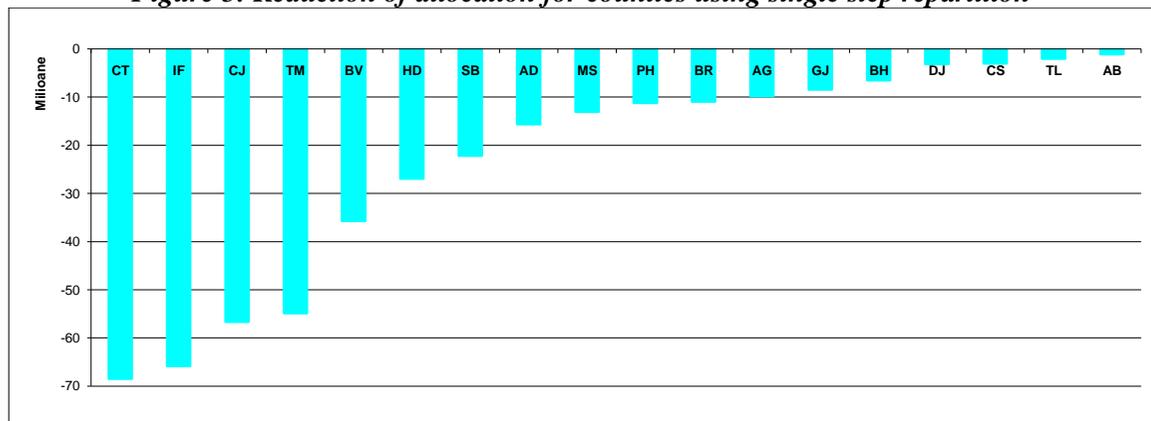
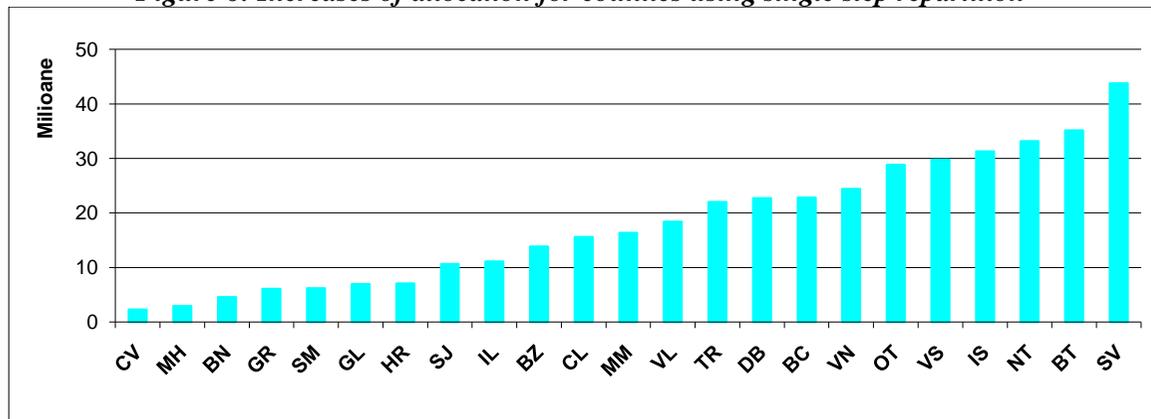


Figure 6: Increases of allocation for counties using single step repartition



Conclusion

The current system of allocating amounts to balance local budgets has two steps, which hamper the distribution and creates a series of inequities between the budgets of municipalities, towns and villages. By withdrawing the first step of the distribution and directly applying the second step might lead to a more equitable distribution because only the second step of the first stage provides a discretionary distribution to local budgets in localities with limited financial capacity. Our simulation performed in all areas of the country (except for Bucharest) highlighted the need for further support towards the poorer counties (Suceava, Botosani, Neamt). Redistribution shall not consider the counties as a whole, but some localities taken individually. The simulation indicated that some localities could be entitled to receive amounts of ten times higher than those actually received in order to reduce disparities.

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VALUE ADDED TAX IN THE ECONOMIC CRISIS CONTEXT

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This article tries to present the major aspects concerning the value added tax in the context of economic crisis in European Union countries and Romania. The paper realizes an analysis of the impact of economic crises on VAT in the European space underlining the current situation when the revenues from VAT represent a valuable source of financing the public expenditures. In Romania the economic crises has led to increasing of VAT rate from 19% to 24%. This measure is an important fiscal measure for the state budget and this study tries to reflect the impact of this VAT rate increase on the public revenues and consumption.

Keywords: value added tax, economic crises, tax revenues

Cod JEL: H23, H3, H22, G18.

Introduction

Value added tax is a key element of taxation system for many countries, an important and a reliable source of revenue for their budgets. For European Union countries VAT is assuring a significant part of the tax receipts counting 7% of GDP. Considering the share of VAT receipt in total tax receipts the highest ratio is in Bulgaria 35% and the minimum is in Italy only 13% from the total tax revenues and for EU 27 as average is 17%.

In times of economic crisis, the budget revenues are significantly affected by a sharp decrease. Many factors have an important contribution to this decline like: the tendency of some tax bases to contracts – incomes, profits, consumption; a decline in commodity prices and related revenues, or increasing the tax evasion. In this context for all EU countries a major issues is increasing the budget deficit and impossibility to financing the public expenditures.

The significance of VAT has increased in the financial crisis as governments need to raise more revenue to reduce their national debt, but are reticent to raise direct taxes on labour or capital at a time when employment and investment are needed. Personal income taxes increase is not a solution, especially in the context in which Europe is confronted with aging of the population. However it is necessary to increase social contributions in this regard but this increase will not provide budgetary shortfalls. On the other side increase of corporate taxation is not a good solution for the crisis time because may be a cause for deepening crisis.

One way to improve the situation of public finances and increasing the tax receipts or at least maintaining at the same level like before the economic crises is through increasing the VAT rate. But this measure requires a careful assessment of the possible macroeconomic and microeconomics effects. VAT rate increase is reflected in whole or in part on price of goods and

services. With an unchanged nominal wages, rising prices is clearly diminishing real income of households (reduction in purchasing power), thus affecting consumption.

In the case of VAT, the most of the countries decide to increase rates, but also a high number of measures narrowing the base. Base narrowing was in many cases linked to equity considerations, as some countries reduced the tax burden on food or necessities. Generally, however, the measures increasing the standard VAT rates have had a much larger (positive) budgetary impact than the base narrowing measures; for the cases for which we have information, the ratio is almost 5:1 (Taxation trends in EU, 2010).

The impact of high VAT rates on consumer prices is not necessarily immediately, depending on many factors, including: the market rank for suppliers, the degree of competition, the elasticity of demand. Thus, firms from some industries prefer on the short term, may not fully pass on prices the VAT rate increased; the result is decreasing its profits to avoid reduction in demand, especially when they do not hold a significant position in the market, competition is strong and / or demand is very elastic.

The increase in VAT rate with only a few percentage points is unlikely to register a significant reduction in consumption, but on the other hand can increase VAT receipts for the state budget. Normally, any VAT rate increase can lead through higher prices to increasing inflation, yet inflation is only a temporary shock.

Increase VAT rate may influence the degree of regressive tax against current income households (VAT is a regressive tax against current income; current income decreased its share in the growing income). If, in addition to the standard rate of VAT, a reduced rate of VAT is applied for some consumption goods prevailing in low-income households, an increase for standard VAT rate would reduce the VAT regressivity and an increase for reduced VAT rate would lead to a higher regressivity. However, if there is a single VAT rate, the increase does not change the degree of regressive tax, according to the size and structure of consumption will not change.

A single rate of VAT means that the VAT payments by low-income households will be a higher proportion of their incomes than payments by higher income households. VAT is not regressive if tax payments are expressed as a percentage not of income but consumption. If consumption is used as the denominator, then by definition the impact would be proportional.

The tax burden of a VAT levied at uniform rate would also be largely proportional if the denominator is lifetime income instead of annual or current income because many income recipients are only temporarily in the lower income brackets. However, the main role of value added tax revenue is assuring the tax receipts for the state budget and not to achieve efficient redistribution of income in society; it is the quality of other taxes.

The VAT rate increase would leave a negative impact on the inhabitants purchasing capacity and the economy in general through decreasing of the consumption. But the negative of VAT rate increase will be felt also on the business activities. The increasing of VAT rate means inevitably results in the drop in consumption, and the consumption decline has a significant impact on the economy in general. During the economic crisis conditions it is important to promote the consumption increase.

VAT in European Union countries

Since 2009, under conditions of economic crisis, many European Union member states have resorted to increasing the standard VAT rate.

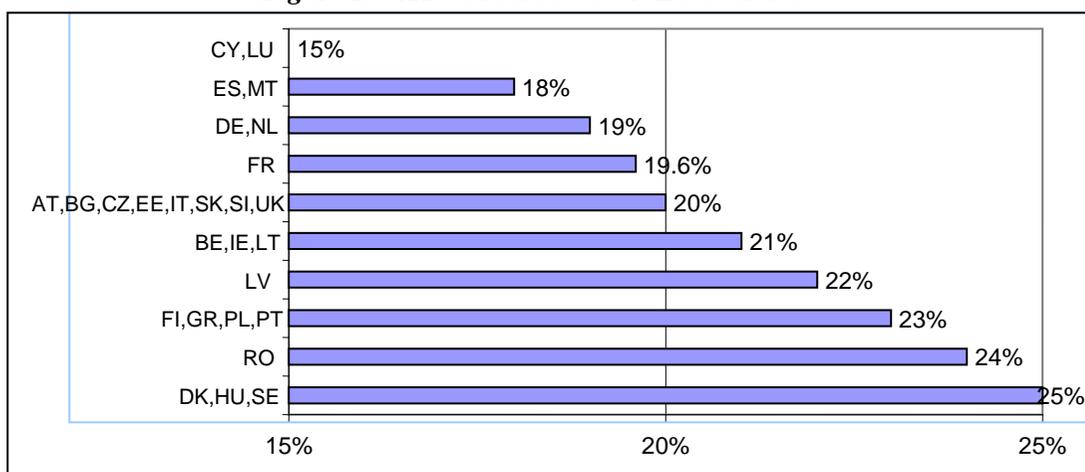
Table 1. VAT rates increases in EU countries

| Country | Standard VAT rate increase | Old standard VAT rate | New standard VAT rate | Δ of rate |
|----------------|----------------------------|-----------------------|-----------------------|-----------|
| Czech Republic | 01.01.2010 | 19% | 20% | 1% |
| Estonia | 01.07.2009 | 18% | 20% | 2 |
| Greece | 15.03.2010 | 19% | 21% | 2 |
| | 01.07.2010 | 21% | 23% | 2 |
| Spain | 01.07.2010 | 16% | 18% | 2 |
| Latvia | 01.01.2009 | 18% | 21% | 3 |
| | 01.01.2011 | 21% | 22% | 1 |
| Lithuania | 01.01.2009 | 18% | 19% | 1 |
| | 01.09.2009 | 19% | 21% | 2 |
| Hungary | 01.07.2009 | 20% | 25% | 5 |
| Poland | 01.01.2011 | 22% | 23% | 1 |
| Portugal | 01.07.2010 | 20% | 21% | 1 |
| | 01.01.2011 | 21% | 23% | 2 |
| Romania | 01.07.2010 | 19% | 24% | 5 |
| Slovakia | 01.01.2011 | 19% | 20% | 1 |
| Finland | 01.07.2010 | 22% | 23% | 1 |
| UK | 01.01.2010 | 15% | 17,5% | 2,5 |
| | 04.01.2011 | 17,5% | 20% | 2,5 |

Source: European Commission

Currently, the standard rates of VAT charged by the EU Member States are between 15% (Cyprus and Luxembourg) and 25% (Denmark, Sweden and Hungary), with an average of 20.7%. It is standard practice ten different levels, being the dominant share of 20% share. It complies with the minimum of 15% imposed by the European Commission but not required and a maximum limit not achieved a significant near standard VAT rates applied by all Member States.

Figure 1. VAT standard rates in EU countries



Source: European Commission

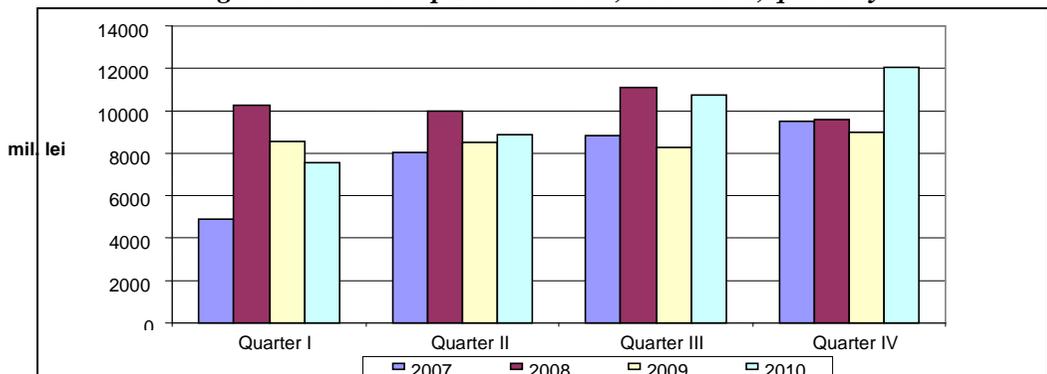
Although differences between the standard rates of VAT applied by some Member States are quite high (ranging up to 10 percentage points), there is some convergence of these shares, so 11

of the 27 countries using the standard rate between 19% and 20%. For instance, France has a VAT standard rate of 19.6% and two reduced rates. A reduced rate of 5.5% is applied to the absolutely necessary products and on the restaurant services and the reduced rate 2.1% for newspapers, plays and approved medicines (Sabau-Popa & all, 2010).

Current situation of VAT in Romania

In Romania, VAT receipts recorded in the last quarter of 2008 were only 0.6% higher in nominal terms than revenue in the fourth quarter of 2007, the conditions under which started to manifest in our country financial and economic crisis. It should be noted that although in the last quarter of 2008 saw a economic growth of 2.9%, final consumption fell in real terms than that registered in the fourth quarter of 2007 by 2.8%, while final household decreased by 4.7%, due to reduction in sales volume of retail goods and services rendered (Institutul Național de Statistică, 2009).

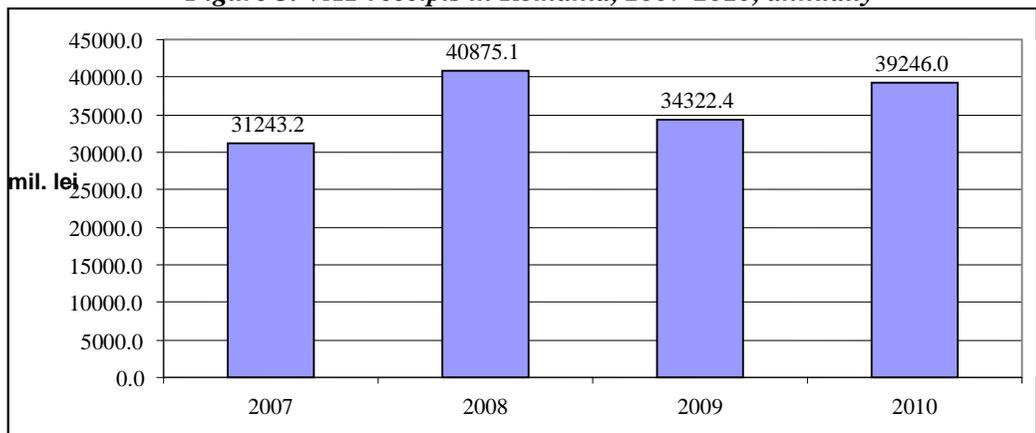
Figure 2. VAT receipts in Romania, 2007-2010, quarterly



Source: own calculation based on Finance Minister Data

Value added tax collected in 2008 was 30.8% higher in nominal terms, than that received in 2007, provided that, in real terms, household final consumption increased by 9.2% , Consumption increased by 8% and gross domestic product grew by 7.1%.

Figure 3. VAT receipts in Romania, 2007-2010, annually

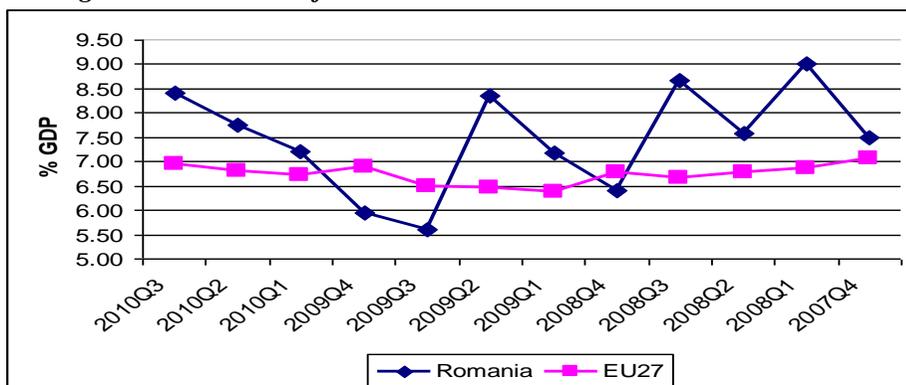


Source: own calculation based on Finance Minister Data

In 2009, there was a significant decrease in revenues from value added tax compared to 2008. They have decreased by 16% in nominal terms, due to real decrease of final consumption of

households with 10.8% and total final consumption decrease with 8.2% and 7.1% of gross domestic product (Institutul Național de Statistică, 2009). VAT receipts recorded in 2010 exceeded 14.3% in nominal terms comparative with 2009, while the standard rate of VAT was increased in July 2010 by 5 percentage points amid economic downturn mitigation (in terms real gross domestic product fell by 1.3%, consumption fell by 2.1% and household final consumption decreased by 1.6%) (Institutul Național de Statistică, 2009). Value added tax collected in 2010 was lower, in nominal terms, than that received in 2008 by 4%.

Figure 4. VAT as % of GDP in Romania and EU in economic crises



Source: Based on Eurostat data

Concerning the evolution of VAT as % of GDP in Romania and EU 27 in the economic crises time we can see that for EU there is a constantly evolution with slight fluctuations between 6 and 7 % of GDP. The increasing of VAT rate in Romania has a significant impact on the tax receipts because there is a continuously increase of the share of VAT receipts in GDP for 2010. Following this trend we can say that the rate increase was felt in the budget favorably even if the purchasing power of consumers has been affected.

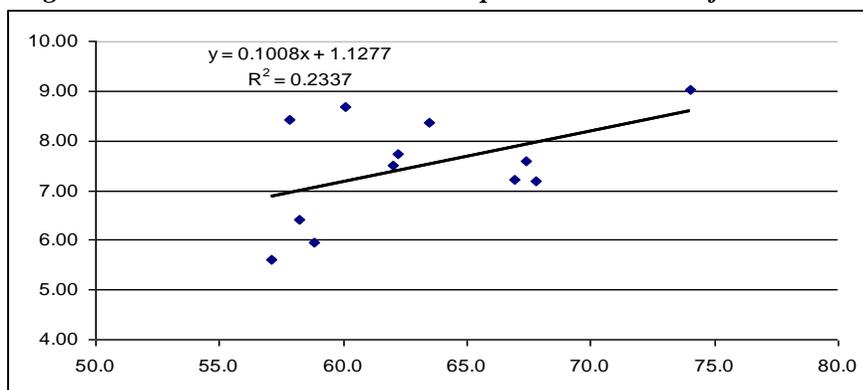
Table 1. Evolution of households' expenditures and VAT as % in GDP

| VAT % GDP | Q4 | Q3 | Q2 | Q1 |
|---|------|------|------|------|
| 2010 | | 8.42 | 7.74 | 7.22 |
| 2009 | 5.96 | 5.6 | 8.36 | 7.19 |
| 2008 | 6.41 | 8.68 | 7.59 | 9.01 |
| Final consumption expenditure of households % GDP | Q4 | Q3 | Q2 | Q1 |
| 2010 | | 57.8 | 62.2 | 66.9 |
| 2009 | 58.8 | 57.1 | 63.5 | 67.8 |
| 2008 | 58.2 | 60.1 | 67.4 | 74 |

Source: Source: Based on Eurostat data

Following the correlation between consumption and the VAT for the economic crises there is a direct correlation, if the consumption increase with 10% than the VAT receipt increase with 1%. The VAT receipts are correlated with consumption –in this case only household consumption with 23%.

Figure 5. Correlation between consumption and the VAT for Romania



Source: own calculations based on Eurostat data

Conclusions

In conditions of economic crisis the government may use the VAT to increase the tax receipts but not without macroeconomic consequences. With the emphasis on taxation is increasingly putting more on indirect taxes, value added tax can be considered a tax of the future, being by far the most important and largest indirect tax harmonization success tax.

Annex 1 VAT in Romania, 2007-2010, millions lei

| | 2007 | 2008 | 2009 | 2010 |
|-------------------------------|-----------------|-----------------|----------------|----------------|
| January | 1.803,8 | 4.671,2 | 4.295,4 | 3.188,0 |
| February | 1.323,3 | 2.543,0 | 2.371,6 | 2.214,3 |
| March | 1.747,4 | 3.050,0 | 1.868,5 | 2.154,6 |
| April | 2.586,8 | 3.236,2 | 3.045,7 | 2.953,4 |
| May | 2.725,9 | 3.486,9 | 2.741,2 | 2.692,1 |
| June | 2.702,0 | 3.240,6 | 2.736,8 | 3.231,0 |
| Julie | 2.894,8 | 4.083,6 | 2.748,9 | 3.220,4 |
| August | 2.813,1 | 3.510,2 | 2.476,1 | 3.637,1 |
| September | 3.137,2 | 3.485,0 | 3.040,7 | 3.890,0 |
| October | 3.187,6 | 3.747,3 | 3.162,8 | 4.233,9 |
| November | 2.770,6 | 3.066,3 | 2.693,2 | 3.896,9 |
| December | 3.550,7 | 2.754,8 | 3.141,5 | 3.934,3 |
| 1st Quarter | 4.874,5 | 10.264,2 | 8.535,5 | 7.556,9 |
| 2nd Quarter | 8.014,7 | 9.963,7 | 8.523,7 | 8.876,5 |
| 3rd Quarter | 8.845,1 | 11.078,8 | 8.265,7 | 10.747,5 |
| 4th Quarter | 9.508,9 | 9.568,4 | 8.997,5 | 12.065,1 |
| Total | 31.243,2 | 40.875,1 | 34322,4 | 39246,0 |

Source: Finance Minister

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THE USE OF EXPERT SYSTEMS IN AGRICULTURAL INSURANCE. NECESSITY VS. REALITY

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The topic was chosen due to the fact that, although agricultural insurance is particularly needed in agriculture to achieve performance, its achievements are still modest. The importance of this research is in that it tackles a very important sector of the economy, agriculture, and puts forward an immediate viable solution that meets the current needs of farmers. The contribution of the authors is their innovative solution, namely the proposition to implement expert systems in agricultural insurance, as a means of promoting insurance products which, although they are not currently granted the due importance, have started to be acknowledged increasingly in recent times. The interest in this type of insurance is due to the recent climate changes whose effects are extremely damaging, and to the need to improve agricultural competitiveness on the common market as a result of trade liberalization in agricultural products.

The scientific literature in the field of expert systems highlights the benefits of implementing systems in all areas of economic and social activity, including insurance and agriculture, but it does not deal separately with the issue of agricultural insurance, despite its importance in the development of agriculture. This confirms the topicality of the study. Regarding the scientific methodology, in order to easily understand how expert systems work also by those who are not familiar with the field, we opted to present the stages of preparation of the system, namely: (a) preparing the knowledge database, (2) preparing the charts and (3) system encoding and assessment.

The research results, at the conceptual level, confirm the need for agricultural insurance expert systems because of the benefits it would create (ease of use, informing farmers about the existence and importance of agricultural insurance, increasing demand for such type of insurance, which would also lead to the development of agriculture, to the creation of insurance products tailored to farmers' needs) and refers to the authorities that should be appointed to implement these systems.

Keywords: agricultural insurance, expert systems, agriculture

JEL Classification: C80, C88, G22, Q14.

I. Introduction

Since 2007, following Romania's EU integration, Romanian agriculture has been put to heavy trials as it had to meet the challenges imposed by the Common Agricultural Policy. Although, in comparison with European countries, Romania ranks ninth as agricultural area, seventh as arable land, eighth according to the area occupied by pastures and meadows, fourth according to the population engaged in agriculture (Creacă 2002, 23), the impediments that are currently hindering the development of agricultural insurance (e.g. lack of awareness and confidence in insurance, lack of financial means of farmers), entail modest results, despite the significant potential and its importance in the development of agriculture. Thus, due to the fact that modern agriculture can be developed only in the presence of an agricultural insurance system, there is an urgent need to find solutions to promote agricultural insurance products, as both farmers and insurance companies do not show a keen interest in this type of insurance.

Therefore, the following questions arise: Why don't farmers buy insurance? What should be done to change the perception of farmers towards insurance, so as to boost demand for agricultural insurance?

The solution could be offered by artificial intelligence, especially expert systems. Their implementation in agricultural insurance would promote existing insurance products, finding alternatives to farmers' needs according to their possibilities and needs, and allowing for an ongoing improvement of the system as a result of feedback from farmers.

The objective of this paper is to collect data on specific aspects of agricultural, to prepare a knowledge database, to present conceptually a pilot version that will continuously improve based on the farmers' feedback, by showing clearly the collected data which would lead, through their processing, to the most relevant results.

(Ganesan 2006, 263) 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.

II. Literature Review

Expert systems have started to grow in importance lately, covering all areas of economic and social activity, with the role to collect data from human experts on various aspects in order to assist the user in the reasoning necessary to solve problems, at levels of expert performance, making available to him the acquired knowledge and experience.

The expert system is a software program that incorporates a particular knowledge database and an inference engine. The program acts as an intelligent adviser in a particular area (Frenzel 1987). It is a system that uses human knowledge captured in a computer program to solve the problems that usually require human expertise (Turban, Efraim; Aronson, Jay 2001).

The goal is to offer a solution to a given problem; the expert system must take a decision in this regard. For example - in this period, which is the insurance type that corresponds to the current features of the agricultural production and to the financial means of the farmer?

The ideal expert system first makes use of simple questions and rules to infer more complex knowledge. The system would be self-defensive if, instead of asking simple questions at first, would ask questions that require specialized expertise (Russel and others 1988).

(Trencher 1998, 7) consider that today, a growing number of insurers are using expert systems as a way to improve the quality of human processes - to perform tasks faster, more consistently and with fewer errors.

The main benefits of expert systems are (Turban, Sharda and Delen 2011, 569, 570):

- *Increased output and productivity.* Expert Systems can work faster than humans can.
- *Decreased decision-making time.* This property is important in supporting frontline decision makers who must make quick decisions while interacting with customers.
- *Elimination of the need for expensive equipment.* Often, a human must rely on expensive instruments for monitoring and control. Expert Systems can perform the same tasks with lower-cost instruments because of their ability to investigate the information provided more thoroughly and quickly.
- *Ability to work with incomplete or uncertain information.* Expert Systems can, like human experts, work with incomplete, imprecise, and uncertain data, information, or knowledge. The user can respond with "don't know" or "not sure" to one or more of the system's questions during a consultation, and the Expert Systems can produce an answer, although it may not be a certain one.

- *Provision of training.* Expert Systems can provide training. The explanation facility can also serve as a teaching device.
- *Improved decision quality.* Expert Systems are reliable. They do not become tired or bored. Expert Systems also consistently pay attention to all details and do not overlook relevant information and potential solutions, thereby making fewer errors. In addition, Expert Systems provide the same recommendations to repeated problems.
- *Ability to solve complex problems.*

(Gray 1987) suggested that insurers who have an automated partner generally have a higher probability to succeed in an increasingly complex environment.

While reviewing scientific literature, we found that expert systems are used increasingly more in recent years in agriculture (e.g. *Rice Crop Doctor*, the National Institute of Agricultural Extension Management (MANAGE) has developed an expert system to diagnose diseases and pests for rice crops and to suggest measures for prevention / curing, *AGREX*, the Center for Informatics Research and Advancement, Kerala has prepared an expert system named *AGREX* to help staff called on agricultural land by giving timely and accurate advice to farmers, *Punjab Agricultural University*, Ludhiana, has developed the Farm Advisory System to support agri-business management) (Kiong and others 2005), but we have not found and treated separately agricultural insurance, which would be an incentive to develop agriculture in general and in particular agricultural insurance, because in order to perform a modern agriculture, insurance plays an important role.

III. Research Methodology

The architecture of expert systems consists of 3 basic components:

- the knowledge database : it contains factual and information databases;
- the inference engine: the dynamic component of the expert system, which suggests a possible decision after analyzing the information in the knowledge database. Many expert systems are equipped with the ability to explain to the user **why?** and **how?** they have reached the chosen solutions through their reasoning;
- the user dialogue interface - the component which ensures the dialogue between the user and the computer in an exciting and comprehensible way.

Assuming the use of expert systems in agricultural insurance, we will present hereafter, in a simplified way, the steps that should be followed in building the system to generate the best option of crop insurance for one's needs.

Preparing the Knowledge Database

In order to prepare a more complex knowledge database to be included in the system, one needs to use official documents or diagrams, using specialized information from both agricultural insurance experts and experts from related fields (veterinarians, agricultural consultants, agricultural equipment suppliers, seed suppliers).

Expert systems cannot be designed without the support of a group of experts. An appropriate expert should have extensive knowledge in the field and good communication skills (Turban, Sharda and Delen 2011, 566).

Preparing Charts

Crop insurance, viewed from the perspective of expert systems, consists of multiple first-hand levels (Fig. 1). Each level is an integrated set of sublevels. For example, the "insurance risks" level includes the following sublevels: hail, frost (late spring frost, as well as early autumn frost), torrential rains, storms, hurricanes, tornadoes, landslides of cultivated land, fires caused by natural lightning (thunder, lightning), from which the farmer will choose one according to his needs.

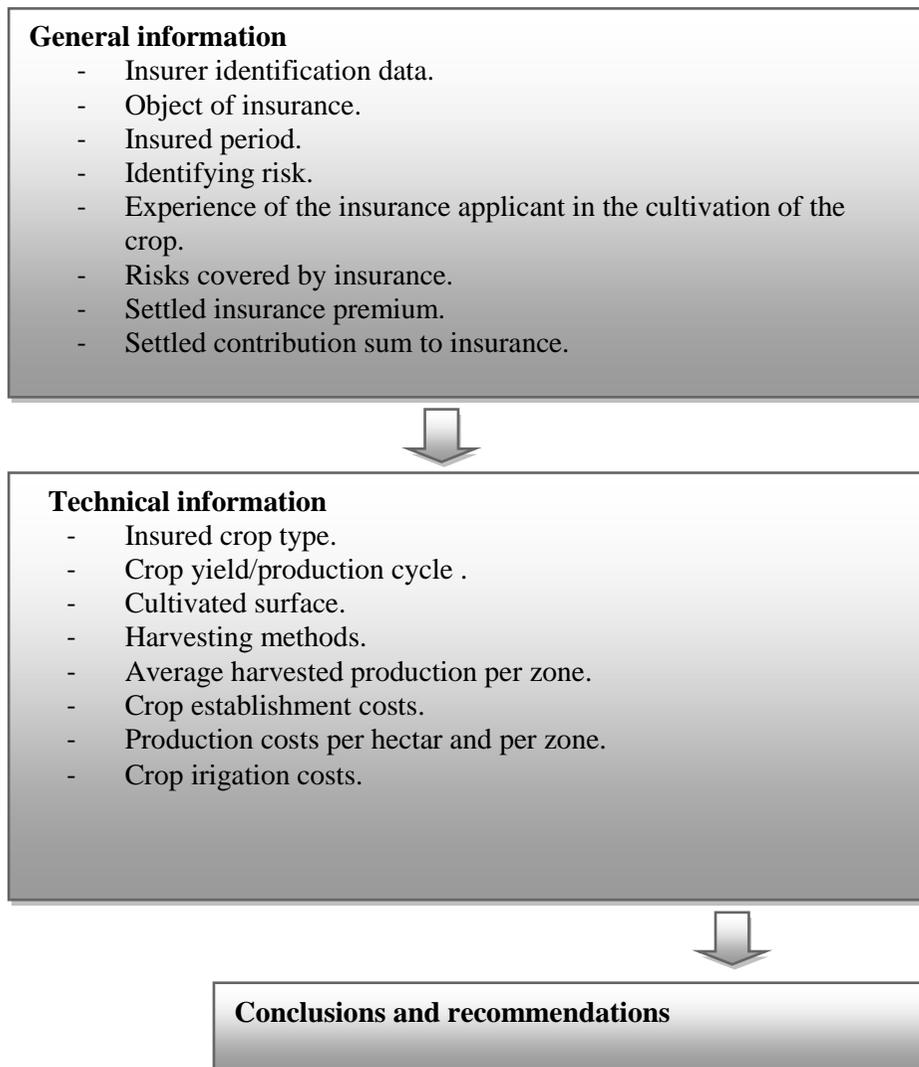


Figure 1: Agricultural insurance chart within expert systems
Source: compiled by the authors

If the reasoning is well done, it translates into the system by IF, THEN rules, which are meant to generate, at the end of the logical algorithm, the best solutions for the user (the farmer). For example: **if** there is a high probability of thunderstorms during the production cycle and **if** the required premium for the risk insured is accessible (within budget), **then** the farmer will subscribe to an insurance contract.

We opted for a simplified schematic representation (on a single level) of a possible expert system for agricultural insurance expert for a better understanding of its functioning, where the system informs the user about existing insurance conditions and provides an alternative, depending on the options chosen.

Encoding and Assessing the System

After choosing a suitable tool, (the most popular is the Corvid system), our attention turns to encoding the knowledge database. A major concern at this stage is whether the encoding process (definition of variables, building logical blocks and command blocks) is properly and effectively managed, to avoid errors. Regarding the assessment of the system, it involves both verifying (by ensuring that the knowledge database contains data acquired from experts and that there are no errors in the encoding phase) and validating the system (by confirming that the system works properly).

IV. Research Results

After observing the necessary steps followed by expert systems, one can easily notice the efficiency of implementing artificial intelligence in agricultural insurance, given that the main benefits are offering the right information to farmers, as well as high quality insurance products tailored to the farmers' needs.

Using expert systems in agricultural insurance would help develop the agricultural sector, bringing both immediate benefits and on the long term because they could track the farmers' behavior over time, their aversion to risk, as well as the frequency and intensity of risks in various regions, and could thus lead to the creation of improved insurance products that meet farmers' needs. These new and improved insurance products would address the different types of risks specific to agriculture, and their expansion to cover the all the farmer's assets is likely to sustain over time the development of this sector and maintain financial flow in agriculture.

The successful implementation of expert systems in agricultural insurance depends on properly understanding the importance of this system, on the availability and capacity of insurance companies to support this area and on the involvement of the Insurance Supervisory Commission and the Ministry of Agriculture.

Although it deals with the topic at a conceptual level, our research moves on to an attempt to present the necessity and importance of implementing expert systems in agricultural insurance as a solution for developing the Romanian agriculture sector because insurance plays a significant role in stimulating investments in agriculture and stabilizing farmers' income.

V. Conclusions

The agriculture of a country may be endangered by the weather which can not be controlled only to a limited extent and which can have major impacts on production achieved. The presence of risk in agriculture is a challenge, particularly for small farmers who are not used to insurance. (Johnson and others 1993, 35-51) showed that many farmers estimate incorrectly the probability of loss and may not correctly predict if an insurance contract is appropriate for them or not.

The implementation of expert systems in agricultural insurance would be an incentive for the development of both agriculture and agricultural insurance, because so as to perform a modern agriculture, it is necessary to maintain funding opportunities under the exact conditions required by the characteristics of the agricultural production. In this respect, the use of expert systems in insurance is a crucial tool for protecting agricultural producers and farmers. That is why the agriculture sector must be developed, especially that lately new risks have arisen as a result of climate change.

Applying expert systems technology in the agricultural insurance is as necessary as it is useful due to the fact that it provides information to farmers about the existing insurance products and it reproduces the reasoning of human experts in a comprehensible form, so that users, regardless of their level of knowledge, can decide which one best suits them at that time.

Despite the importance and necessity of expert systems as an alternative for development of agriculture and agricultural insurance, the implementation of such a system is delayed because of

the lack of involvement of insurance companies and regulatory authorities in the field (Supervisory Insurance Commission and the Ministry of Agriculture).

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THE EVOLUTION OF FISCAL INDICATORS IN THE LAST YEARS IN ROMANIA

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Tax revenues are an important part of budget revenues, and their structure represent the mirror of government's fiscal policy. Also their level and structure reflects the evolution of the economy in general. The evolution of tax revenues has been influenced by the financial crisis of this period. The tax revenue structure in Romania is characterized by relatively high share of indirect taxes revenues in comparison with another European Union states, where the share of revenues from direct, indirect taxes and social contribution is relatively close.

Government expenditure is vital for the economy especially if they are focused on productive areas. They are the engine of economic developments and plays an important role in raising the standard of living of population in a state. In the last years, the growth rate of public expenditure was higher than the trend of tax revenues increase. Sizing revenue and public expenditure is essential for achieving the budget balance target and to meet the criterion stipulated in the Stability and Growth Pact. According to the Pact, the budget deficit may not exceed 3% of GDP. This development asymmetric led to increased deficits in the last years.

The high level of structural deficit has canceled an initiative to tax relaxation in this recession period. The need for fiscal consolidation has been paramount in the context of chronic deficit and difficulties faced in financing it. The opportune solution to finance the high public deficit and to achieve the objective of financial stability of the economy was contracting of public debt from International Monetary Fund. Other measures to reduce the deficit were the reduction of public expenditure and increasing tax revenues.

We propose in this paper to analyze the evolution of fiscal indicators in comparison with the evolution of macroeconomic indicators to capture the reaction of taxpayers and economic environment at measures adopted.

Keywords: fiscal, tax, fiscal revenues, budget, financial crisis

Coduri JEL: E60

I. Introduction

The importance of fiscal policy of a state budget is derived from the impact that it manifests on the main macroeconomic indicators which reflect progress through economic growth. The fiscal –budgetary policy must be linked to macroeconomic policies and support macroeconomic stability objective. The main objectives of fiscal-budgetary policy are to stimulate the economic activity, rising living standards, fiscal consolidation, promotion of countercyclical fiscal policies. The mirror of fiscal-budgetary policy is a state budget, which includes destinations of financial resources and their sources of funding. Some authors considers that budgetary policy represent the concept and actions of government for public revenue and expenditure, the means to raise revenue, the types and size of expenditure which can interfere in the stabilization and economic recovery(Dobrotă N 1999:354). Although the architecture of revenue and expenditure depends

from economic priorities of a state, it must adapt to situations at a time. Through the budgetary policy is reflected the efficiency of public expenditure use and management and the allocation of financial resources. The level and structure of public revenue and expenditure reflects the main trends, directions for action in a state economy. So do not neglect “the important role of policies and budgetary levers in the modern economy”, like it is highlighted by Constantin Tulai professor(Tulai C. 2007:68). Fiscal policy offers the main tools which is used by the government to influence the economy through changes in taxation level or public expenditure adjustment. Fiscal policy plays an important role in mitigating the economic cycle. According to several experts which we subscribe too, the effectiveness of fiscal policy is reflected by its role of stabilizing the economy. Thus, we can say that the optimal tax policy is acting to mitigate the amplitude of business cycle fluctuations, that in periods of recession adopt a lax behavior and in the expansion periods a more restrictive behavior. An important indicator by means of we can estimate if the fiscal policy performs the stabilizing role is the structural deficit. The structural deficit shows how many from the fiscal-budgetary position level reflected through taxes, transfers, expenditure due to economic conditions and how many due to fiscal policy decisions taken. The analysis of this indicator reflects the sustainability of fiscal policy.(Raport anual: Evoluții și perspective macroeconomice și bugetare 2011: 23-24)

By the side of monetary policy, fiscal policy has an important role in the general economic policy objectives. While monetary policy acts on short-term, the effects of fiscal-budgetary policy is outlined in a medium or long time horizon. However the objectives of the two categories of economic policies must be linked.

In the context of Romania integration into the European Union, another concern is adapting the fiscal-budgetary policies to EU requirements. Optimum sizing of public revenue and expenditure is essential to achieve budget balance and to respect the objective criteria laid down in the Maastricht Treaty. According to the Treaty, the budget deficit must not exceed 3% of GDP.

The current financial crisis has exposed some weakness of fiscal budgetary policy direction of Romania that pro-cyclicality. Thus, in the context of excessive growth in the budget deficit in Romania is necessary a budgetary and fiscal consolidation. A growth model based on debt and increase investment in housing and consumer sector, high budget deficits have required fiscal consolidation efforts.

II. The evolution of main fiscal indicators in period 2000-2010

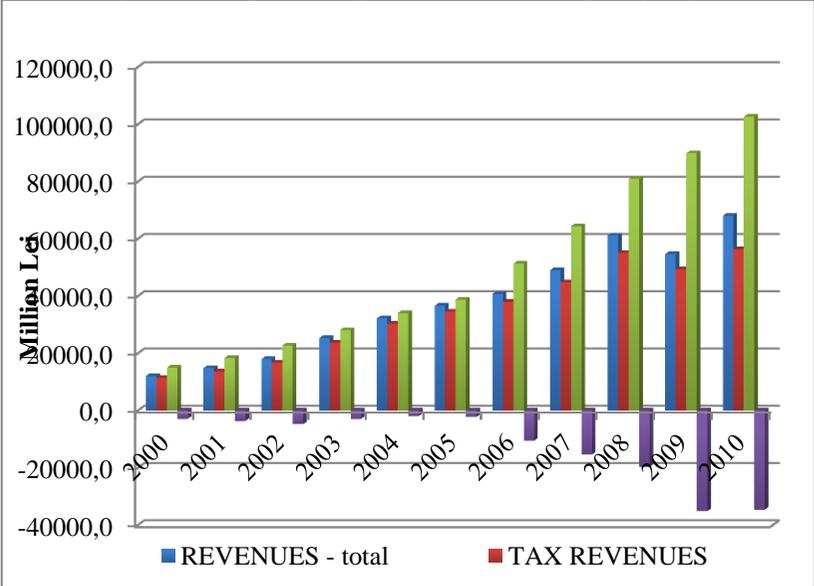
Procyclical nature of fiscal and budgetary policies of economic growth before the financial crisis, canceled fiscal space to stimulate the economy during the recession claiming the need to reduce high budget deficit during the crisis and maintaining pro-cyclical fiscal and budgetary policies. Although Romania is the country with the highest GDP growth in Europe but in the short term this situation marks a number of uncertainties about the outcome of the deep financial crisis(Raport privind situația macroeconomică pentru anul 2009 și proiecția acesteia pe anii 2010-2012: 8).

Analyzing the revenue and expenditure in the period 2000-2010, we notice a trend of growth, but it is noticeable that since 2006 public expenditure growth has outmatched the strong growth trend of public revenues. The share of public revenues in GDP in the period 2008-2010 is situated between 32.2% and 32.7%, while the share of expenditure in GDP have been growing larger, ranging between 37-39, 5%(Ministry of Finance - *Raportul la proiectul Legii bugetului de stat pentru anul 2011 și orizontul 2012-2012:9*).

This development resulted in an exaggerate increase in the budget deficit. Unlike other European Union countries (Ireland, Belgium), where the excessive budget deficits growth is due by measures adopted by national governments to support the banking system, in Romania the budgetary deficit is determined by two main factors: the dramatic loss of budget revenues caused by the GDP collapse and the structural deficit accumulated by Romanian before the starting of

financial crisis. If in the period 2001-2007, the budget deficit was fitted within the limits set by the Maastricht Treaty, since 2008 the share of budget deficit to GDP has significantly increase about 5.7% from GDP, exceeding far the permitted threshold of 3 % of GDP. Fiscal adjustment measures aimed primarily efforts to increase tax revenue by increasing the VAT rate with 5%. On the expenditure side, efforts were directed towards a reduction in salaries of public sector, complemented by reducing the number of employees, a decrease of 15% of most social benefits and reduce spending on goods and services by 10%.

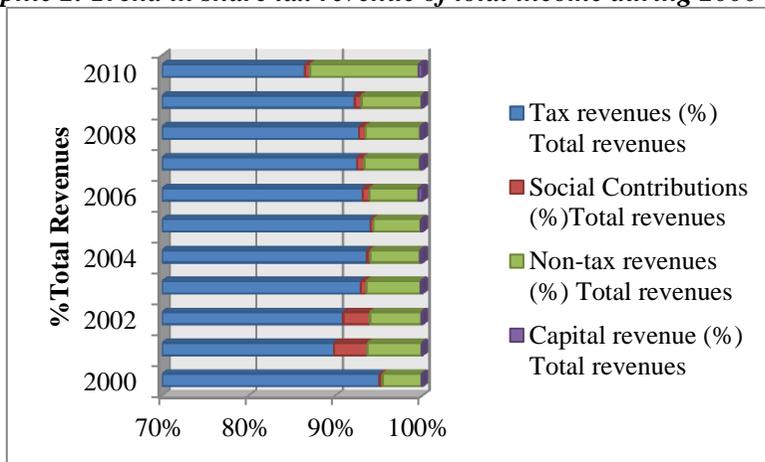
Graphic 1. Evolution of revenue, public expenditure and budgetary deficit 2000-2010



Source: Ministry of Finance- www.mfinante.ro

By the side of public revenues, Romania is the state with the lowest share of budgetary revenues in GDP (32.4% of GDP in 2009), in comparison with other European Union countries, with about 11% lower than the EU average. Also the share of tax revenue to GDP is below the EU average. Analyzing chart below we notice a downward trend in the share of fiscal revenues in total government revenue, emphasizing in the period 2009-2010. This evolution is certainly due to the economic slowdown and GDP downward during 2008-2009 period. Reducing the share of tax revenues in total revenues during 2009-2010 budget is offset by an increase of share of non-tax revenue in the total income.

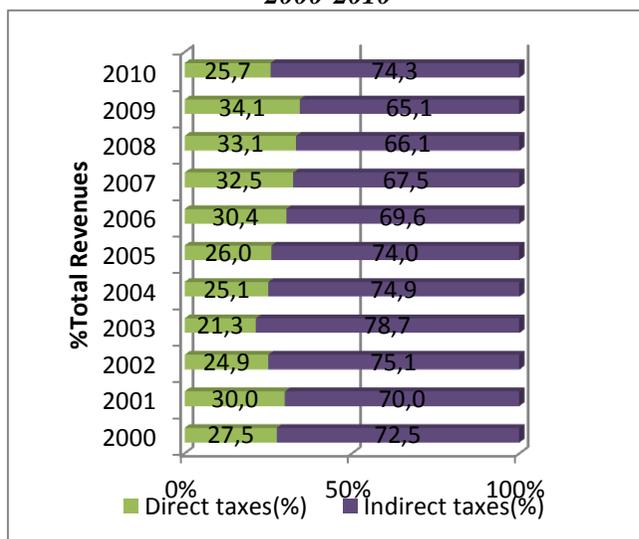
Graphic 2. Trend in share tax revenue of total income during 2000-2010



Source: Ministry of Finance- www.mfinante.ro

The tax revenue structure in Romania is characterized by relatively high share of indirect taxes revenues in comparison with another European Union states, where the share of revenues from direct, indirect taxes and social contribution is relatively close. Although the share of direct taxes fluctuate between 20% and 30% of fiscal revenue in the reviewed period, it is lower in comparison with the share of tax revenues from indirect taxes ranging between 65% and 80%. Analyzing strictly period 2007-2009, we can observe that the revenue from indirect taxes knows slightly downward trend from 67.5% in 2007 to 65.1% in 2009. The orientation of revenue from indirect taxes change in 2010, when an increase of almost 10 percent record compared with 2009. This development is due to austerity measures adopted by the Romanian government among indirect taxes in response to IMF conditions, namely increase in VAT rate from 19% to 24%, gradually increasing excise.

Graphic 3. The share of direct tax and indirect tax revenue to the formation of tax revenues 2000-2010

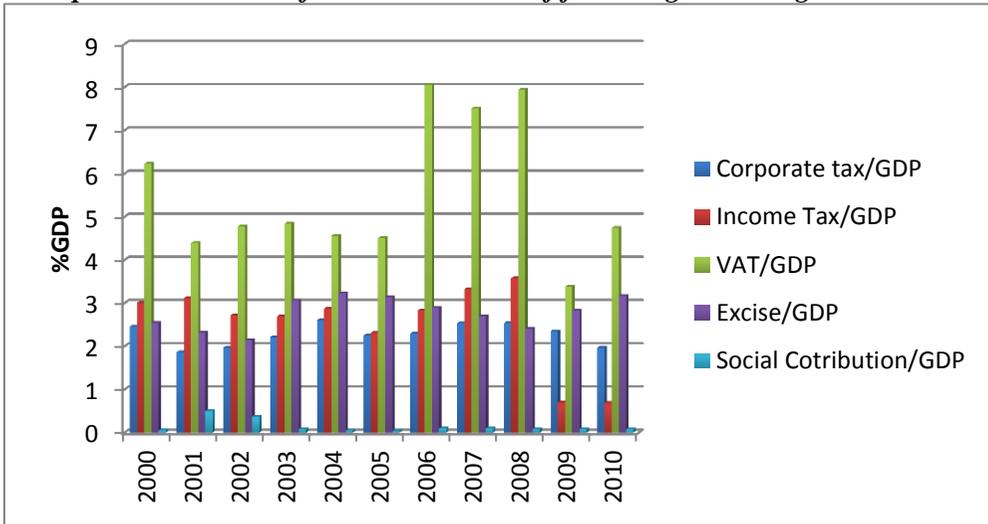


Source: Ministry of Finance- www.mfinante.ro

Analyzing the main categories of sources of revenue: income tax, VAT, excise duties and social contributions can be seen that the largest share is held by value added tax, culminating in 2006 recorded values (8.05% of GDP), 2007 (7.5% of GDP) and 2008 (7.9% of GDP). There then follows a collapse in 2008-2009 of VAT receipts. Then follows a collapse in 2008-2009 of VAT receipts. Since 2010, the revenues from VAT has resumed the ascendant trend as a result to measures taken by the government: the increase in VAT from 19% to 24% by OUG 58/2010 to achieve a balance between revenues and expenditures, where the income were strongly affected by the financial crisis. Government has taken this measure to increase the VAT rate to achieve the objectives of fiscal policy commitments agreed in the bilateral funding agreements concluded with the International Monetary Fund, the World Bank and European Commission. In comparison with the revenues from value added tax, excise revenues are not aware such asymmetric developments in the analyzed period. A slight decrease in revenue from excise duty in 2008 with slight recovery observed in 2009. The slight increase in excise revenue due to the increase of excise duty applied on 1 January 2010 for cigarettes, electricity, heat and gas, to achieve the minimum level required by Community legislation, the increase of the average rate RON / EURO considered at the computation of excise for 2010 and increase the amount of duty on some products. In order to study the impact of fiscal changes on the macroeconomic indicators we can say that measures to increase the rate of VAT and excise duty levels had a negative direct effect of inflation growth in Romania. As regards direct taxes there are high differences among the income taxes, a decrease of approximately 3% of GDP in 2009 compared with 2008. Since may 2008, receipts from corporate income tax recorded a slight decrease. Decreasing receipt from direct taxes is determined mainly by decline of household income and the level of profits as a result of financial crisis. Measures taken by the Romanian government in order to income tax to restore the balance between revenues and public spending was temporary introduction of the minimum tax in April 2009. From the analysis of changes in tax receipts we can observe that the measure do not provided higher receipts from this source, the effect was rather gap mitigation. Social benefits also know a slightly downward trend. The share of social contributions to GDP is steadily falling since 2006. This development is the result of gradually implementation of pension pillar II, which involves targeting gradual shares of social security contribution rate by a private pension fund to invest. Gradually implementation of the pension pillar II is achieved by increasing the share of social contributions redirected from 2.5% to 3% in 2010. In order to restore balance in the public pension system have been adopted reforming measures which include: raising the standard retirement age, increasing the number of those taxpayers with income from professional services, managers, discouraging the number of early retirement, early partial and unfair disability retirement, the expansion base for social contributions.

Overall we conclude that the financial crisis effects have been evident since the end of 2008, resulted in a strong decline are the main sources of financing state budget.

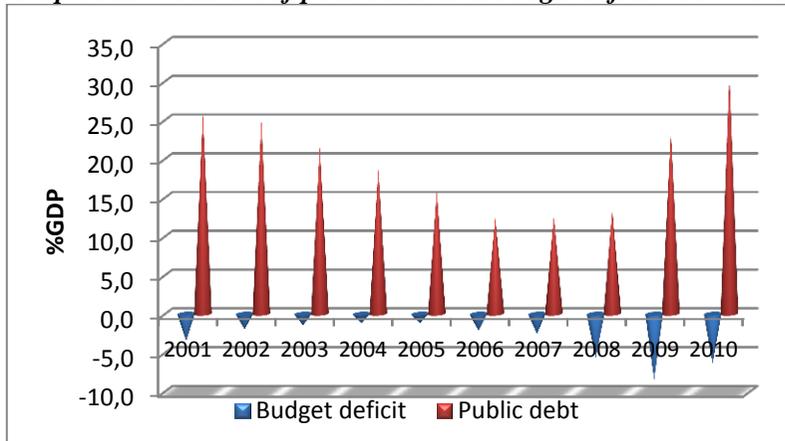
Graphic 4. Evolution of the main sources of financing state budget 2000-2010



Source: Ministry of Finance- www.mfinante.ro

In terms of economic contraction and the budget deficit financing needs in 2008 (5.7% of GDP), Romania's public debt increased. The optimal solution for financing, the high deficit and debt refinancing, respectively to achieve the objective of financial stability of the economy was contracting of public debt from the International Monetary Fund (Mara Eugenia Ramona, Inceu Adrian, Cuceu Ionuț, Achim Monica Violeta 2005: 5). Increasing public debt growth is due mainly by the increasing of government debt, local debt remained constant. The structure of government debt shows that public debt contracted directly by the state is about 90% of the total public debt and debt guaranteed by the state government is about 10% of the total. (privind situația macroeconomică pentru anul 2009 și proiecția acesteia pe anii 2010-2012: 30). Analyzing the public debt by the currencies in 2010, we can observe the most important component is the Euro (44.1%), followed by national currency (43.5%), while other currencies have only 12.4% of total debt government. High share of debt in euros due to the hiring of loans in euro, both domestic and foreign. Romania's public debt has increased significantly in the last two years, reaching the 2010 level of 30.8% of GDP, which is well below the ceiling imposed by the Maastricht Treaty of 60% of GDP.

Graphic 5. Evolution of public debt and budget deficit 2001-2010



Source: Eurostat

III. Conclusions

Through the financing agreements concluded with the IMF and the European Commission, the Romanian government has assumed an adjustment program to reduce the general government deficit at 4.4% of GDP for 2011 of 3% in 2012, and most adjustment measures are already in force. This further implies keeping under control public spending and the elimination of discretionary fiscal policy measures affecting the revenues.

In conclusion we can say that Romania's fiscal policy should remain a conservative, restrictive towards the goal of fiscal consolidation.

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PUBLIC DEBT SUSTAINABILITY ANALYSIS: EU CASE

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The global crisis has caused a serious fiscal deterioration that leaves the world economy with serious challenges. In many developed markets as well as in a few emerging markets (Emerging markets) public finances have already become, or are at least at risk of becoming, unsustainable. Commonly, public debt sustainability is defined as a sovereign's ability to service debt without large adjustments to public revenue and/or expenditure and without ever-increasing public-debt-to-GDP ratios. Hence, this definition refers to both a country's ability and willingness to repay its debt. We also have to add the fact that there isn't an universal accepted definition of fiscal or debt sustainability.

In light of the growing public debt, the issue of debt sustainability has increasingly attracted attention. In this paper we analyse public debt sustainability scenario in EU economies. At least half of the EU countries will have to implement stringent fiscal consolidation programmes over the next few years in order to prevent already high public-debt-to-GDP ratios from a further significant rise, also the case of Romania. However, drastic fiscal policy adjustment may be not feasible in the short term and hence public debt is likely to grow further.

In some scenarios the public-debt-to-GDP ratio is predicted to soar to 133% in 2020, from just over 100% in 2010. By contrast, nearly all EM countries, including major economies, appear to be well positioned to stabilise or even outgrow their current debt ratios without drastic fiscal adjustment.

Institutional improvements may help European countries to maintain fiscal credibility. In light of the future fiscal challenges, many European governments may introduce new or more effective national debt limits, similar to those put in place in the past with good results by some Emerging markets. Such institutional reforms could help to insulate fiscal policies from political pressure and to anchor financial market expectations.

Keywords: public debt, fiscal policy, fiscal sustainability, GDP, fiscal consolidation.

JEL Codes: H63, H30, H69, H60, H59.

I. Introduction

Most economists, policymakers and international financial institutions called for expansionary monetary and fiscal policies to mitigate the adverse effects of the global crisis. So far, bold and coordinated policy actions have successfully prevented a collapse of the world financial system and the global economy.

Nearly all major developed markets as well as some emerging markets have run counter-cyclical fiscal policies, either via automatic stabilisers or through discretionary stimuli. As a result, fiscal accounts have worsened significantly since 2007 not only in Developed markets but also, though to a lesser extent in emerging markets. Fiscal accounts were hit particularly hard in Developed markets with bursting housing market bubbles as well as in countries with already high pre-crisis debt burdens.

Regarding the average GDP-weighted public-debt-to-GDP ratio in Developed markets and Emerging markets, it is obvious that many governments have moved into unexplored territory over the past couple of years. While the GDP-weighted EM public debt stock climbed to around 44% of GDP in 2009 from just 35% in 2006, the DM debt ratio skyrocketed to around 95% of GDP from less than 80%.

Today, most Emerging markets still exhibit relatively manageable public debt levels. The current EM public-debt-to-GDP ratio is well below its late 1990s high of 55% of GDP. Contrary to Emerging markets, DM public-debt-to-GDP ratios are now higher than they were in the late 1990s, measured both on an un-weighted as well as on a GDP-weighted basis.

Since the turn of the century, public finances have worsened in particular in a few major developed markets, as underlined by the growing gap between the un-weighted (simple) and the GDP-weighted DM public debt-to-GDP ratio. Meanwhile, the gap between the un-weighted and GDP-weighted average debt-to-GDP ratio has narrowed in the EM world, indicating that no major EM has a public debt burden that is significantly above the average level of its peers.

The previous findings indicate that tail risks in public finances, as measured by the relative size of an economy, are nowadays highly concentrated in the advanced world. The nine Developed markets that face substantial consolidation needs (Ireland, Germany, the UK, the US, France, Portugal, Greece, Italy and Japan), account for around 85% of the DM sample's total GDP. However, the Emerging markets that are either subject to tangible consolidation needs (the Czech Republic, Hungary, Romania and Poland) or where past efforts to lower high public debt have to continue (Turkey, Brazil, India) account for only 29.8% of the EM's total GDP.

II. Literature review

When analysing public debt sustainability in Developed markets and Emerging markets, it is useful to recall the basic concept of public debt arithmetics. (Eduardo(2005) and Sturzenegger (2002).)

To begin with, the dynamics of debt accumulation can be described in absolute terms as:

$$D_{t+1} - D_t = r_{t+1} \times D_t - PB_{t+1} \quad (1)$$

where:

- D denotes a country's gross public debt stock,
- r captures the real interest rate paid on public debt outstanding, and
- PB represents the government's primary balance, i.e. the government's fiscal balance before net debt interest payments.

The above identity can also be expressed in percent of GDP, which puts the public debt stock in relation to the size of the economy (government's underlying potential tax base):

$$\frac{D_{t+1}}{GDP_{t+1}} = (1 + r_{t+1}) \times \frac{D_t}{GDP_t} \times \frac{GDP_t}{GDP_{t+1}} - \frac{PB_{t+1}}{GDP_{t+1}} \quad (2)$$

After rearranging we obtain:

$$d_{t+1} = \left(\frac{1 + r_{t+1}}{1 + g_{t+1}} \right) \times d_t - pb_{t+1} \quad (3)$$

where:

- d denotes the public debt stock and
- pb the primary budget balance (both in percent of GDP).
- g represents the annual real GDP growth rate.

As shown in equation (3), the current public debt stock depends on the past year's debt stock as well as on today's real interest rate, real GDP growth rate and primary balance. The higher the real interest rates, the lower real GDP growth and the lower the primary balance, the more the

public-debt-to-GDP ratio rises. In other words, strong real GDP growth, low real interest rates and sound fiscal policies (as reflected by primary surpluses) are necessary to avoid ever-rising public debt stocks or to lower public debt to more sustainable levels.

Often it is important to know what primary balances governments have to achieve in order to stabilise their current public-debt-to-GDP stocks under given macroeconomic and financial conditions, i.e. under the prevailing economic growth and interest rates.

It can be shown from (3) that the required primary balance to stabilise the debt-to-GDP ratio, denoted as pb^* , depends on the differential between the real interest rate r and the real GDP growth rate g as well as on the prevailing debt level in year $t=0$:

$$pb^* = \left(\frac{r-g}{1+g} \right) \times d_0 \quad (4)$$

Highly indebted sovereigns may have to achieve more than stabilisation of their current public-debt-to-GDP ratios. Instead, more ambitious fiscal improvements are needed to put public debt dynamics on a sounder footing.

In order to lower the current debt-to-GDP ratio to a target level d^* over the next T years, the required permanent primary balance pb^{**} is given by:

$$pb^{**} = \frac{d_0 \times \left(\frac{1+r}{1+g} \right)^T - d^*}{\sum_{j=1}^{T-1} \left(\frac{1+r}{1+g} \right)^j} \quad (5)$$

III. Methodological framework

In many countries rising public-debt-to-GDP ratios imply the risk of increasing pressure on sovereign financing capacity, creditworthiness and hence ratings. A “positive” shock would be triggered by unexpectedly strong but well-balanced fiscal consolidation. Should economies show signs of a more durable recovery, or – more gloomily – should market and rating agencies’ pressure intensify, such a scenario would not look that far-fetched. But how much adjustment is needed? This depends on the current and desired debt level. As “desired” debt targets we use three different benchmarks:

(1) **Stabilising current debt levels**, as preventing further increases could send a positive signal about fiscal prudence.

(2) **Pre-crisis (2007) debt levels**, to be attained in 5-10 years’ time.

(3) **Prudential public-debt-to-GDP benchmarks** (of 60% for DMs and 40% for EMs), to be attained over a 10-year period.

To stabilise debt at 2011 levels, EM countries – on aggregate – could run a primary fiscal deficit of 1.2% of GDP each year. For the past five years, these countries have run a primary surplus of 0.8%, so the stabilisation of debt appears to be easily manageable. Of course, there are country-by-country differences. Turkey and Brazil, for instance, would need to deliver a substantial permanent primary surplus to stabilise their debt. However, in both EMs the required primary surpluses are largely in line with what was achieved over the last cycle.

In the past decade, DMs ran an average primary deficit of 1.2%. Again, the country-by-country analysis shows significant differences and some silver lining. For example, crisis-struck countries like Spain, the UK and the US could stabilise their 2011 public-debt-to-GDP ratio by running only moderate permanent primary surpluses. Nevertheless, the gap between the primary balance

achieved over the last cycle and the debt-stabilising primary balance indicates that many DM and a few EM governments have to significantly alter their fiscal policy stance. This is also true for countries that could continue to run primary deficits to stabilise debt levels. In Japan, Greece, Slovakia, Portugal, the US, Romania, Hungary, the UK, the Czech Republic, Ireland and Poland (consolidation needs by decreasing size) the debt-stabilising permanent primary balance is at least one percentage point above the average figure of the last cycle.

Lowering debt to pre-crisis levels: here we discuss the permanent primary fiscal balances required to bring current (2011) public-debt-to-GDP ratios back to pre-crisis levels (2007) within five or ten years' time.

Nearly all DMs (16 out of 17, with Switzerland as exception) have to achieve constant primary surpluses of 1-12% of GDP in order to lower public-debt-to-GDP ratios to pre-crisis levels over the next five years. If spread over ten years, the required adjustment ranges from 1-6% of GDP for 13 out of 17 DMs. The consolidation needs are largest in Japan, Ireland, the US, the UK, Greece, Portugal, Slovakia, France, Spain and Germany. This holds true in absolute terms and/or relative to what has been achieved over the past years.

Contrary to most DMs and in line, debt reduction to 2007 levels does not appear challenging for most EMs, according to the average primary balance achieved over the last cycle. The only exceptions are Poland, the Czech Republic, Hungary and Romania. These countries need a tangible improvement on their primary balances to reach their pre-crisis indebtedness.

However, pre-crisis indebtedness is not necessarily a meaningful benchmark for the analysis of debt sustainability. Especially for those countries where the difference between the public debt levels in 2011 and 2007 is small and/or where the pre-crisis debt stock was already elevated, the focus on pre-crisis levels may not show the true sacrifice required to cut public-debt-to-GDP ratios back to more sustainable levels. Thus, we also calculate the permanent adjustment needed on the primary balance to lower public debt to benchmarks considered prudent.

As benchmarks and in line with the IMF's calculations we use public debt- to-GDP ratios of 60% and 40% for DMs and EMs, respectively. Other benchmarks are also perceivable and economic theory offers no widely accepted public-debt-to-GDP limits.

Although the 60% limit for DMs (also part of the Maastricht treaty) has some theoretical justification, it could be considered arbitrary. For EMs we use a limit of 40% of GDP, which is often suggested as a critical external debt limit. At least up to now there are several reasons that support this discount for EMs (e.g. more unfavourable debt structure, higher exchange rate and market access risks).

In a sample only 5 of 17 DMs (Australia, Slovakia, Switzerland, Denmark and Sweden) have public-debt-to-GDP ratios of below 60%. In fact most DM countries, including major economies and most major EMU and EU countries, have debt stocks well above this benchmark. Germany, the UK, the US, France, Portugal, Belgium, Greece and Italy would have to achieve constant annual primary surpluses of 2.5-8% of GDP over the next ten years to reach a public-debt-to-GDP ratio of 60%.

Moreover, the debt reducing primary balances are extremely demanding (with the exception of Belgium and Canada) in relation to past averages. Compared to the last decade these countries will have to improve their primary balances by 2-7 percentage points.

By contrast, in the EM world there seems no widespread need for sharp fiscal consolidation. Nevertheless, fiscal challenges in the EMs should not be underestimated. Within a sample only ten out of 21 EMs have public-debt-to-GDP ratios below the 40% benchmark.

However, compared to DMs the efforts required to reach prudential levels look much more manageable. Only Romania, Hungary, Poland and the Czech Republic would have to alter their fiscal policy stance substantially. However, these EMs enjoy the prospect of joining EMU and hence of migrating to the DM segment. As EMU members they would be able to issue public

debt in a global reserve currency. Thus, the 60% debt limit, well within reach except for Hungary, appears to be a more appropriate benchmark to them.

IV. Results

We want to stress that public debt ratios above 60% (40%) of GDP do not necessarily imply a crisis. Many DMs and Ems have not defaulted despite having borne relatively high debt. However, debt ratios well above these limits and/or on a rising trend certainly increase the risk of market repercussions. At the moment, this applies in particular to DMs. Moreover, the outlook for public debt levels above the 60% benchmark, on the rise and substantially above past levels in a lot of DMs has several implications.

Firstly, record volumes of sovereign issuance will have to be absorbed. This holds true even if some consolidation will be achieved. Thus, regulatory pressure on FIs to absorb this issuance might increase. Moreover, countries with public debt well above benchmarks might suffer from crowding-out effects or may have to accept substantially higher risk premium. Although for some DMs (including EMU members) such risk reprising may be desirable from an economic point of view (i.e. to enforce fiscal discipline), it will complicate the task of preserving public debt sustainability in the short run.

Secondly, the credibility of institutional arrangements like national debt limits in DMs or the EU's Maastricht treaty as well as the Stability and Growth Pact will be under pressure for years.

Thirdly, the fiscal challenges in many DMs may revitalise the longstanding debate on the establishment of ex-ante instruments to deal with sovereign debt problems. Concepts to enforce an insolvency law for sovereign debtors or to establish the IMF as a sovereign bankruptcy trustee (traditionally developed in times of EM crisis) could gain more acceptance. As the design of a potential EMF will have to be part of the current European institutional framework, its design and funding are likely to be partially based on the Maastricht framework. Thus, countries with a public-debt-to-GDP ratio higher than 60% and/or fiscal deficits above 3% of GDP would have to contribute to its funding. The debt target analysis clearly shows that all major EU/EMU members would be contributors for many years. This would help to equip such an institution with adequate capital.

Fourthly, the debt target analysis gives some tentative insight on potential pressures on DM sovereign creditworthiness in the absence of credible consolidation plans along the lines of the sketched requirements. Failure to consolidate could have serious implications for rated quasi-sovereign and private sector entities.

The ultimate bearer of the sketched adjustment costs (e.g. through higher income taxation) is the population, i.e. the electorate of a country. Thus, the quality of policymaking will be crucial in the years ahead. Being aware of this, governments may want to "ring fence" fiscal consolidation from political pressure using (more) effective institutional arrangements such as limits on public indebtedness.

V. Conclusions

In many DMs and a few EMs, one should not forget that expansionary policies mitigated the adverse effects of the global crisis and very likely prevented a collapse of the global financial system and the world economy.

At the moment, it appears that a fiscal exit can take place only gradually. Future scenarios as well as debt target analysis highlight that public debt has become, or is at least at the risk of becoming, unsustainable in many DMs but only in a few EMs. At least in theory, most EMs could afford to run looser fiscal policies, for instance by extending counter-cyclical fiscal policies in order to smooth the fall-out from the global crisis.

Moreover, moderate initial debt levels put them in a relatively comfortable position to stabilise or even outgrow their debt-to-GDP ratios. Only austere and bold fiscal policy adjustments after the worst of the crisis is over, which may lay the foundations for higher potential real GDP growth, lower real interest rates and improved fiscal accounts, would significantly alter the presented public debt dynamics. For some countries the permanent primary balances required to stabilise or even reduce public-debt-to-GDP ratios look very ambitious.

Nevertheless, the required economic and political efforts to consolidate public finances might be much greater than in the past. Overall, medium-term fiscal consolidation is more likely to occur in a supportive macroeconomic environment. During an economic downturn or recession, rising tax rates may not suffice to substantially increase the tax-to-GDP ratio.

Should consolidation fail, policymakers in DMs and some EMs may be tempted to look for other ways to fix the fiscal damage. Either they could tolerate a substantial acceleration in CPI inflation to inflate public debt and/or they risk severe adjustments in the real effective exchange rate. Such adverse scenarios should not be disregarded. The assumption that major macro issues cannot go wrong in the DM world (including EMU) has to be scrapped in the aftermath of the global crisis while this time EM, not DM, economies are the ones in the lead to keep public indebtedness sustainable.

VI. Notes

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PUBLIC EXPENDITURE POLICY IN THE CONTEXT OF ECONOMIC CRISIS - CHALLENGES AND IMPLICATIONS

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Public spending is a key component for both public finances and government financial policy. In this situation, government expenditures are made in direct relation with the results of governance with economic and financial crises and global social welfare of the nation. From this perspective, our article aims to highlight the correlation between public expenditure and budgetary financial and economic crisis and, also, state government responses, anticipating their impact on medium and long term. Also, in the context of the crisis and the concomitant lack of public revenue, we identify the pillars on which to base the budget reduction in public expenditure. The implications of the economic crisis in Romania are analyzed along with proposed measures to be followed by the Government through budgetary fiscal strategy. In relation to the purpose and objectives of the research, documentation was made both in terms of bibliographic resources and the plan of legislative documents and quantitative reporting. We believe that the issue of increasing allocative efficiency of resources is vital to counter the current crisis, but also to maximize the positive effects of public interventions in general and from another state, we consider that state and, consequently, public expenditure budget which should be used to replace the market, can not be regarded as some suggest to be founded and we suggest a line for developed countries. This work was supported by the grant "Post-doctoral studies in Economics: program for continuous forming of elite researchers – SPODE", contract POSDRU/89/1.5/S/61755, project financed by the European Social Fund, by the Operational Sectorial Program Development of Human Resources 2007-2013.

JEL: H50 - General H53 - Government Expenditures and Welfare Programs

Keywords: public expenditures, public debt, tax strategies, economic crises

I. Introduction

The financial crisis that hit the world economy since 2008, had the initial effect of the massive decline in production in many countries, whose level effects were considered comparable with those of the Great Depression. Simultaneously, unemployment rates have increased and will probably be some time still growing in some countries and in Romania. Income tax revenues have also declined, sharply. This crisis can be categorized as having an unusual character, a fact supported by its two main features: (a) how it has spread very quickly from the U.S. to other countries, and (b) how it has become globalized, compared with past financial crises which have generally been limited to one or several countries.

Many analysts considered the current crisis as a clear evidence of market failure, calling for governments to intervene and play an important role both in the short term to stabilize the economy and long term, to expand activities in the public sector and public spending. The theme of the current debate can be considered "more market and less government intervention" (Tanzi 2009: 31). From this perspective, we see that the manifestation of the crisis has provided a convenient argument for increased government spending, but also for their serious restructuring

in many countries. In early 2011 states are still involved in the short term to stabilize the market. It is perhaps too early to predict what will happen long term but inevitably short-term actions will have a major impact on long-term consequences. Now, when countries will come out from the financial crisis, will face a fiscal crisis, which is more difficult to solve.

II.Literature review

The issue of public expenditures was, by its nature, the subject of extensive research in the literature. Normally, however, in the absence of confrontation with another similar economic crisis as it was in 1929-1933, with which currently comparisons are made, no studies have been conducted on evidence showing the correlation between the expression of crisis, government responses and public spending. Extensive studies on the issue of public expenditure were undertaken in the work by Vito Tanzi - *The Changing Role of the State in the Economy: A Historical Perspective*, IMF Working Paper 97/114, International Monetary Fund, Washington in 1997, but also in the work done with L. Schuknecht *Public spending in the 20th century. A global perspective*, Cambridge University Press, 2000, in which was captured a comparative analysis of their impact on society and economy development. Alan Sutherland stressed the impact of public spending in an economy continuously changing conditions in an article entitled *The Expenditures Switching Effect, Welfare and Monetary Policy in a Small Open Economy* CEPR Working Papers published, in April 2004. An important analysis is carried out by Anwar Shah World Bank *Public Expenditures Analysis* in 2005. The issue of public expenditure is enhanced by Vito Tanzi, in the context of recent economic crisis, seeking their role and impact in the new context that most states have faced, in the article *The Economic Role of the State Before and After the Current Crisis* of the 65th Congress International Institute of Public Finance, Cape Town (South Africa), 2009.

III.Research methodology

In relation to the purpose and objectives of the proposed research, documentation was made both in terms of bibliographic resources (books, studies, articles) and the plan of legislative documents (eg., Fiscal and budgetary strategy) and the reporting of quantitative (statistical yearbooks, official reports, national and international forecasts such as those of Eurostat, OECD, World Bank, IMF or the ECB). Data collected were processed and summarized in graphics, in order to capture more adequately the trends identified. It is also used comparative analysis of data which allowed highlighting the differentiation and peculiarities of public spending and their differential impact on social and economic development.

IV.Research results

IV.1.Public expenditure policy in the context of international crisis

At this stage, all states have relied on massive public spending increases, giving rise to major public deficits, public expenditure budget later found related with borrowings, interest and fees. Many institutions (IMF, OECD, ECB, European Commission) have made various estimates of the impact on fiscal variables, implicitly revealing developments in public spending budget. Table no. 1 also reflects estimates by the European Commission in Euro-12 area average and seven other countries. Data refer to the general consolidated budget reflecting final figures for 2007 and projections for the end of 2010.

Table no. 1 Evolution of public expenditure, public debt and balance of payments in the period 2007-2010 (percentage of GDP)

| Countries | Balance (excedent/deficit) | | Public debt | | Public expenditures | |
|--------------|----------------------------|-------|-------------|-------|---------------------|-------|
| | 2007 | 2010p | 2007 | 2010p | 2007 | 2010p |
| USA | -2,8 | -14,2 | 63,1 | 91,1 | 37,4 | 43,7 |
| Japan | -2,1 | -8,7 | 173,6 | 194,0 | 36,4 | 46,7 |
| England | -2,7 | -13,8 | 44,1 | 81,7 | 44,0 | 52,4 |
| Germany | -0,2 | -5,9 | 65,1 | 78,7 | 44,2 | 49,0 |
| France | -2,7 | -7,0 | 63,9 | 86,0 | 52,3 | 56,4 |
| Italy | -1,6 | -4,8 | 104,1 | 116,1 | 47,9 | 51,1 |
| Spain | 2,2 | -9,8 | 36,2 | 62,3 | 38,8 | 47,1 |
| Euro zone-12 | -0,6 | -6,5 | 66,1 | 83,8 | 46,1 | 51,1 |

* P - forecasts for the end of 2010

Source: European Commission Report, 2010

Year 2010 was the moment expected that the vast majority of countries to overcome the crisis, although in many cases these expectations proved overly optimistic. In this context, should also be noted that the starting point of analysis has specific characteristics, meaning that although 2007 was considered essentially a good year for the economy in general, all countries listed, except Spain, had consistent budget deficits and high public debt, which means that expectations may not materialize in large numbers with positive values in the short term.

According to data summarized in the table, it is noted that there were remarkable increases in public spending as a share of GDP between 2007 and 2010. Elevations range from a minimum of 3.2% of GDP for Italy at a high level 10.3% of GDP for Japan. The increases recorded for the UK (8.4% of GDP), and Spain (8.3% of GDP) are also remarkable, but the fact remains that, in large part, these increases are due especially from lower GDP rather than the real growth of public expenditure.

During this period, local budget deficits, toward which the central budgets of states have initiated substantial balance transfers, in turn led to dramatic increases in deficits in the period 2007-2010. Thus, in the United States and England, deficits reached about 14% of GDP, levels that have not been recorded after World War I and much higher than during the Great Depression. Also, in other countries have recorded spectacular growth, especially in Spain and Japan. As a global effect, increases budget deficits, due to decreasing tendency of gross domestic product and increase public spending budget, have resulted in massive increases in public debt, seen through the prism of its share in GDP, data showing sometimes dramatic levels of the public debt in the analysed countries.

The events of recent years illustrates the danger of an economy in which the financial system operates without careful supervision and regulation, which leads to cycles „boom-bust", which ultimately are damaging livelihoods and savings of citizens. Forecast estimates that 2011 to represent out of crisis, without knowing what might happen beyond the year 2011 if the crisis would continue. But certainly, these forecasts should take into account the expected increase in public expenditure budget, due to aging and the effects after the crisis. Increase overall public spending and worsening budget deficits will be caused mainly by increases in social spending (pensions, healthcare and long-term care), but also the impact on fiscal revenues and earnings growth rates. In this regard, Table no. 2 reflects the results of forecasts for public spending budget, with the expected adverse demographic issue for the period 2007-2060, in several

countries. Even without the impact of the current crisis, these increases in public expenditure budget will become difficult to bear for countries with an already high level of taxation, high public deficits and debt.

Table no. 2 Forecasts of Public expenditures due to an aging population: 2007-2060 (percentage of GDP)

| Countries | Pensions | Health | Long-term care | Total growth |
|-------------|----------|--------|----------------|--------------|
| Germany | 2,2 | 1,8 | 1,4 | 4,8 |
| Spain | 6,7 | 1,6 | 1,7 | 9,9 |
| France | 1,0 | 1,2 | 0,8 | 2,7 |
| Italy | -0,4 | 1,1 | 1,0 | 1,7 |
| Netherlands | 4,0 | 1,0 | 4,7 | 9,4 |
| England | 2,7 | 1,9 | 0,5 | 5,1 |

Source: Economic Policy Committee's forecasts of the European Commission, 2009

In the foreground of the analysis, in which the majority of developed countries are in, but also countries such as Romania, the future potential to increase public spending on the rise in taxation can not be considered feasible. This we can argue in terms of taxation levels which is already high in most states, namely, the fragility of the tax base. In the same context, the possibility of future funding of increased public expenditure can hardly be regarded as sustainable at the expense of contracting new loans because the debt levels are already too high.

In the United States, which are not included in the table, long-term outlook is even more worrisome. The Commission's budget of the US Congress in 2009 stated that "current policies are unsustainable" (Budget Commission of the US Congress 2009), whereas, if they are maintained, and in the most optimistic forecast it will cause deficits (for federal budget) of 7% of GDP in 2020 and a debt of more than 100% of GDP by 2023.

In the current crisis, among countries that have not managed to cope with financial crisis and with a fiscal crisis later, are, first, foremost Dubai Emirate (UAE). Colossus of investment set in motion by the state for construction has generated unprecedented debt and no viable solutions.

Greece is also faced with a violent economic crisis, which has a budget deficit of about 12% of GDP and public debt is estimated to exceed 130% of GDP by 2011. Japan's debt already amounted to 200% of GDP.

Thus, the global financial crisis has exacerbated the fiscal crisis. This is because, on the one hand, the onset of recession, which reduced tax revenues and led to conduct additional public spending on social protection, and on the other hand, in some countries, the huge costs that the public authorities had to bear to avoid bankruptcy of financial institutions.

As we noted earlier, public expenditure budget to GDP increased and is expected to grow in the next period.

Although since the 1980s much of the developed countries, especially European ones, have operated reductions in GDP share of public expenditure, public expenditure as a dynamic have maintained normal growth. The explanation is that these reductions in weight were made against a background of continuing growth of GDP. The most telling example is the one of Great Britain, whose measures were treated as true victories of neoliberal doctrine.

These actions were not long lasting, and the population was willing to choose raising taxes to increase public spending and the various programs provided by them. Thus, governments have returned to welfare programs that (in Britain since Tony Blair's government) have not only

financed public expenditure growth based on increases in tax revenue, but also by accepting shortages of almost 3 % in public construction budgets. Increase public spending in these countries was directed primarily to education and health. Estimates have shown that, in Britain until 2007, nearly a quarter of employed people work at the state and more than 30% of households depended on (over half) of revenues from the state.

Experience in Hong Kong and Singapore, where the public expenditure is usually less than 20% of GDP, confirmed the approach regarding that a low level of public expenditure in GDP, can be a variant of the long term.

We believe that the ability to maintain or decrease the level of public spending as a share of GDP should be correlated with both increased public sector efficiency and greater efficiency with the private sector, able in future to cover part of the economic risks (but not only), facing the citizen. In this context, Vito Tanzi even identify two pillars on which the reduction of public spending budget. The first pillar would require people to be more aware of certain unforeseen events of life and to do so. Obvious examples are considered private insurance for accident and health, along with a package of restrictive measures of social protection offered by the state.

The second pillar would be for government to seize the opportunities offered by globalization and the world market to purchase services not available on the market or are available at a higher cost (Tanzi 2009: 32). These services must be provided even for a small group of citizens, for then they become public. Such services may be the latest medical procedures, training for advanced techniques, etc..

IV.2.Public spending policy in the context of economic crisis in Romania

Deep economic crisis faced by the global economy and, implicitly, the Romanian economy and recent developments that have taken place including Greece, have taken promptly imposed austerity measures. These measures concern in particular the relocation of public expenditure analysis and a new structure to allow a mix of budgetary policies, fiscal and monetary, short stop economic decline, and in perspective on a healthy economic recovery.

In this context, one of the main tools the government has at hand is the public investment program which, through judicious allocation of available resources and spending can correct some imbalances emerged, particularly in construction, or compensate for potential lower instantaneous availability of private sector funding in this area.

In this year, for the public investment expenditure financed from general government budget were allocated resources representing approximately 6.5% of GDP, respectively 16.7% of general government expenditure. In Table no. 3 are presented in the consolidated general government public expenditure and investment expenditure in the period 2008 to 2013 and their share in GDP.

Table no. 3 Total public expenditures and investment expenditures as a share of GDP and percentage from 2008

| | Public expenditures in percentage from 2008 | Public expenditures % GDP | Public investment expenditures from 2008 | Public investment expenditures % GDP |
|-------|---|---------------------------|--|--------------------------------------|
| 2008 | | 37,0 | | 6,3 |
| 2009 | 101,75 | 39,4 | 108,73 | 7,2 |
| 2010p | 105,11 | 39,1 | 102,47 | 6,5 |
| 2011p | 105,24 | 36,8 | 104,94 | 6,3 |
| 2012p | 112,55 | 35,8 | 129,20 | 7,0 |
| 2013p | 120,50 | 34,8 | 147,00 | 7,3 |

Source: own processing after Fiscal Budget strategy from 2011-2013, <http://codfiscal.money.ro/strategia-fiscal-bugetara-pe-anii-2011-2013>

The data presented in Table no.3 shows that, in nominal terms, investment costs of the consolidated budget increase each year between 2010 to 2013, are expected in 2011 as the growth of investment expenditure to exceed the the total public expenditure. It is also noted an increasing every year share of investment expenditure in total general government expenditure.

But there are enough doubts of specialists on the rationality of government expectations, based if we consider the realities we face. Thus, for example, is hard to believe that in the current conditions in Romania where the courts reinstate previously earned retirement funds or state employees, counteracting the reduction in public expenditure, there will be enough resources for investment and GDP growth will be most anticipated.

V. Conclusion

Currently increasingly emphasis is put more on exit strategies, and thus the role of the state, involving public expenditure budget, you may have. In the past, these strategies which involved increasing public debt has been passed on increases in inflation, and, on occasion, high economic growth. As it stands, the high economic growth is not feasible in the next few years because of major distortions caused by the crisis, which caused large reductions in output. Moreover, growth rates in recent years, several major countries like the United States, Britain, Spain, etc., but also countries such as Romania, have been somewhat artificially generated massive construction of houses / homes / buildings and their unrealistic prices, excessive profits and which entered the financial market. They maintained artificially increases the rate of economic growth and the tax revenues. In these circumstances, we assume that inflation can not be a solution but, rather, the solution may be to rethink the role in the economy and, implicitly, the judicious use of public expenditure budget. Thus, contrary to many who support the idea of "more public spending and a smaller market" we can analyze the situation in which public expenditure is lower, but more effective and more regulated markets.

Before the crisis, there were views that the changes in dynamics, especially in the structure due to the aging population will create serious problems in terms of sustainability of the state, the current optics. Full effects of these demographic changes will start to be felt fully in the coming years. At present, the crisis will deepen the sustainability of this problem increased public spending states. The idea of giving an economic role in the increasingly important state, in our opinion should not necessarily signify the growth of public spending budget, which in turn would mean higher taxes. Obviously, this perspective should not be understood as a unit, but only applicable to a wider group of countries.

For a number of developed countries including the U.S., supports the idea that the current level of public expenditure may remain constant at this level as long as the state has been able to satisfactorily meet its obligations. Moreover, it focuses particularly on those strategies that will be effective and will streamline public spending as well. We believe that the issue of increasing allocative efficiency of resources is vital to counter the current crisis, but also to maximize the positive effects of public interventions in general.

From another perspective, consider that the claim that state and, consequently, public expenditure budget would be used to replace the market can not be regarded as some founded. The market operates outside the moments of crisis, much better than any government action that you take. In this way, a first possible position adopted for the group of developed countries would be not to intervene in the market, but to print a temporary stimulus to aggregate demand while preparing for post-crisis periods without, usually increases public debt.

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VIEWS ON THE CONCEPT OF FINANCIAL POLICY AND ITS MANIFESTATION

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The present study proposes an analysis of the main views expressed in the literature on financial policy, as well as the shaping of our own, clear and comprehensive vision, regarding the content of this concept.

The main objective of our research is to clarify the content of the financial policy concept, so that this policy may be effectively used in the service of overall development of our economy and society. Reaching such an objective has implied the research of a vast existing literature on the field, in the country as well as abroad, observing a vast variety of understandings regarding the meaning of the concept itself, the objectives stated within the financial policy as well as the main approaches (ways to follow) for achieving these objectives.

Of course the achievement of such a research is not possible without a meaningful analysis of the principles expressed in this field's literature. In relation to this matter we can see that each author has his own conception regarding the subject under review. These expressed conceptions are, in turn, based on previous research in the analyzed area. The accelerated dynamism proved by the evolution of our economy and society in this stage shows us that through the financial policy, outlined both at a micro and a macroeconomic level, clear fundamental objectives must be formulated that should be possible to achieve by partial objectives (sequential), practical methods and procedures being adapted to them.

Our research is at the present stage, a theoretical and methodological one. It is based on the comparisons we make between the views expressed in the studies of different authors, trying to draw the “red line” of these views and observing the fundamental meaning given to the financial policy concept. We express our conviction that a clear conceptual expression of the financial policy notion comes to the rescue of the general management (macro and microeconomic) facilitating the process of adopting the most appropriate decisions for achieving the objectives set by the financial policy.

The result of our research is represented by the formulation of a clear and comprehensive concept concerning the financial policy.

Removing ambiguities in formulating the concept under review as well as in the means of achieving the formulated objectives is for the benefit of achieving the monetary, financial and budgetary balance at a macroeconomic level, which is the foundation for promoting some beneficial financial policies at a microeconomic level.

Key words: financial policy, financial policy elements, investment policy, financing policy, dividend policy, evolution.

JEL Codes: G 31, G 32

1. Introduction

The financial policy is a complex and controversial, which incited our interest for elucidating its meaning.

It is a complex concept because, looking at it in terms of a system it has two elements, namely:

- macroeconomic financial policy subsystem;
- microeconomic financial policy subsystem.

At a macroeconomic level the following subsystems develop:

- financial policy subsystem;
- budgetary policy subsystem;
- parafiscal policy subsystem.

Within each subsystem, considered as a distinct entity, financial policy's connecting branches develop. We illustrate the statement by the budgetary policy subsystem within which we distinguish: the budgetary revenues policy, the budgetary expenditure policy, the budgetary balance policy.

At a *microeconomic* level we also observe a set of subsystems such as:

- investment policy subsystem;
- current activity financing policy subsystem;
- dividend policy subsystem.

In relation to the financial policy subsystem at a microeconomic level we can also establish the existence of policy ramifications. We illustrate this statement (finding) showing that within the investment policy we distinguish: investments financed with internal resources (national) and investments financed with external resources (international); investments financed from the company's own resources and investments financed from borrowed resources; own overhead investments and contracted out investments.

The controversial nature of the financial policy concept is generated by the fact that each researcher (author) has left his own imprint on the content of the analyzed concept. We, therefore, assumed the burden of detaching the common ideas which are the core of the concept trying to point out each time, the ultimate pursued goal and the methods and procedures used in the practice of financial activity in order to achieve this goal.

2. The financial policy concept

In a general sense, *politics* is understood either as a management activity or as a way of organization and leadership. Since political activity is carried out on the basis of some political programmes, politics is often portrayed as the tactics, the strategy, the methods and the means used to achieve the objectives set out in such programmes.

The way from the concept of politics in general to that of financial policy cannot be crossed without lingering, even just in passing, on the concept of economic policy. Thus, the economic policy is portrayed as an area of government policy, but it is often circumscribed to the concept of economic mechanism. In such an interpretation the economic policy is presented as part of the economic mechanism functioning. We observe that in the system theory, „the economic mechanism appears as a subsystem in economy's organization and management system and government is the most important aspect of the economic mechanism” (Tulai 2003:84-85).

An important element of the general economic policy is the financial policy which is „anchored in the development process of any society” (Onofrei 2000: 11).

Building the financial policy, organizing and managing the company's activity implies, as professor Constantin Tulai used to say: „management strategy and direct practice” (Tulai 2003:92).

In the attempt to define this concept we should start, rightly and without exception, from the statement that the *financial policy* is an element of the economic policy, having to contribute, in its specific ways, at the fulfilment of the economic programme. It is subordinated to this goal but it must exert an active role in achieving it, which means both conception and concrete action and representing the land where the theory offers solutions, strategies confront and options take shape, decisions are taken and also actions to achieve them. Therefore in the defining of the financial policy, as the previously cited author would say, we must take into account at least the following reasons (Tulai 2003:85-86):

- it represents a specific area of the economic policy, it is subordinated to the totality it belongs to, but it carries an active influence on it;

- it implies a certain conception of the financial sector management, they are differentiated by fields of application, solutions are dynamic and always perfectible and the tools are flexible;
- it must be designed and implemented in a way that ensures the financial mechanism's functionality, to establish a proper framework for it to show its self-regulation ability and to exert a favourable influence on the functioning of the economic mechanism as a whole;
- through the specific instruments and levers the achievement of all economic decisions must be ensured under the conditions of superior resource exploitation and high economic efficiency. This means above all, to imperatively take into account, the financial reasons when underlying the economic decisions.

As shown in the literature (Halpern, Weston și Brigham 1998: 216; Bran 1997: 315-317), defining the financial policy concept involves, by default, mentioning its sphere.

Doing a critical analysis of the financial policy sphere, C. Iuga pointed out that sometimes the sphere is restricted to the formulation of its objectives, other times it also includes the used methods and the proper organizational arrangements, pointing out that in his view „the financial policy has a broad coverage area, it establishes the main objectives of the financial activity, the strategy and the tactics of accomplishing them as well as the organizing and management system, respectively, the set of concrete principles, methods and means with regard to the relations, the institutions and financial agencies, which ensure the fulfilment of the functions and roles that belong to finance in the economic and social life” (Iuga 1977: 67).

Such an indication on the financial policy sphere allows us to observe some of its most obvious characteristics, namely:

1. it includes in its sphere, placing first, *setting the main objectives of the financial activity*, derived from the fundamental objective and integrated in the economic policy's objective;
2. the financial policy has *its own objectives*, specific to its domain, and their achievement represents its contribution in the achievement of the overall economic policy's objectives.
3. in order to achieve the established objectives, the financial policy includes financial sector specific policies, but varied in relation to the sub domain they are applied in, being achieved with an appropriate tactics;
4. the achievement of the established objectives through an appropriate strategy and tactics, requires an appropriate organizational framework, the design and use of specific principles, methods, levers and instruments in a framework created by the legislation;
5. on this field the specialized financial institutions and organisms are operating, performing exogenous financial decisions, taking and performing their own decisions, they carry out the financial policy.

Based on these issues and respecting the set out methodological requirements we can conclude that the financial policy, as a specific area of the economic policy, represents a certain conception and a certain way of direct action regarding the organization, management and financial activity deployment.

The financial policy has several characteristic features determined by the nature of the state's prerogatives, as well as by the country's economic, social, etc. objectives in that given stage.

Among the financial policy's characteristic features we mention the following:

- ***The financial policy's scientific nature***, which is determined by the thorough knowledge of our specific features, by the study of the real, national and international conditions in each stage, by taking into account the economic law's requirements, by the correlation between the financial policy and the nation's interests. Being judiciously planned and enforced, the financial policy is required to fully contribute to the achievement of a high and increasing social work's performance capacity. The financial policy's effects are reflected in the development of productive forces, in the increasing of the gross domestic product, in satisfying the material and spiritual life requirements, of the population which are on the increase.

- ***The financial policy's realistic nature*** resides in the fact that it has to be developed and carried out based on thorough knowledge about the national economy's realities, particularities and possibilities of each stage. The financial policy is designed to help promote national interests, achieve national independence and sovereignty as well as to help collaboration and cooperation at a national level.

- ***The transforming, renewing character*** of the financial policy is generated by the judicious use of financial instruments. The financial policy is not established once and for all, it is not immutable, but it evolves, it changes, it continuously improves and it adapts both regarding the goals as well as in the use of financial instruments.

The financial policy has a certain independence from the state's general policy, because it has its own objectives, it uses specific tools and procedures, which implies the existence of its own methodologies.

Studying the issues of financial policy at a microeconomic level (Halpern, Weston and Brigham 1998: 220), we observe its main manifestation directions:

- selection of investment projects;
- identifying financing modalities;
- substantiation of the company's financial structure and ensuring an optimal ratio between equity and borrowed capital;
- choosing the optimal allocation for net profits and dividends;
- selection of optimal solutions for changing the equity's size.

It must be noted that the company's financial policy is directly influenced by the macroeconomic financial policy, through instruments that at the microeconomic level are considered to be external influence (constraint) factors.

Financial policy involves not only setting goals to pursue in one area or another for a certain period of time but also establishing the means to achieve them. It is also necessary to make a critical analysis of its promotion's results, in order to correct any deficiencies, shortcomings, mistakes came up or occurred in time.

Putting together and comparatively analyzing the many definitions given to the financial policy in the literature (Halpern, Weston and Brigham 1998: 222; Bran 1997: 318), we find both common elements and some differences, not only in shades but also in the sphere coverage. Both of them relate to the three present elements, without exception, in all encountered definitions, namely: ***the reference, the purpose and the used procedures***.

Referring to the ***specific used methods***, they are portrayed as a set of methods and means; principles, methods and means; rules, principles and methods or methods, levers and mechanisms specific in the financial sector. Therefore not only the wording is different but also the number and kind of arrangements involved.

In a different way is presented the field of reference, the same in its essence, namely the ***financial sector***. It circumscribes, in different formulations, the same elements, namely:

- finance, financial relations or in a detailed presentation, their display field (creation, distribution and optimum use of funds);
- institutions and specialized institutions belonging to the financial unit;
- the legal executive legal framework, including financial regulations or legislation.

Finally, for the ***concerned purpose***, the formulations are also different. Some refer to the social and economic policy objectives as a whole, but different in each step or from one program to the other; others are confined to the fundamental strategic objective of the current phase (Chandler 1996: 63); in some of them the aim of achieving the economic policy objectives is fixed ("Help 2003: 87), and finally in others, it is stated that the financial policy is oriented towards achieving the social mission of finances (Văcărel 2007: 76), ensuring the fulfilment of their functions and roles in each phase.

Taking into account the ones mentioned above, we could shape our *own opinion* which means that we can define *financial policy* at a microeconomic level as *the combination of financial methods and instruments involved in the acquisition, allocation and management of financial resources in order to achieve the ultimate objective of the firm - thus maximizing market value, increasing shareholder wealth.*

3. Company’s financial policy elements

At a microeconomic level the financial policy includes a set medium and long term objectives, which relate either to all financial activity or to its major components. Among these we distinguish by their special meanings: the volume and structure of available resources, performers of various activities, financing sources, intermediary and final terms, global and partial indicators.

The specific consequences of financial policy decisions are manifested in combining the company’s financial cycles (operating, investing, financial operations) whose graphical representation is depicted in Figure no. 1.

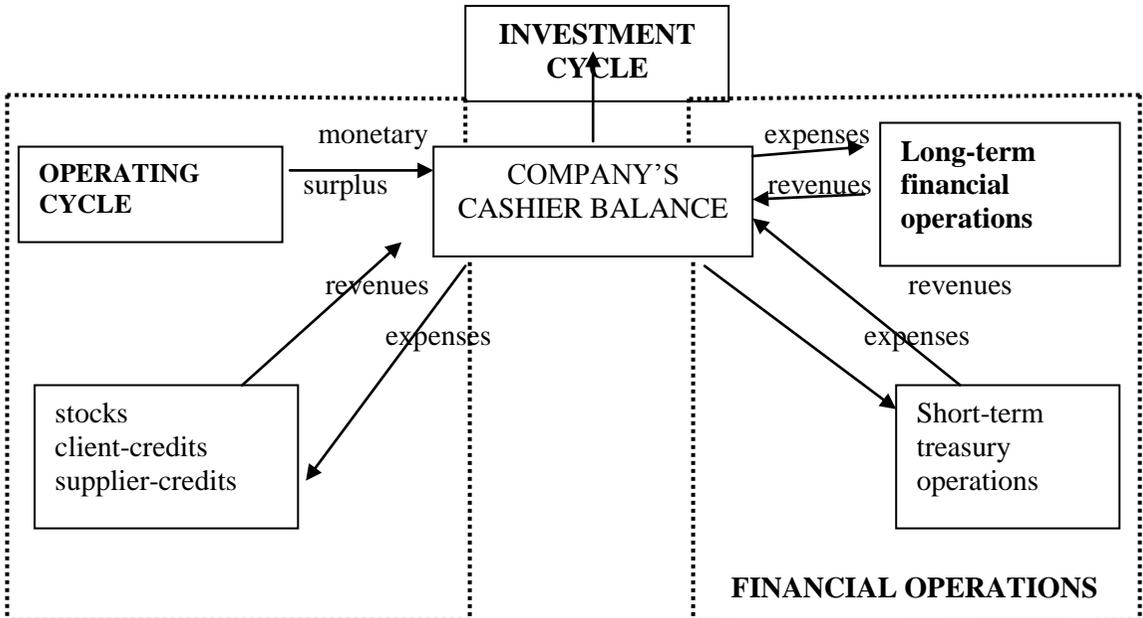


Fig.no.1. The enterprise’s financial policy action range

Source: adapted by the author from (Onofrei 2000: 46)

As shown in the figure above, the financial policy’s range includes a variety of decisions to be taken by the company’s management about the pace and terms of capital creation, namely the financing of the company.

Modern financial theory holds that, at the firm’s level, there can be identified three broad categories of policies (Stancu 2007: 47), which are considered interdependent, namely:

- investment policy (internal / external);
- financing Policy (own sources and / or borrowed);
- dividend policy (distribution and / or reinvestment of dividends).

The investment policy is considered primal, whereas it affects capital for a longer period of time. Involving significant capital expenditure in the hope of obtaining a successful future, underlying the investment decision (policy) should aim at:

- the investment’s participation in the total value of assets (net present value);
- payback period of invested capital and hence the starting moment of net gaining from that

investment;

- alternative analysis of investment's further exploitation or disinvesting and seeking other forms of investment (decision tree method).

The financing policy is determined and in the same time it is determining the investment policy. The financing policy's foundation is represented by the proposed amount of investment, by the existing capital and the one necessary to continue to run the investments. Of particular importance is the company's financial structure, namely the relationship between equity and borrowed capital.

The dividend policy is determined by the predilection and in the same time the investor's wish to receive annual dividends. Although theoretically, in perfect market conditions, dividend policy does not affect the firm's value, recent studies have demonstrated the favourable effect of maintaining and possibly increasing the rate of distribution (dividend/share) on the course of shares, namely the awareness effect on the dividend. Some researches (Walter 1996: 29-35) mainly the agent theory, demonstrated the role of dividends distribution in settling conflicts between shareholders and managers on one hand and between the groups "shareholders and managers" on one side and creditors on the other.

Since dividend policy distributes the net profit between cash flow and net profit share distribution, it affects both the firm's financing policy and, indirectly, the investment policy. Each of these policies involves certain types of decisions and, most often it is considered that the company's main financial decision is the choice of a certain financial structure (Manolescu 1997: 486). This is followed closely by three other coordinates as the dividend distribution policy, increasing the company's equity and its debt.

"The existence of a power structure - P. Conso was saying - is the support for the internal decision-making process. The decision's degree of rationality depends on the role of people and on the values system they agree to join. The nature of power is thus an important determinant of company behaviour "(Conso 1981: 159).

In our opinion, the influence of the internal power structure of a company must be analyzed in terms of number of partners / shareholders in it. Thus, an individual firm holding the power and capital monopoly will have a very simple internal structure; in the case of a company formed by association (as a society), the internal structure becomes complex and dependent on the number and diversity of partners (businesses, banks, state, citizens, etc.) leading to the phenomenon of power distribution among its shareholders.

Therefore, financial policy-making requires knowledge of business environment and anticipating its evolution, based on foundations coming from the financial information system and from power relation correlations with the help of legal norms.

Having clearly defined the coordinates of its development, the company has the necessary autonomy to decide and to choose the way to follow. But not always financial decisions taken at a microeconomic level can be accepted at the macroeconomic one, which highlights the relative character of this autonomy, suggesting the idea of a competition between the company and the state. In this sense Jean-Paul Betbeze's finding takes on a special significance: "with every business modulation the state considered that it had to sustain it and with every acceleration that it had to brake. It has also created the habit of being the judge of other's performance, measured in terms of growth, employment (labor), price or foreign exchange. This is how it turned the interests towards facing the major problems: growth, distribution, planning [...] passing over in silence the fact that it should not manage the results of the billion operations of these organic cells in the economic universe - companies "(Betbeze 1983: 3) .

Financial policy is a component of the company's management being decisive in the strategic options, which is those fundamental options that deeply engage the future as well as in the current management decisions.

The company's financial policy is called to secure answers for at least the following questions (Ana 2001: 47):

- a. resolving issues related to insufficient funds;
- b. setting destinations and rational use of funds;
- c. ensuring financial stability;
- d. price stability;
- e. the continuous cost reduction.

Another direction of the company's financial policy is the tendency to maximize the economic capital through the options related to investment and funding. The capital increase has implications related to the financing cost and at the same time, issues related to the proportion between equity and borrowed capital for financing fixed and current assets.

In relation to capital cost, practical experience shows that it lowers through a judicious use of loans and will become a burden the optimal indebtedness level is exceeded. The increase of debt ratio over an accepted optimum entails the risk of lower profitability and increases the degree of insolvency.

The role of financial policy at a microeconomic consists in selecting the investment projects that can contribute greatly to increasing the company's value in providing resources necessary for a normal activity performance with low cost, achieving optimal stock and debt management as well as establishing a consistent strategy to pay shareholders. The purpose of this policy should be represented not only by increasing the value of the company but also the harmonization of the interests of all stakeholders involved in the business (shareholders, managers, employees, lenders, state, local community). These complex interactions are expressively shown in Figure no.2:

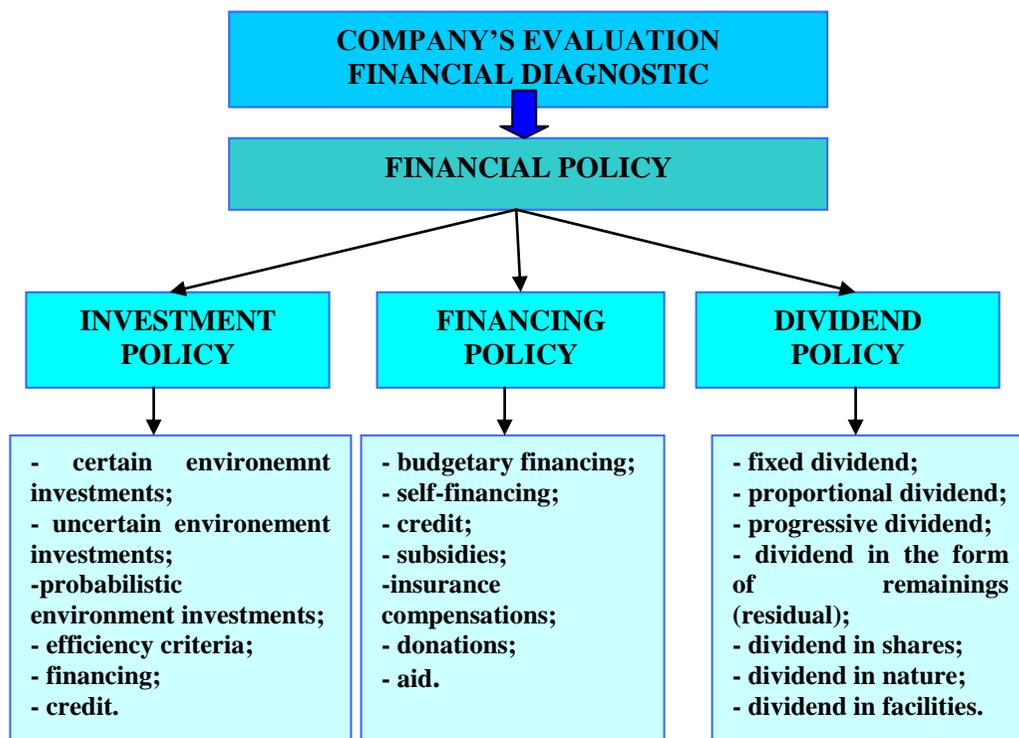


Fig.no.2. Financial policy's structure

Source: author's own conception (based on the present financial theory and practice)

Based on information provided by the financial and policy analysis we can make an assessment of the company 's patrimony assets and liabilities, an assessment of future income streams, which is expected to be released by the company or a mixed assessment of the present and future capacity of paying capital investors.

4. Conclusions

From the above we detach a first conclusion linked to the expression of the financial policy concept, namely that it is complex and controversial. It is complex and in the same time synthetic, because it reflects a variety of subsystems, already shown, in the introduction of this study. It is a controversial system, in that researching a vast literature in this field we found it difficult to find the same definition given to the concept by two or more authors. A second conclusion drawn is that a range of influences that come from both internal and external environment act upon the company's financial policy components adopted by its management. On behalf of associates and shareholders as owners of the company who are interested in at least maintaining it as well as in the consistent dividends remuneration. On behalf of the lenders either by shrinking or expansion the volume of loans or by interests charged considered by the firm as elements of cost. On behalf of the state, either by tax policies or within the general legal system, that favours or inhibits business. Besides all these there are also other factors in the company's external environment, objective or subjective, such as: market reaction, direct partnership relations, crisis phenomena, extreme natural phenomena (earthquakes, fires, floods, landslides), etc..

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SMES' SECTOR ACCESS TO FINANCE: AN OVERVIEW

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Through their contribution to the creation of added value and new jobs, the small and medium enterprises (SMEs) have a significant role in the economic and social development of a country. However, these enterprises are facing numerous obstacles that limit their performance, growth and development. Among the difficulties faced by SMEs, the access to finance is often reported as a major obstacle to the deployment and expansion of their activity.

The paper aims to highlight the difficulties faced by SMEs in securing financing resources, emphasizing the differences between countries and also between SMEs and large enterprises. Knowing the difficulties in SMEs financing is essential for policy makers in order to design and implement appropriate measures, which will help to improve the access to financing for these enterprises. Thus, another issue addressed, synthetically, in this paper aims the measures taken by public authorities in order to support the access to financing for SMEs.

Key words: Small and Medium Enterprises, access to finance, financing constraints, bank financing, support measures

JEL code classification: G30, G32, O16

1. Introduction

In all countries, small and medium enterprises are a significant source of economic growth and jobs creation. Furthermore, these enterprises, through their dynamism and flexibility, are an engine of innovation and growth. Based on these considerations, it is easy to understand the crucial importance that the easy access to funding has, taking into account that it can support the creation of new businesses, the innovation process as well as the growth and the development of the existing businesses, which in turn boost the economic growth of a country.

The paper is structured as follows: *the first part* contains the introduction remarks regarding the importance and relevance of the approached theme; *the second part* is dedicated to a literature review which summarises the main researches undertaken so far on this theme; *the third part* highlights the major difficulties in SMEs financing, and *the fourth part* of the paper reflects, mainly, the difficulties reported by the entrepreneurs in dealing with banks and the measures that need to be taken in order to improve the access to financing for these enterprises. The study ends with conclusions.

The research methodology used in this paper starts with a literature review in order to highlight the importance of the subject addressed in our research. The analysis conducted in this paper is based on data and statistics provided mainly by the World Bank surveys, by certain empirical studies and by the National Council of Small and Medium Sized Private Enterprises in Romania. Based on the methodology used, the paper indicates the difficulties in SMEs financing and the crucial importance of enhancing the public authorities concerns regarding their alleviation, especially by adopting measures focused on increasing financial development.

The limited availability and even lack of statistical data regarding the SMEs financing situation from various countries, including Romania, impose certain limits to the researches in the field, which can be overcome as policy makers realize the vital importance of developing and monitoring specific indicators regarding the financing of this type of enterprises.

2. Literature review regarding the access to finance for SMEs

The access to finance for SMEs represents a topic of great interest for the academic literature, as witnessed by the large number of studies addressing such a problem.

Numerous studies based on various surveys highlight that access to finance is one of the most important obstacles in the way of enterprises' growth and development, especially in the case of small and medium enterprises.

The study realised by *Beck, Demirguc-Kunt, Laeven and Maksimovic* (2004) reflects, based on a survey that has included 10.000 firms from 80 countries, the fundamental factors to which depends the enterprises' access to finance. Thus, the study highlights the relationship between the access to finance for enterprises and their characteristics, such as age, size and propriety structure. From this perspective, the authors find that young firms of small size as well as national ones face greater obstacles when they seek to obtain financial resources. The study also highlights the relationship between the degree of economic and financial development of a country (expressed through the degree of financial intermediation, the level of capital market development, the efficiency of the legal framework, the GDP per capita) and the access to finance for enterprises. From this point of view, the authors demonstrate that in the financial developed countries it can be accounted a decrease of the difficulties that the firms face when they try to obtain financing resources. Furthermore, the study concludes that the institutional development is the most important feature that explains the differences between countries in terms of financing obstacles faced by enterprises.

Beck, Demirgüç-Kunt and Maksimovic (2005) point based on a survey realised on firms from 54 countries that small and medium-sized enterprises are faced with financial and legal constraints and corruption issues in a much greater degree when compared with the large firms, thus the impact of these constraints on the firm growth is inversely proportional to the size of the firm. Moreover, the authors also noted that the financial and legal system development and the process of reducing corruption help to relax the constraints faced by small and medium-sized firms.

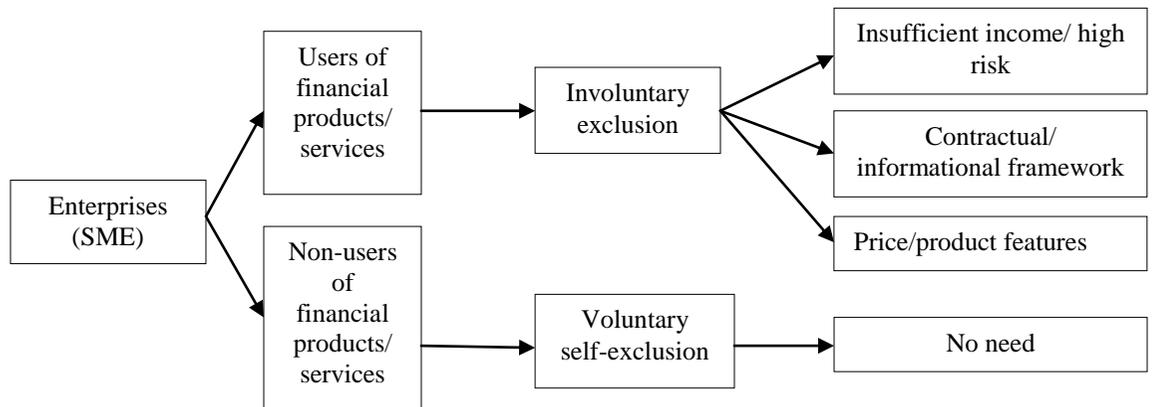
Beck and Demirguc-Kunt (2006) highlight that access to finance is an important growth constraint for SMEs that financial and legal institutions play an important role in relaxing this constraint. The authors also noted that innovative financing instruments can help facilitate SMEs' access to finance even in the absence of well developed institutions.

Ardic, Mylenko and Saltane (2011) analyze, using statistical data, the macroeconomic and institutional factors that are influencing the SMEs' financing through loans. Similar to other studies, the authors have found a positive correlation between the overall economic development (measured by income per capita) and financial development (measured by the ratio of private credit to GDP), on the one hand, and the SMEs' financing level, on the other side. Moreover, the authors demonstrate that the financing level of SMEs depends also on the legal framework and the overall business environment.

3. The general framework regarding the obstacles in the financing process of the SMEs

In general, the access to financial products/financial services or the financial inclusion assumes the absence of barriers in the way of using financial products/services, regardless of whether these obstacles are or are not related with pricing (*Demirguc-Kunt, Beck and Honohan* 2008: 2). Thus, improving this access means increasing the degree in which the financial products/financial services are available for everyone and at a fair price.

Unlike the use of financial products/services which is determined by supply and demand, the access aims at providing financial products or supplying financial services. The difference between access to financial products/services and their use is reflected in Fig. no 1.



Source: based on Demirguc-Kunt, Beck and Honohan 2008: 29

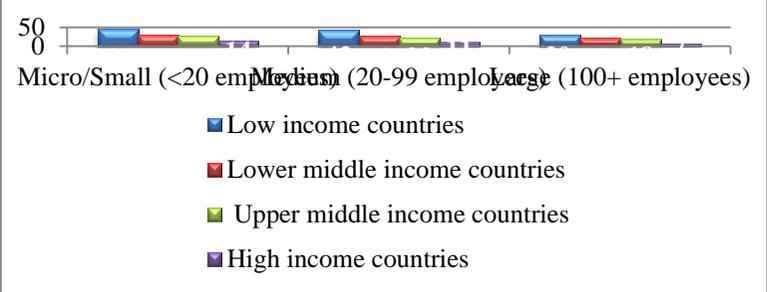
Fig. no 1: The difference between the access to finance and the use of financial products/services

Within the firms that do not use financial products/services it can be distinguished several categories, whose identification is essential for the authorities in order to adopt the necessary measures to improve their access to finance. Thus, on the one hand, there are *the firms that have access to finance*, generally to financial products and services, but do not use them because they do not have viable investment projects. On the other hand, it can be distinguished *the involuntarily excluded firms*, those firms that do not have access to finance or financial services, although they demand them. The involuntary exclusion of firms from finance/financial services appears in the situation in which some companies do not earn enough income or do not have the guarantees requested by the suppliers of capital and therefore have a high credit risk. At the same time, there are situations when some companies request funding, but the financial and banking institutions are not answering to these demands because the cost involved would be too high for them. Finally, within the category of involuntarily excluded firms appear also those for which the price of financial products/services is too high or the financial products'/services' features don't meet their needs.

The access to finance is indispensable for the efficient allocation of capital and the enterprise development. However, when compared with large enterprises, small and medium enterprises face many difficulties when pursuing to procure financial resources, which are due to several causes, including: the unstable and inadequate juridical and legislative framework, which does not support the relationship between capital providers and the enterprises that require financing; incomplete information and even lack of information from the part of both capital providers and enterprises, which prevents the development of normal and efficient relations between them; lack of a credit history and insufficient guarantees for creditors, especially in the case of the small and young firms; limited and, sometimes, inadequate range of financing products.

Numerous surveys carried out, particularly, by the World Bank highlight that the access to finance is often mentioned by the SMEs as one of the most important barriers to their well functioning and growth. For example, the surveys conducted by the World Bank, in 2006-2009, found that, worldwide, 31% of the studied firms report that the access to finance is a major obstacle in the way of carrying out current operations, the percentage being even much higher, at 40% in the case of young firms with up to three years experience (Chavis, Klapper and Love

2010: 1). Also, a series of global surveys, including the information provided by the World Business Environment Survey, show that small and medium size enterprises report the cost of financing as the most important obstacle to their growth. The difficulties in SMEs financing are more severe in the case of developing countries, this assessment resulting from the fact that approximately 50% of the micro and small sized enterprises report the difficulties in financing as a major obstacle (see Fig. no 2).



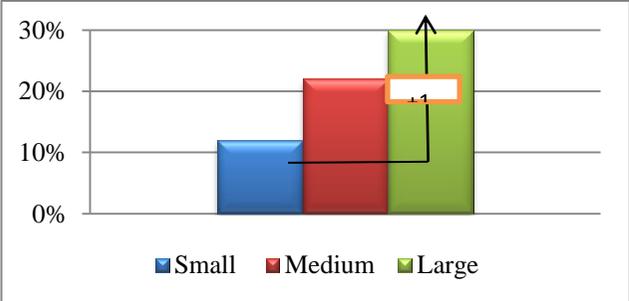
Source: International Finance Corporation 2010: 12

Fig. no 2: The average percentage of firms that have reported that the access to finance and the cost of financing represent a major constraint

As results also from Fig. no 2, regardless of the group of countries where SMEs are located, about one-third of these firms report that the access to finance is a major constraint to their current operations (International Finance Corporation 2010: 12).

4. Difficulties in SME’s banking finance access and support measures

In most countries, especially in the ones with bank-oriented financial systems, the SMEs main source of external financing is represented by the bank loan. Thus, the access to this type of loans is vital for the development of these enterprises. However, surveys show that small firms when compared with large firms are using in a much smaller degree bank financing for new investments (see Fig. no 3).



Source: Own simulation based on the data provided by International Finance Corporation 2010: 15

Fig. no 3: The percentage of firms that use bank financing for new investments

As we have mentioned within the paper, the usage of financial products is determined by supply and demand. Therefore, it is important to identify why small size firms use in a lesser extent bank financing. In this regard, some studies (Banerjee, Duflo 2004) have demonstrated that the main reason would be related to the supply, because every time when the SMEs had access to subsidized credit, they used it to increase the production. Such a conduct of firms strengthens the assertion that the lake of access to finance is a major obstacle to their growth. Furthermore, in the context of the current global economic crisis, the limited access of SMEs to financing has been

increased as a result of reduced availability of bank loans. Thus, this type of enterprises faces major difficulties.

The survey conducted by the National Council of Small and Medium Sized Private Enterprises in Romania (CNIPMMR), in the period 7 - 29 October 2010, highlights the main difficulties faced by the SMEs in their relation with the banks. Thus, 82% of the interviewed entrepreneurs considered that *the access to bank financing is very difficult*, especially because of the excessive bureaucracy, the unjustified high requirements, the high interest rates, the rigidity of the creditworthiness indicators used by banks, the numerous types of commissions and fees required. Also, over 61% of the SMEs' entrepreneurs and managers reported *banks' lack of transparency* (by charging hidden fees, ineffective communication etc.), *no real negotiation* (by using standard contracts, banks' refusal to modify or complete the credit contract, etc.) and *unjustified and abusive contractual terms practiced by banks* (such as performing unauthorized transactions in accounts and in general bank frauds). The knowledge of these difficulties has a vital importance regarding the need to adopt measures in order to support and improve the SMEs' access to finance.

Overall, the obstacles in the way of SMEs access to financing are related both to the entrepreneurs and the economic environment as well as to the institutional and regulatory framework (Nicolescu and Nicolescu 2008: 171). Among the obstacles related to entrepreneurs, a series of surveys conducted in various countries, identify: the lack of knowledge regarding the possibilities of obtaining financial resources, the lack of awareness regarding the consulting institutions, the development of business plans that do not meet the requirements of the lenders or investors, the reduced negotiating skills in relation with capital suppliers and the insufficient guarantees available. In regard to the second category of obstacles, they refer in particular to the reduced availability of funding in some cases, excessive guarantees imposed by some banks for SMEs' loans, the high cost of SMEs' financial consultancy services, corruption, bureaucracy. Starting from the fact that the SME sector has a key role in the economic and social development of a country, in most countries supporting this sector has become a primary objective of the governments.

In order to improve the access to finance for SMEs, the public authorities from different countries have adopted a series of measures, depending on the particularities of each country, which aimed (International Finance Corporation 2010: 26) at improving the juridical and regulatory framework, developing the financing instruments for SMEs and direct interventions on the market in order to stimulate SMEs' financing (for example, by granting loans through certain state institutions, providing guarantees for loans to entrepreneurs, providing grant financial allocations etc.).

The significant importance of easy access to finance for enterprises, particularly for SMEs, and especially in the context of the current crisis, is highlighted by the fact that approximately two thirds of the EU business support measures, adopted by the European Commission and set out through the European Economic Recovery Plan aims to facilitate the access to finance (European Commission 2009: 79).

Improving the access to finance for SMEs still remains a concern and also a challenge for the authorities from the national, European and international level. For example, at EU level, through the Review of the *Small Business Act* (SBA) for Europe are set out new measures *to improve the access to finance for SMEs*, including *facilitating the access for SMEs to structural funds* through reducing reporting requirements, establishing the "*credit ombudsman*" in order to facilitate the dialogue between SMEs and credit institutions, *avoiding double taxation through tax legislation*, that would hamper the cross-border venture capital investments, which play a significant role.

A number of studies, especially the empirical ones, highlight the crucial importance of the degree of financial development of a country for SMEs' access to finance. Therefore, the measures taken by authorities in order to support the SMEs' access to finance should focus on ensuring a high

degree of financial development, which would ensure a greater availability of financing for businesses. Concretely, the authorities should adopt measures aimed at the seven pillars commonly used to measure the degree of financial development, namely institutional environment, business environment, financial stability, banking financial services, non-banking financial services, financial markets and financial access (World Economic Forum 2010: 5).

Conclusions

The easy access to finance for SMEs has a significant importance for the creation of new businesses, the growth and development of already existing ones, which, in their turn, foster the economic and social development of a country. Moreover, under crisis conditions, supporting the access to finance for SMEs is vital because these firms can contribute to the recovery of the national economies. However, most surveys emphasize that SMEs report, consistently, the access to finance as one of the most important obstacles to their functioning and development.

The difficulties that SMEs face when they are seeking to obtain the necessary funding resources are related both to the entrepreneurs and the economic environment from each country, as well as to the existing regulatory and institutional framework. In order to mitigate these difficulties, the measures taken by public authorities should focus on increasing financial development, which would ensure greater availability of financing for businesses and thus economic growth.

Given the reduced availability and even lack of statistical data regarding SMEs' financing in various countries, including Romania, we consider that policy makers need to focus their efforts in order to shape and monitor a series of significant indicators, such as the share of loans granted to SMEs, based on their size, experience and sectors of activity, that would be useful for public authorities, creditors and investors.

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LABOUR TAXATION IN THE EUROPEAN UNION

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This article proposes an analysis, which we consider extremely useful in the current economic context, of the evolution of labour income fiscality, more precisely, the effect of the public debt growth on the tax wedge for the labour income.

The share of fiscal revenues from direct taxes, indirect taxes and social contributions is relatively close in the old member states of the European Union in comparison with the new member states, which register a lower level of income from direct taxes. The low level of income from direct taxes is compensated by more significant shares of the social contributions or indirect taxes.

The main motivations of cross-border migration are: a successful career in a multinational corporation, high variations of the tax rate, of the salary income between states and, last but not least, the level of the net salary. To this day, there are no plans to harmonize across the European Union the legislation regarding the taxes wages and the social security contributions. Still, the European Union had in view the coordination of the national tax systems to make sure that the employees and the employers do not pay several times the social contributions in their movement across the community space.

Despite the fact that some states tax the labour income at a low level, the labour fiscality remains high in the European Union in comparison with other industrialized economies, probably also due to the fact that the majority of the member states have social market economies. The increase of the fiscality level for the labour income determines the decrease of the employment rate and the raise of the unemployment rate.

The solution to guarantee a higher employment rate, which is a target of the European Union Strategy „Europe 2020” could be the relaxation of the labour income fiscality by transferring the tax wedge on the labour income towards property or energy taxation.

Keywords: labour income, social contributions, tax quotas, taxes

JEL Codes: F22, G28, H2

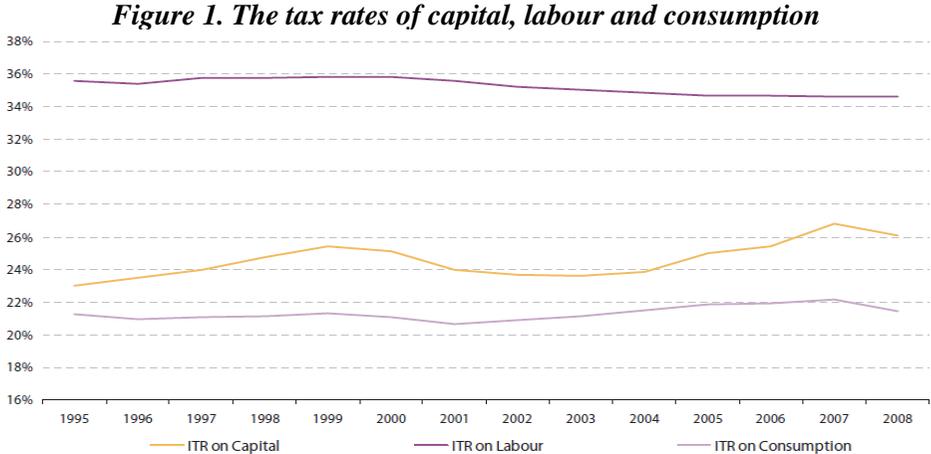
1. Introduction

The mechanism of the Single European Market is based on the four freedoms acknowledged by the European Community legislation: the free movement of goods, people, services and capital. The main motivations of cross-border migration are: a successful career in a multinational corporation, high variations of the tax rate, of the salary income between states and, last but not least, the level of the net salary. According to some research realized in Switzerland (Kirchgassner, Pommerehne, 2001) and (Feld, Kirchgassner, 2001) we can notice that the level of payroll tax and the level of social contributions have an important influence on the dispersion of the labour force with high income (Peter Egger and Doina Maria Radulescu 2008: 2).

To this day there are no plans to harmonize across the European Union the legislation regarding the social security contributions. Still, the European Union had in view the coordination of the national tax systems to make sure that the employees and the employers do not pay several times the social contributions in their movement across the community space.

If we analyze the structure of budgetary income collected by the European Union, according to the economic classification, the labour taxation and the compulsory social contributions are the most important source of revenue, representing an average of 50% of the budgetary income collected in the European Union. Thus, the labour taxes collected by ten member states: Hungary, Slovenia, Czech Republic, Holland, France, Belgium, Finland, Denmark, Greece and Italy represent between 50-55% of the total income; the labour taxes collected by four states: Sweden, Austria, Germany and Estonia exceed 55% of the total income.

Concerning the rates of labour taxation, the following figure proves that these are the highest of the European Union, amounting to 34%-36% in comparison with the lower rates of capital gain tax and consumption tax.



Source: Eurostat

During the period before the crisis, in the European Union, generally speaking, the tax wedge increased especially concerning the labour taxes and the social contributions as a result of the need to finance the government expenditures.

During the period after the crisis, the fiscal measures to support the employment offer adopted in the majority of the European Union states visible in the reduction of the fiscality for labour income led to a decrease of the share of the direct fiscal incomes. The tax wedge on the salary income, especially for the low incomes decreased in almost all member states. Instead, the level of social contributions, which increased during the period 2008-2009 registered an asymmetrical evolution. (European Commission, Taxation Papers, 2010: 18).

2. Aspects regarding the taxes wages in the European Union

The labour tax rates in the EU increased continually from 28% in 1970 to approximately 42% in 1997. The continual growth of labour fiscality was due to the tendency of excessive increase of the unemployment rate at the beginning of the 1990s, as a result of the recession. Thus, at the end of the 90s the concerns aiming to decrease the excessive employment costs in order to stimulate the employment rate became more important. While some measures could be generally applied like: the decrease of labour tax rates or of the social contributions rate, others aimed at certain target groups: the decrease of the contribution rates for the unskilled workers.

Regarding the fiscal reforms adopted by the member states, the national governments preferred measures in order to narrow the taxable base or to grant allowances for the low income households rather than to reduce the tax rate. Thus, measures meant to increase the labour tax rate

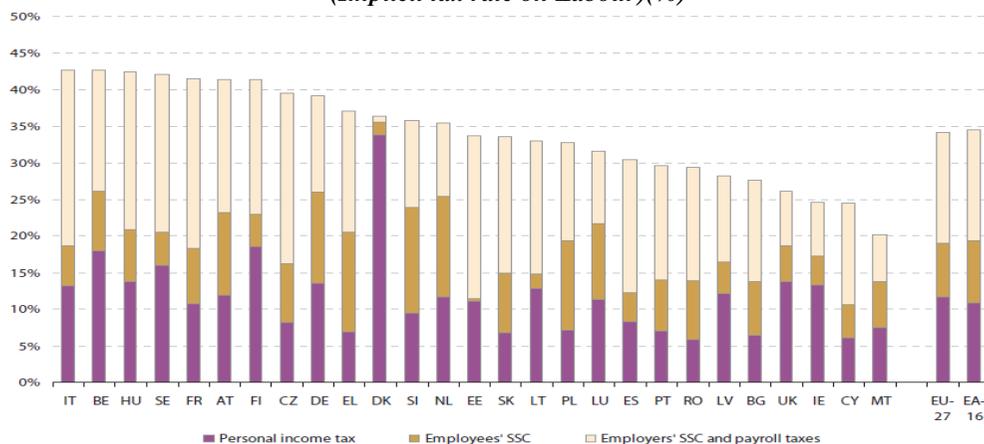
were adopted by Greece, France, Latvia, Portugal, Slovenia, Great Britain, Ireland; measures meant to decrease the labour tax rates were adopted by Austria, Germany, Denmark, France, Finland, Hungary, Latvia, Lithuania, Romania. Measures meant to increase the taxable base were adopted by states such as Denmark, Greece, Estonia, Spain, Ireland, Hungary, Portugal; measures meant to decrease the taxable base were adopted by Austria, Belgium, Bulgaria, Germany, Denmark, Finland, Hungary, Luxembourg, Holland, Poland, Portugal, Romania, Sweden. Fewer fiscal measures were adopted regarding the social contributions. The states which chose to apply measures meant to increase the social contributions rates were: Cyprus, Estonia, Portugal, Slovakia, Finland; the states which chose to decrease them were: Bulgaria, Czech Republic, Sweden. The enlargement of the taxable base was adopted by the following states: Bulgaria, Czech Republic, Estonia, Latvia, Lithuania and the narrowing of the taxable base was adopted by Finland.

The series of changes occurred during the period 2000-2008 had a very different effect upon the labour fiscality in the member states. The states of Central and Eastern Europe which joined the European Union in 2004 and 2007 faced a decline stronger than 4.4% of the labour tax rates, a decrease of 4.4%, while the average decrease of tax rates in the European Union was of 1.7%. The strongest diminution of these rates, of 11.1% was registered in Bulgaria and an increase of the rates was registered in Portugal (2.4%, Greece (2.5%), Spain (1.9%), Luxembourg (1.6%), Cyprus (2.9). During the period 2000-2008, in Romania, the labour tax rates decreased by 4%. (European Commission, Taxation trends in European Union, 2010: 107).

The international economic and financial crisis did not determine a decrease of the labour fiscality. If we analyze the situation in the member states, we can notice that the most significant decrease of the labour tax rates was registered in Denmark, Estonia, Romania, Ireland, Sweden, Bulgaria, Latvia and Lithuania. We can also notice that the taxation level in the three northern states is closet o the European Union average. The labour tax rates increased significantly in Cyprus, Portugal, Greece, below the European average in the case of the first two. The lowest labour tax rates are registered in Malta (20.2%), Cyprus (24.5%), Ireland (24.6%) and the highest labour tax rates are Italy (42.8%), Belgium (42.6%) and Hungary (42.4%).

If we analyze the salary tax evolution, we can notice that the decline of the tax wedge on the labour income is due to the decrease of the social contribution rates, as well as of the tax rates of the natural persons' income. The tax wedge is calculated by dividing the payroll tax, the social contributions paid by the employee and by the employer and other taxes to the total labour cost. The tax wedge supported by the employee and bt the employer for the labour force is quite high in the European Union and this represents one of the main causes for the poor performance concerning employment in the European Union.

**Figure 2. The structure of the tax wedge – the level of labour taxation in 2008
(Implicit tax rate on Labour)(%)**



Source: European Commission, *Taxation trends in European Union, "Data for the EU member states, Iceland and Norway", 2010, p. 110*

If we analyze the structure of labour taxation in the European Union, we can notice that its largest share is represented by the employer's compulsory social contributions, closely followed by the payroll taxes and the employee's social contributions.

Thus, in Denmark, Ireland and Great Britain, the largest share of the tax wedge on the labour income is represented by the payroll taxes and in states like Romania, Slovakia, Greece, the largest share is represented by the social contributions, the payroll tax representing less than 20%. The labour tax and the social contributions attenuate the economic fluctuations by decreasing the available income volatility. In many member states, the progressive character of the payroll taxes is often compensated by the regressive system of compulsory social contributions. The diminution of the tax wedge for the low wages increased the progressiveness of the tax wedge in the member states. The majority of the member states collect taxes on the natural persons progressive income. Seven member states apply progressive tax rates on the natural persons' income: Czech Republic, Bulgaria, Estonia, Latvia, Lithuania, Romania, Slovakia.

Table 1. The tax wedge on labour income – single worker with average income (% of the labour cost) in 2009

| Country | Tax wedge | Income tax | Employee SSC | Employer SSC | Tax wedge | Income tax | Employee SSC | Employer SSC |
|-----------------|-----------|------------|--------------|--------------|-----------|------------|--------------|--------------|
| | (1) | (2) | (3) | (4) | (1) | (2) | (3) | (4) |
| Belgium | 55.2 | 21.1 | 10.7 | 23.3 | -0.54 | -0.50 | 0.00 | -0.04 |
| Hungary | 53.4 | 15.9 | 12.8 | 24.6 | -0.72 | 0.11 | 0.17 | -1.00 |
| Germany | 50.9 | 17.3 | 17.3 | 16.3 | -0.57 | -0.52 | -0.03 | -0.03 |
| France | 49.2 | 9.9 | 9.6 | 29.7 | -0.05 | -0.05 | 0.00 | 0.00 |
| Austria | 47.9 | 12.1 | 14.8 | 17.8 | -0.91 | -1.05 | -0.02 | 0.10 |
| Italy | 46.5 | 15.0 | 7.2 | 24.3 | -0.03 | -0.03 | 0.00 | 0.00 |
| Sweden | 43.2 | 13.9 | 5.3 | 23.9 | -1.65 | -1.11 | 0.04 | -0.57 |
| Slovenia | 42.9 | 9.3 | 18.9 | 14.7 | -0.52 | -0.20 | 0.00 | 0.30 |
| Finland | 42.4 | 18.6 | 5.1 | 18.7 | -1.39 | -0.88 | 0.14 | -0.66 |
| Czech Republic | 41.9 | 8.3 | 8.2 | 25.4 | -1.55 | 0.05 | -1.05 | -0.55 |
| Romania | 41.7 | 8.8 | 12.3 | 20.6 | -1.65 | 0.31 | -1.03 | -0.93 |
| Lithuania | 41.7 | 15.6 | 2.3 | 23.8 | -1.38 | -1.38 | 0.00 | 0.00 |
| Latvia | 41.6 | 14.9 | 7.3 | 19.4 | -0.81 | -0.81 | 0.00 | 0.00 |
| Greece | 41.5 | 7.1 | 12.5 | 21.9 | -0.06 | -0.06 | 0.00 | 0.00 |
| Estonia | 39.5 | 12.6 | 2.0 | 25.0 | -0.56 | -0.56 | 0.00 | 0.00 |
| Denmark | 39.4 | 29.1 | 10.3 | 0.0 | -1.28 | -1.25 | -0.03 | 0.00 |
| Spain | 38.2 | 10.3 | 4.9 | 23.0 | 0.19 | 0.33 | 0.01 | -0.15 |
| Netherlands | 38.0 | 15.1 | 13.8 | 9.1 | -0.96 | 1.18 | -1.86 | -0.29 |
| Slovak Republic | 37.6 | 6.3 | 10.6 | 20.8 | -1.17 | -1.17 | 0.00 | 0.00 |
| Portugal | 37.2 | 9.1 | 8.9 | 19.2 | -0.07 | -0.07 | 0.00 | 0.00 |
| Bulgaria | 35.1 | 7.2 | 10.8 | 17.1 | -1.37 | 0.27 | 0.78 | -2.42 |
| Poland | 34.0 | 5.6 | 15.5 | 12.9 | -0.52 | -0.52 | 0.00 | 0.00 |
| Luxembourg | 34.0 | 12.7 | 10.9 | 10.3 | -1.16 | -1.59 | 0.08 | 0.35 |
| United Kingdom | 32.5 | 14.6 | 8.3 | 9.6 | -0.34 | -0.21 | -0.06 | -0.07 |
| Ireland | 28.6 | 12.9 | 6.0 | 9.7 | 1.54 | 0.35 | 1.18 | 0.00 |
| Malta | 22.8 | 8.7 | 7.0 | 7.0 | -0.81 | -0.07 | -1.74 | 0.00 |
| Cyprus | 13.9 | 2.1 | 5.9 | 5.9 | -0.21 | -0.21 | 0.00 | 0.00 |
| EU27 | 39.7 | 12.4 | 9.6 | 17.6 | -0.69 | -0.36 | -0.09 | -0.22 |

Source: European Commission, *Taxation Papers, Monitoring tax revenues and tax reforms in EU Member States 2010, "Tax policy after the crisis", Working Paper nr. 24, 2010, pp. 84*

A research conducted by the World Bank in eight member states: Czech Republic, Estonia, Latvia, Lithuania, Poland, Slovakia and Slovenia concerning the relationship between the tax wedge on labour income and the employment level revealed that there is an inverse relationship between the tax wedge and employment. It was also revealed that the labour force structure – with many unskilled workers, compulsory minimum wages, high level of labour taxation and progressive fiscal systems have worse effects on employment than in the rest of the European Union member states. (World Bank, EU-8 Quarterly Economic Report, 2005:12).

In the case of low-wages category, it is important to analyze the stimulants offered by the employees. In this respect, two indicators were developed: *the effective marginal tax rate* and *the effective average tax rate*, in order to study the effect of wage modifications. If the first rate takes into account the marginal modification of salary income, the second takes into account the salary changes implicit to the transition from unemployed to employed. The effective average tax rate is a specific concept of unemployment or inactivity; it is used to monitor the labour market distortions, especially regarding financial constraints in order to gain access to a job.

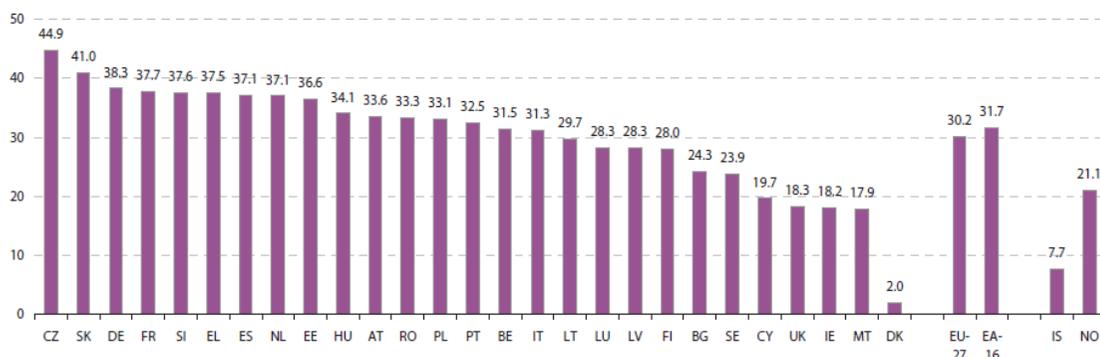
It is also obvious that an increase of the tax wedge has a stronger negative effect on the employment level in the case of workers with a lower qualification level. A research conducted in Belgium, Holland and France confirms this observation since a decrease of fiscality for the low-income workers led to a considerable increase of the employment level.

3. Aspects regarding the importance of compulsory social contributions to the formation of public income in the EU

The share of fiscal revenues from direct taxes, indirect taxes and social contributions is relatively close in the old member states of the European Union in comparison with the new member states, which register a lower level of income from direct taxes. The low level of income from direct taxes is compensated by more significant shares of the social contributions or indirect taxes. While in some states such as Bulgaria, Romania, Malta and Cyprus the most significant share of the budgetary income is represented by the income from indirect taxes, in other states like Czech Republic, Slovakia, Germany and France, the income from social contributions is high. At the opposite side are Denmark, Ireland and Great Britain, states which collect relatively low income from social contributions. The motivation for the very low level of social contributions in Denmark is the fact that its social expenditures are not financed by the social insurance budgets, but by income from general taxes. This explains the very high level of direct taxes, one of the highest in the European Union.

If we analyze the evolution of the budgetary income, we can notice that in time most of the states changed the structure of the budgetary income. For example, in case of Latvia and Slovenia, the increase of the share of the direct taxes was compensated by a decrease of the social contributions and of indirect taxes. In Sweden, the increase of the share of indirect taxes meant a decrease of the share of direct taxes and social contributions in the total income. In Greece, the decline of direct and indirect taxes was completed by an increase of the social contributions rates.

Figure 3. The share of social contributions in the total tax wedge (%) in 2008



Source: European Commission, *Taxation trends in European Union, “Data for the EU member states, Iceland and Norway”*, 2010, p. 68

In Austria, the most important share of the tax wedge is represented by the social contributions. The social contributions rate supported by the employees is approximately 18%, the social contributions rate supported by the employer is 21.5%, and in case of income earned out of independent activities, the social contribution rate is 25%.

In 2010, the total social contributions collected in Bulgaria reached almost 28.5% of the income, out of which the most important part was represented by the contributions to social insurances – pensions – which decreased in 2010 from 18% to 16%, decrease compensated by an increase of the direct tax rates.

In Czech Republic, the most important source of budgetary income is represented by the social contributions (44.9% of the total collected income). The level of income from social contributions is the highest of the European Union, followed by Slovakia and Germany. Taking into account this aspect, the income from direct and indirect taxes is under the European Union average. The social contribution rate owed by the employees is 11%, out of which 6.5% for the social insurances – pensions and 6.5% for social health insurances. The social contributions rate owed by the employer is 34% of the gross income. In Finland, the social contributions level owed by the employer is 28%.

The level of social contributions owed by the employer registered in France in 2008 was the second in the European Union after Czech Republic. The social contribution rate owed by the employer is high in France, amounting to 35%-45% of the income in comparison with the contributions owed by the employees which amounts to 14% (European Commission, *Taxation trends in European Union, 2010*: p. 160-272).

In Sweden, the social contributions have the lowest share in the total budgetary income. In Sweden, most of the social contributions is paid by the employers (31.42%). The employees pay an additional rate of 7% for the social insurances. In order to facilitate youth employment, the employers benefit from a reduced rate of social insurance for people under 26.

In Ireland, the share of social contributions to the total income is not significant – only 18.2% because of the very low level of labour taxation in comparison to the European Union average. The increase of labour tax rate starting with 2000 was balanced by the decrease of the social contributions level. The contribution paid by the employers is 10.75%, with a reduced rate of 8.5% for those with low income (lower than 352 euros per week) and the contribution supported by the employees is 4% of the gross income. Given the very low level of social contributions rate in Great Britain, the income from this source represents a small share of the total budgetary income.

In Malta, the level of social contributions is very low, much under the European Union average. The income from this source had a declining evolution during the period 2000-2008, registering the lowest level of all the member states. The workers of Malta, the employers and the government contribute equally to the social security fund with 10% of the basic salary.

In Holland, the three important sources in the income formation have equal shares. The social security system is composed of the public insurance and the employees' insurance. The first category is financed by all the members of the society, while the second category is supported by the employers according to the economic sector in which they work. The employees' social contributions rates are identical to those of the employers.

Romania is the fourth country in terms of the importance of income from direct taxes to the total budgetary income after Bulgaria, Cyprus, Malta. In 2008, the level of budgetary income increased with almost 29% in comparison with 2007. This increase of public income came from the increase of income from: income tax -23.6%, natural persons' income tax - 27.8%, VAT - 30.8%, excises - 8.7% and social contributions - 24.7% (Mara Eugenia Ramona, Inceu Adrian, Cuceu Ionuț, Achim Monica Violeta, 2009: 3). This confirms the importance of social contributions to the formation of public income. The obligation to pay the rate of social insurance belongs to the employer (20.8%) and to the employee (10.5%) in normal working conditions. If the employee develops his activity in higher risk conditions, the contribution rate paid by the employer increases by 5%; for particular working conditions the total contributions rate is 36.3% and for special working conditions, the total contributions rate is 41.3%.

Examining in general the main sources of budgetary income formation in the European Union in 2008, we can notice a quite balanced situation, the social contributions having the smallest share in the total income (12.6% of GDP), in comparison with the direct taxes (13.5% of GDP) and the indirect taxes (31.4% of GDP).

4. Conclusions

In the current context of the financial crisis it is absolutely necessary to compare the evolution of labour fiscality and the effect of the growth of public debts on the tax wedge on labour income. In a research conducted by the European Central Bank, it was revealed that in the majority of the states which registered an increase of the public debt, the labour taxation increased - Greece, Italy and France being relevant examples in this respect.

Despite the fact that some states have low labour taxes, the labour fiscality remains high in the European Union in comparison with other industrialized economies. The increase of the fiscality level for the labour income determines the decrease of the employment rate and the raise of the unemployment rate. The solution to guarantee a higher employment rate could be the relaxation of the labour fiscality. Some specialists consider that fiscal neutrality in the field of labour fiscality could be realized by transferring the tax wedge on the labour income towards property or energy taxation.

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THE FLAT TAX – A COMPARATIVE STUDY OF THE EXISTING MODELS

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In the two last decades the flat tax systems have spread all around the globe from East and Central Europe to Asia and Central America. Many specialists consider this phenomenon a real fiscal revolution, but others see it as a mistake as long as the new systems are just a feint of the true flat tax designed by the famous Stanford University professors Robert Hall and Alvin Rabushka. In this context this paper tries to determine which of the existing flat tax systems resemble the true flat tax model by comparing and contrasting their main characteristics with the features of the model proposed by Hall and Rabushka. The research also underlines the common features and the differences between the existing models. The idea of this kind of study is not really new, others have done it but the comparison was limited to one country. For example Emil Kalchev from New Bulgarian University has asses the Bulgarian income system, by comparing it with the flat tax and concluding that taxation in Bulgaria is not simple, neutral and non-distortive. Our research is based on several case studies and on compare and contrast qualitative and quantitative methods. The study starts form the fiscal design drawn by the two American professors in the book “The Flat Tax”. Four main characteristics of the flat tax system were chosen in order to build the comparison: fiscal design, simplicity, avoidance of double taxation and uniformity of the tax rates. The jurisdictions chosen for the case study are countries all around the globe with fiscal systems which are considered flat tax systems.

The results obtained show that the fiscal design of Hong Kong is the only flat tax model which is built following an economic logic and not a legal sense, being in the same time a simple and transparent system. Others countries as Slovakia, Albania, Macedonia in Central and Eastern Europe fulfill the requirement regarding the uniformity of taxation. Other jurisdictions avoid the double taxation but they have several tax rates for different types of income. Analyzing the flat tax jurisdiction we concluded that none of the existing models is a true flat tax as designed by Hall and Rabushka.

The study is important given the fact that it can provide useful information for future studies in connecting the effects generated by the adoption of flat tax with the design of the system. This can give intelligence for the exiting models in correcting and improving their features in order to become more efficient. This can also provide precious design information for the jurisdictions desirous of implementing flat tax systems.

The added value of this paperwork consists in the determination of the main features of the existing flat tax systems in relation with the theoretical system designed by Hall and Rabushka and in the fact that it provides precious structured information for future studies allowing to connect the effects of the flat fiscal model with its characteristics.

Keywords: flat tax, simplicity, uniformity, rates

JEL Codes: H20, H24, H25

1. Introduction

Over the last two decades the flat tax became a real fiscal phenomenon. Many countries in transition, but also developed jurisdictions all over the world have adopted this system in order to give their economies an impetus.

Along with the idea of a flat tax have appeared the theories which advocate this system and also the theories which show that it does not represent a viable solution. The pro and cons of the flat tax system are not yet exhausted, theorists, practitioners, politicians and even journalists worldwide try to determine the social, fiscal and economic efficiency of this construction.

The debate over the flat tax is yet concentrated on rhetoric arguments and is based on assertion rather than analysis and evidences.

The present global economic crisis has brought to viewfinder the problem of finding fiscal solutions in order to overcome the social and economic negative effects of the crisis. With this occasion the flat tax system became an important spark discussion point. Some economists blamed the flat tax idea, trying to demonstrate that these systems represent one of the indirect, yet important, causes of the international economic crisis because of their character which generates inequities and social bias. More than that, some specialists consider the flat tax is the main cause of the financial problems in the Baltic region. Yet no country which adopted a flat tax, less Iceland, has given up this fiscal construction.

In the modern world there are no perfect fiscal systems, but improving the existing ones is goal for any jurisdiction. More over, it is well known that fair taxes are not efficient and efficient taxes are not fair. Although the recipe for the perfect taxing system was not found in terms of fairness and efficiency, our study tries to bring a small contribution to the diagnosis and improvement of the existing flat tax system.

The specific objectives of this research are:

- Determining the common elements and the differences between the existing flat tax models:
- Generating research assumptions which may represent the leading point for future research studies.

2. The Flat Tax of Hall and Rabushka

We began our research from the “Bible” of the flat tax, the book “The Flat Tax” written by Robert Hall and Alvin Rabushka in 1985. In this work the two American professors define the flat tax system by drawing its main features.

The flat tax is a very simple consumption tax system. Following not a legal sense, as other tax systems, but economic logic the integrated flat tax design is utmost simple – its two tax forms fits on postcards. The income is divided in two categories: individual wage tax, which includes wages, salaries and pensions, and business income which include all other types of income. The taxation for individual wage tax is made using a single form which fits a postcard:

| Form 1 | | Individual Wage Tax | | 1998 |
|--|---|---------------------|---------------------------------|-----------------------------|
| Your first name and initial (if joint return, also give spouse's name and initial) | | Last name | | Your social security number |
| Present home address (number and street including apartment number or rural route) | | | Spouse's social security number | |
| City, town, or post office, state, and ZIP code | | | Your occupation™ | |
| | | | Spouse's occupation™ | |
| 1 | Wages and salary..... | 1 | | |
| 2 | Pension and retirement benefits..... | 2 | | |
| 3 | Total compensation (line 1 plus line 2)..... | 3 | | |
| 4 | Personal allowance | | | |
| | (a) <input type="checkbox"/> \$16,500 for married filing jointly..... | 4(a) | | |
| | (b) <input type="checkbox"/> \$9,500 for single..... | 4(b) | | |
| | (c) <input type="checkbox"/> \$14,000 for single head of household..... | 4(c) | | |
| 5 | Number of dependents, not including spouse..... | 5 | | |
| 6 | Personal allowances for dependents (line 5 multiplied by \$4,500)..... | 6 | | |
| 7 | Total personal allowances (line 4 plus line 6)..... | 7 | | |
| 8 | Taxable compensation (line 3 less line 7, if positive; otherwise zero)..... | 8 | | |
| 9 | Tax (19% of line 8)..... | 9 | | |
| 10 | Tax withheld by employer..... | 10 | | |
| 11 | Tax due (line 9 less line 10, if positive)..... | 11 | | |
| 12 | Refund due (line 10 less line 9, if positive)..... | 12 | | |

Figure 1: Individual wage – tax form

Source: Hall and Rabushka 2007: 94

The business tax is a giant, comprehensive withholding tax on all types of personal income other than wages, salaries, and pensions, but the taxation is also made using a very simple form:

| Form 2 | | Business Tax | | 1998 |
|---------------------------|---|--------------------------------|--|------|
| Business name | | Employer identification number | | |
| Street address | | County | | |
| City, state, and ZIP code | | Principal product | | |
| 1 | Gross revenue from sales..... | 1 | | |
| 2 | Allowable costs | | | |
| | (a) Purchases of goods, services, and materials..... | 2(a) | | |
| | (b) Wages, salaries, and pensions..... | 2(b) | | |
| | (c) Purchases of capital equipment, structures, and land..... | 2(c) | | |
| 3 | Total allowable costs (sum of lines 2(a), 2(b), 2(c))..... | 3 | | |
| 4 | Taxable income (line 1 less line 3)..... | 4 | | |
| 5 | Tax (19% of line 4)..... | 5 | | |
| 6 | Carry-forward from 1997..... | 6 | | |
| 7 | Interest on carry-forward (6% of line 6)..... | 7 | | |
| 8 | Carry-forward into 1998 (line 6 plus line 7)..... | 8 | | |
| 9 | Tax due (line 5 less line 8, if positive)..... | 9 | | |
| 10 | Carry-forward to 1999 (line 8 less line 5, if positive)..... | 10 | | |

Figure 2: Business wage – tax form

Source: Hall and Rabushka 2007: 94.

Another important feature of the flat tax defined by Hall and Rabushka is that it taxes once and only once all types of income.

The flat tax also means that business income and worker income are taxed at the same single tax rate.

3. Methodology

This paper represents a scientific approach focused on relevant case studies in the area of flat tax constructions research. This systemic and comparative research starts from the theoretical flat tax model designed by Robert Hall and Alvin Rabushka in 1985.

In the research process four main characteristics of the theoretical model are selected in order to build the comparison:

- simplicity;
- fiscal design;
- avoidance of double taxation;
- tax rates uniformity.

Through these characteristics, the similarities and the differences between the flat tax systems in different jurisdictions of the world are found. For a systemic approach the jurisdictions are analyzed grouped in regions. For each region were selected the most relevant cases for our research.

In the first place the flat tax systems from Asia are analyzed. For the comparison with the theoretical model was chosen Hang Kong, taking into consideration the age and the performances of this fiscal construction.

The flat tax systems from Eastern and Central Europe are also studied. The flat tax became a part of the fiscal landscape of the ex-communist countries since 1994 when Estonia adopted a flat tax. The idea spread rapidly, countries like Lithuania, Latvia, Russia, Serbia, Slovakia, Ukraine, Georgia, Romania, Albania, Macedonia, Monte Negro, Bulgaria, Czech Republic, Slovakia and Hungary have also adopted this type of system.

The issue regarding the flat tax is also studied for Western European Countries. The fiscal design of Guernsey and Jersey, two of the oldest flat tax systems in the world, are compared with the theoretical model. In Western Europe we find the first country in the world which gave up the flat tax construction.

The American continent has also some jurisdictions with flat tax systems: Paraguay and Jamaica.

4. Results

4.1 The Flat Tax in Asia

In Asia there are six countries which have a flat tax system: Hong Kong, Mongolia, Turkmenistan, Kyrgyzstan, Kazakhstan and Iraq. Hong Kong flat tax was adopted in 1947 and is one of the most efficient fiscal systems in the world taking into consideration the fact that the budget of this jurisdiction was on surplus for decades on a row.

Comparing the flat tax constructions of these countries with the model designed by Hall and Rabushka, some differences and similarities appear.

In terms of simplicity Hong Kong is the champion. The taxpayers declare their income once a year and there is no withholding tax so the each person, business or individual has to declare his or hers income.

In the other five countries the systems are not that simple, the fiscal tasks are more complex and appear more often.

The Hong Kong fiscal design resembles the design proposed by Hall and Rabushka. The treatment of the income in this Chinese jurisdiction follows an economic logic and not a legal

sense, so that income is divided in wages income and business income. The other Asian states treat the different types of income from a judicial point of view.

Avoiding double taxation is an accomplished rule in Hong Kong as long as dividends and capital gains are not taxed.

Analyzing the tax rates in Hong Kong one can see that there is a difference of 1.5% between the tax rate used for taxing business income and the tax rate for wages, salaries and pensions. There is also an important legal foresight regarding the salaries under a certain ceiling: one can choose between a progressive taxation with rates ranging from 2% to 17% and a proportional taxation. But this progressive taxation can be interpreted as a system of allowances for the poorer taxpayers.

In Mongolia the taxation is made using a uniform rate for personal income and two tax rates for the profit. In Turkmenistan, Kyrgyzstan and Kazakhstan the uniformity of the rates is verified only for personal income.

4.2 The Flat Tax in Eastern and Central Europe

In the last two decades many of the ex-communist European countries have adopted flat tax systems. The first one was Estonia in 1994 and many others follow: Lithuania in 1995, Latvia in 1997, Russia in 2001, Serbia in 2003, Slovakia and Ukraine in 2004, Georgia and Romania in 2005, Macedonia and Montenegro in 2006, Czech Republic in 2007, Belarus, Albania and Bulgaria in 2008 and Hungary in 2011.

The fiscal design of the flat tax countries in Central and Eastern Europe is still a complex one. Unlike the flat tax, the separation of both taxation structures in all the countries of this region does not follow economic logic, but a legal sense, generating complications and double regulation of business income.

In terms of avoiding double taxation there are just a few countries like Slovakia and Serbia that comply with this rule. The other countries in the region tax dividends and/or capital gains, generating double taxation. This is the case of the Czech Republic, Bulgaria, Romania, Belarus, Montenegro, Macedonia and many others.

The uniformity of the tax rates is the most important feature of a flat tax system. This characteristic is accomplished by Estonia, Slovakia, Albania, Macedonia, and Montenegro.

4.3 The Flat Tax in Western Europe

Western Europe remains an impregnable redoubt for the flat tax. The only two jurisdictions in this region which have adopted a flat tax system are Guernsey and Jersey, also known as the Channel Islands.

The fiscal systems from the two islands are relatively simple. Their simplicity comes from the uniformity of the tax rates used for all kinds of income, but the declaration procedure is classic.

The fiscal treatment of the revenues is made by classifying the income using classic legal principles and not economic rules. For example in Guernsey the income is divided into wages and salaries, dividends, interests, income of sole proprietors and corporate income.

Double taxation is a reality in these jurisdictions, as income from dividend is taxed both in Guernsey and Jersey.

Taxing in the Channel Islands is made uniformly. There is an exception in Jersey where the income of the companies from the financial sector is taxed with a rate of 10%, while all the other types of income are taxed with 20%.

4.4 The Flat Tax on the American Continent

There are two major countries in Central and South America which have embraced the flat tax idea: Paraguay and Jamaica. Till 2010 in Paraguay the personal income was not taxed. Starting 1st

January 2010 the personal income is taxed with a rate of 10%, the same tax rate used for corporate income.

Jamaica adopted a flat tax in 1986. In 2010 Jamaica introduced a progressive taxing system for personal income, but the authorities from this state readopted a fat tax in March 2011.

The Jamaican and the Paraguayan fiscal systems are far from resembling the flat tax system designed by Hall and Rabushka. These systems are not simple; their complexity is being reflected by the diversity of tax rates used for imposing different types of income. The rule regarding the avoidance of double taxation is violated by taxing the dividends in both countries. The classification of the revenues in these American jurisdictions is made following a legal logic and not an economic sense.

5. Conclusions

Analyzing the flat tax systems by comparing and contrasting them with the fiscal model designed by Hall and Rabushka, we obtained some interesting results.

The comparative study shows that the differences between the theoretical flat tax model and the existing flat tax constructions are the rule, whereas similarities are rather the exception.

The fiscal constructions became simpler by adopting the flat tax, especially because the rates become uniform for the all types of income and the taxing procedure is easier to perform. But none of the flat tax jurisdictions analyzed is as simple as the theoretical model.

The general design of the flat tax systems in Europe, Asia and America is based on legal principles and not on economic fundamentals as the flat tax of Hall and Rabushka. The exception is represented by the Hong Kong flat tax model, which is the only fiscal construction in the world following an economic logic.

Some countries have uniform tax rates for all types of income, but others use flat rates only for personal income.

Avoiding double taxation is a principle often violated by the majority of the flat tax countries, excepting Hong Kong and a few jurisdictions from Europe.

All in all we can conclude that there is no fiscal construction in the world which goes all the way with the theoretical model design by the two famous American professors. Yet the system that resembles the most the theoretical construction is the one of Hong Kong. But the questions that remain are which of the existing models are the most efficient ones and which are their characteristics generating the desired economic and social effects.

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SUB-SECTION: BANKING

COMPETITION IN ROMANIAN BANKING SECTOR

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Recent turmoil in the global financial system has impacted severely on the banking sector with many banks suffering large losses and necessitating the need to raise additional capital privately or through their respective national governments. In our study we investigate the impact of structural reforms performed throughout the European Union (EU) accession process on competition and contestability of banking systems in Romania.

The literature of the measurement of competition can be divided into two major approaches: structural and non-structural. The structural approach to the assessment of competition embraces the „Structure-Conduct-Performance Hypothesis” (SCP) and the „Efficient Structure Hypothesis” (ESH). The structural approach, as the name suggests, assesses bank competition by examining measures of market structure such as concentration ratios (the share of assets held by the top 3 or 5 institutions) or indices (e.g., the Herfindhal-Hirschman index) and supposes that higher concentration in the banking market causes less competitive bank conduct and leads to higher bank profitability. The SCP model is originally developed by Bain (1956). The second approach, ESH, developed by Demsetz (1973) and Peltzmann (1977) suggests that the superior performance of the market leaders determines the market structure, implying that higher efficiency produces both higher concentration and greater profitability. The non-structural indicators of competition are mainly based on the measures of monopoly power developed by Lerner (1934). The Lerner Index suggests the mark-up of price over marginal cost. An alternative non-structural indicator of the degree of market competition is the Panzar and Rosse (1987) H-statistic. The H-statistic measures the extent to which changes in banking costs are reflected in changes in banking revenues.

In order to examine the level of competition and market power of banks in Romania for period 2003 – 2009, we estimate the non-structural indicators and compare it with the structural indicators of competition.

In particular, we measure competition using Lerner index and the H-statistic, indicators what are estimated using bank-level data and are compared with a standard market structure measure of concentration like HHI and CR5. There are no other studies that measure both structural and non-structural competition indicators for Romanian banking sector. Also, our assessment contains a period of seven years including the begging of the implications of the present international financial crises on Romanian banking sector.

The structural indicators show continuous increase of competition in the Romanian banking system. Lerner index and H statistic demonstrate that Romanian banking system is characterized by monopolistic competition and relatively competitive practices. Personnel cost, operational cost and financial cost are statistically significant at conventional levels, which imply good fit of the revenue equations. The results also demonstrate that excess fixed assets do not generate abnormal revenue.

Keywords: bank competition, Lerner index, H statistic, structural indicators, Romanian banking system

JEL classification: G21; L11

1. Introduction

In recent years due to reform process, what involved an ample process of liberalization, privatization and recapitalization of the banking sector, the analysis of the competition of banking sectors in transition countries from Central and Eastern European countries has received much consideration. In our study we investigate the impact of structural reforms performed throughout the European Union (EU) accession process on competition and contestability of banking systems in Romania. Recent turmoil in the global financial system has impacted severely on the banking sector with many banks suffering large losses and necessitating the need to raise additional capital privately or through their respective national governments. The failure of investors, depositors, and supervisors to appropriately discipline banks have led academics and policy-makers to re-consider the links between bank performance, risk and changes in the competitive environment. Moreover, in recent years, indicators of banking competition had been used by researchers to explain performance and risk differentials across banks.

2. Literature review

The literature of the measurement of competition can be divided into two major approaches: structural and non-structural. The structural approach to the assessment of competition embraces the „Structure-Conduct-Performance Hypothesis” (SCP) and the „Efficient Structure Hypothesis” (ESH). The structural approach, as the name suggests, assesses bank competition by examining measures of market structure such as concentration ratios (the share of assets held by the top 3 or 5 institutions) or indices (e.g., the Herfindhal-Hirschman index) and supposes that higher concentration in the banking market causes less competitive bank conduct and leads to higher bank profitability. The SCP model is originally developed by Bain (1956).

The second approach, ESH, developed by Demsetz (1973) and Peltzmann (1977) suggests that the superior performance of the market leaders determines the market structure, implying that higher efficiency produces both higher concentration and greater profitability. "Non-structural models" do not infer the competitive conduct of banks through the analysis of market structure. The New Empirical Industrial Organization approach rather recognizes that banks behave differently depending on the market structure in which they operate. The non-structural indicators of competition are mainly based on the measures of monopoly power developed by Lerner (1934). The Lerner Index suggests the mark-up of price over marginal cost. The higher the mark-up, the greater is the realized market power. There are a broad range of studies that use the Lerner index like Angelini. and Cetorelli (1999), Padoa-Schioppa (2001), Carbo et al., 2003, Maudos and Perez (2003), Toolsema (2003), Fernandez de Guevara and Maudos (2004), Carbo et al. (2005), Carbo´ et al. (2006); Humphrey et al. (2006), Fernandez de Guevara et al. (2007); Carbo and Rodriguez (2007), Maudos and Fernandez de Guevara (2007), Carbó et al. (2009). A number of studies have used the Lerner index to try to determine the trend in competitive behavior over time.

An alternative non-structural indicator of the degree of market competition is the Panzar and Rosse (1987) H-statistic. The H-statistic measures the extent to which changes in banking costs are reflected in changes in banking revenues. It is calculated as the sum of the ratios of the percentage change in total revenue (from all sources) to the percentage change in the three input prices (funding, labour and capital costs), holding constant total banking output (total assets), leverage, and two balance sheet composition variables (loans to assets and deposits to total liabilities). There are a various studies using H-statistic measures. Some of them examine competition on European countries like those of Shaffer (1993), Molyneux et al. (1994), Bikker and Groeneveld (2000), De Bandt and Davis (2000), Weill (2003), Boutillier et al. (2004), and Koutsomanoli-Fillipaki and Staikouras (2004), Carbó et al. (2009). Claessens and Laeven (2004), Bikker and Haaf (2002) assessed competition using H-statistic for a sample of different countries,

including European ones. There are also individual country studies: for Germany – Hempell (2002), Gischer and Stiele (2008), for Italy – Coccorese (2004), for Greece – Hondroyiannis et al. (1999), Coccorese (2005), for Spain – Maudos and Perez (2003), Carbo et al. (2003), for Finland – Vesala (1995), for Canada – Nathan and Neave (1989), for Japan – Molyneux et al (1996).

3. Methodology and data used

The purpose of this study is to analyze the competitive conditions in the banking sector of Romania, in light of the reforms implemented in this country and the immense changes in Romanian banking system using bank-level data. There are no other studies that measure both structural and non-structural indicators for Romanian banking competition.

In order to examine the level of competition and market power of banks in Romania for period 2003 – 2009, we estimate the non-structural indicators and compare it with the structural indicators of competition. In particular, we measure competition using Lerner index and the H-statistic, indicators what are estimated using bank-level data and are compared with a standard market structure measure of concentration like HHI and CR5.

We estimate the degree of bank market power using bank-level data, the approach followed is similar to that of Maudos and de Guevara (2007) and Delis and Tsionas (2009) who defined the Lerner index as:

$$L_{it} = (p_{it} - mc_{it}) / p_{it} \quad (1)$$

where p is the price of total assets computed as the ratio of total revenue to total assets; mc is the marginal cost of total assets. In particular, we opt for a modeling framework that allows mc to differ across banks and time, using a non-parametric technique to estimate observation-specific marginal costs from a cost function. In particular, here we resort to the estimation of the following Cobb-Douglas cost function:

$$\ln c_{it} = a_0 + a_1 \ln q_{it} + a_2 \ln d_{it} + a_3 \ln w_{it} + \varepsilon_{it} \quad (2)$$

where c is the total cost of bank i at time t , q is bank output (measured by total assets), d is the value of bank deposits, w are the prices of inputs and e is a stochastic disturbance. This cost function assumes that banks use inputs and deposits to produce output q (for a similar implementation, see e.g. Uchida and Tsutsui: 2005; Brissimis et al.: 2008). The marginal cost of bank output is simply a_1 .

In the case of perfect competition, $L=0$; under pure monopoly, $L = 1$; for monopolistic competition L ranges between 0 and 1; and $L < 0$, implies pricing below marginal cost and could result, for example, from a non-optimizing behavior of banks.

In our application of the Panzar–Rosse approach, the following equation is estimated to assess the H statistic from a panel dataset of banks from Romania for period 2003 – 2009:

$$\log\left(\frac{R_{it}}{TA_{it}}\right) = \alpha_0 + \sum_{k=1}^K \alpha_k \log \omega_{it}^k + x_{it} \beta + \varepsilon_{it} \quad (3)$$

where R is the revenue; TA is the total assets; w_k is the unit price of input k ; x is a vector of control variables; ε is the disturbance term; i and t denote bank and time respectively. The H statistic is the sum of α_1 to α_k in this specification.

Panzar and Rosse (1987) showed that the H statistic indicates the nature of market structure under following assumptions: a) banks are profit maximizing; b) banks produce revenue using labour, capital and intermediated funds as inputs; c) higher input prices are not associated with higher quality services that generate higher revenue.

For accurate identification of the H-statistic using an estimated revenue equation based on a static equilibrium model, it is necessary to assume that markets are in long-run equilibrium at each point in time when the data are observed. Accordingly, the equilibrium profit rate should be uncorrelated with the factor input prices. To test of the market equilibrium assumption we estimated in addition following equation:

$$\log(1 + R_{it}) = \alpha_0 + \sum_{k=1}^K \alpha_k \log \omega_{it}^k + \beta x_{it} + \beta_{TA} \log TA_{it} + \varepsilon_{it} \quad (4)$$

with the variable TA controlled as an explanatory variable.

The estimated value of H statistic ranges between $-\infty$ and 1. H statistic is smaller than 0 if the underlying market is monopoly, it ranges between 0 and 1 for monopolistic competition and an H statistic of unity indicates perfect competition.

In order to estimate the non-structural indicators of competition we used the following set of data: a) inputs: personnel expenses, fixed assets and financial capital (sum of total deposits, total money market funding, total other funding and equity); input prices: total personnel expenses over total assets, other operating expenses over fixed assets and interest expenses over financial capital; control microeconomic variables: total capital ratio, equity to total assets ratio, credit risk measured as ratio of loan-loss provisions to total loans (LLR_GL), liquidity risk measured as ratio of liquid assets to total deposits and borrowing funds (LA_TD); and control macroeconomic variables: GDP growth rate – Growth in real GDP in per cent (GDP_G), Inflation rate - change in annual average retail/consumer price level in per cent (IR), Level of financial intermediation – domestic credit provided by banking sector percentage of GDP (FIN_INT).

The empirical model specified in equation is estimated using the panel least square fixed effects methodology. A second set of models is estimated, GMM data models, to allow comparison of results, and as a robustness check. The models are estimated on a panel of 24 commercial banks from Romania for 2003 – 2009 period.

4. The results of the research

The most common structural measures of competition and concentration are the Herfindahl-Hirschman Index (HHI) and the n-bank concentration ratio (CRn). The HHI is defined as the sum of squared market share of the banks in the market. The upper bound of the HHI is 10.000, which indicates a monopoly, and the lower bound is 0 in the situation of an infinite number of banks. A market with a result of less than 1.000 is a competitive marketplace, a result of 1.000 – 1.800 indicates a moderately concentrated marketplace and a result of 1.800 or greater indicates a concentrated marketplace. The n-bank concentration ratio (CRn) is calculated as the percentage of the market controlled by the top n banks in the market, usually the first three or five banks, and the measure takes the share of deposit, loans or assets.

Table 1 Structural indicators of competition in the Romanian banking system for 2003 – 2009 period by year

| Year | Herfindahl Index for credit institutions | Share of total assets of the five largest credit institutions | Number of credit institutions | Number of local units (branches) | Number of branches of credit institutions from EU countries |
|------|--|---|-------------------------------|----------------------------------|---|
| 2003 | 1251 | 55.2 | 39 | 3387 | 7 |
| 2004 | 1111 | 59.5 | 40 | 3031 | 6 |
| 2005 | 1115 | 59.4 | 40 | 3533 | 5 |
| 2006 | 1165 | 60.1 | 39 | 4470 | 6 |
| 2007 | 1041 | 56.3 | 42 | 6340 | 10 |
| 2008 | 922 | 54 | 43 | 7375 | 10 |
| 2009 | 857 | 52.4 | 42 | 6425 | 10 |

As we can see in the Table 1, the concentration of the Romanian banking system has been decreasing continuously from 2003 to 2009. This means that the competition in the Romanian

banking system has increased yearly, especially due to diminishing of the state capital and entering of foreign capital.

Table 2 Non - structural indicators of competition in the Romanian banking system for 2003 – 2009

| Model | OLS | GMM |
|---------------------|----------------------------------|----------------------------------|
| <i>Lerner index</i> | | |
| Lerner index | 0.908022*** (0.044363) | 0.842283*** (0.078149) |
| <i>H statistic</i> | | |
| Personnel cost | 0.357857*** (0.020786) | 0.455813*** (0.107588) |
| Operational cost | 0.033020*** (0.011901) | 0.038437 (0.074553) |
| Financial cost | 0.313549*** (0.019461) | 0.445536*** (0.087971) |
| H statistic | 0.704426 | 0.939786 |

Note: Standard deviations are presented between brackets.

*, **, *** indicates significance levels at 10%, 5% and 1%

Table 2 reports the estimates obtained from applying the methodology described above to the Romanian banking sector. Most of the input prices reported in Table 2 are statistically significant at conventional levels, which imply good fit of the revenue equations.

The both results, Lerner index and H statistic, show that Romanian banking system is characterized by monopolistic competition and relatively competitive practices.

The price of fixed assets contributes less to the equation for the H-statistic than the rest of the input prices, result in line with the literature (see Molyneux et al. 1994 and Bikker and Haaf 2002) and it means that excess fixed assets does not generate abnormal revenue.

Finally, we test for long-run equilibrium using ROA as the dependent variable as discussed above. The result (i.e. $H_n=0$) suggests that the hypothesis of equilibrium is confirmed for Romanian banking systems.

5. Conclusion

As the structural indicators show, the concentration of the Romanian banking system has been decreasing continuously from 2003 to 2009. This means that the competition in the Romanian banking system has increased yearly, especially due to diminishing of the state capital and entering of foreign capital. The Romania' accession to European Union had an active effect on these trends. The both results, Lerner index and H statistic, show that Romanian banking system is characterized by monopolistic competition and relatively competitive practices. Personnel cost, operational cost and financial cost are statistically significant at conventional levels, which imply good fit of the revenue equations. The results also demonstrate that excess fixed assets do not generate abnormal revenue. Even if some banks have extended their network aggressively for a bigger share of market, they do not account larger revenues yet. Personnel cost and financial cost higher contributions to the equation for the H-statistic comparative with operational costs could be explained by a intense competition in recruiting and maintaining the personnel (due to head hunting and personnel migration) and a high cost of financial resources, due to high cost with the minimum reserve requirements and the using of parental undertakings financing as a form of profits repatriation.

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TROUBLESHOOTING BASEL II: THE ISSUE OF PROCYCLICALITY

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A widespread concern about Basel II capital requirements is that it might amplify business cycle fluctuations, forcing banks to restrict their lending when the economy goes into recession. Under the IRB approach of Basel II, capital requirements are increasing functions of the probability of default (PD), loss given default (LGD) and exposure at default (EAD) parameters estimated for each borrower, and these inputs are likely to rise in economic downturns. In this paper, we compare two alternative procedures that are designed to somehow moderate the procyclical effects induced by Basel II - type capital regulation. The starting points of our analysis consist Jokivuolla, Kiema and Vesala (2009) and Repullo and Suarez (2009), who both examined the impact of regulatory capital's procyclical effects. It's vital to note remarks of Caprio (2009), that is, making regulatory capital levels countercyclical could worsen the state of an economy during a recession. As we do not have access to the Romanian Central Credit Register database, we compute a model-economy that stands as a proxy for the Romanian firms' sector. Our simulated Romanian economy can be characterised by all Romania-specific macroeconomic controls. Then we estimate a model of PDs during the period 2000 – 2010, and based on the estimated probabilities of default we compute the corresponding series of Basel II capital requirements. After the diagnosis of procyclical, we analyze two procedures that try to mitigate the cyclical effects of capital regulation: smoothing the output of the Basel II formula, and smoothing the input, by construction of through-the-cycle (TTC) PDs. The comparison of the different procedures is based on the criterion of minimizing the root mean square deviations of each adjusted series. Our results show that the best ways to moderate procyclical are either to smooth the input of the Basel II formula by using through-the-cycle PDs, or to smooth the output with a multiplier based on GDP growth. We conclude that the GDP-based smoothing may be more efficient than the use of TTC PDs in terms of simplicity and transparency. In terms of the GDP adjustment, regulatory capital levels should increase with approx. 1,31% during an economic growth period and decrease with 4,03% during a recession, in order to mitigate the cyclical effects induced by Basel II – type capital regulation.

Keywords: Basel II, procyclical, regulatory capital, probability of default, credit-crunch.

JEL classification: G18, G17.

I. Introduction

The financial crisis proved that the capital requirements system, which is based on risk weights defined by Basel II, can't adapt to the new economic prosperity. The recession is aggravated by the fact that the banks were forced to squeeze their credits and this caused a delay in the economy's availability to grow. Several financial analysts pointed out the errors in the system, therefore the Basel Committee on Banking Supervision must find a solution in order to develop the model.

In our paper we compute an in-depth analysis on the issue of the procyclicality, comparing two possible methods that can be used to mitigate the cyclical effects of Basel II regulatory capital. The procyclical effect can be observed in historical data from the banking sector, since the capital regulation based on risk weights is very prosperity-sensitive: in recession the credit losses consume the bank's capital, while venture capital increases. If banks aren't able to gain enough capital for credit losses in a short period of time, then credit-crunch may occur. This kind of process characterizes perfectly the financial crisis. This leads to the fact that banks can't even provide loans for customers with high ratings because of the inadequate level of capital.

The structure of our paper is the following: in the first part we compute a brief review of the literature regarding the issue of procyclicality. This will be followed by an analysis regarding the methods of reducing the procyclical effects, by the use of a logistic model containing a one-month-ahead probability of default (PD). Our goal is to find an answer to the fact that the cyclical effects can be effectively mitigated by fine-tuning of the PD indicators or by the change of the capital requirements. In the conclusion, we seek for other problems that arise when allocating regulatory capital.

II. Literature Review

We analyzed a series of different papers about procyclicality and its issues. Firstly we noticed that Jokivuolla, Kiema and Vesala (2009) and Repullo and Suarez (2009) both examined the impact of the regulatory capital's procyclical effects. Contrary to Repullo and Suarez, Jokivuolla, Kiema and Vesala created a comparison between the regulatory capital requirements of the Basel I and Basel II. Their main question was that whether the risk-based or the constant weights-based regulatory capital requirement shows less procyclical impacts on the credit market. They used a simplified model, which interprets 3 types of market participants: low-risk profile investors, high-risk profile investors and risk-free investors. Their conclusion was that the optimal risk-based capital is the least procyclical. They added that the present Basel II's necessary direction for further development is the implementation of a higher venture capital. Repullo and Suarez used a dynamic equilibrium model in which the banks can't access stock markets in any period. Their conclusion was that, in the case of Basel II Capital Requirements, capital reserves constituted by banks are higher during an economic boom than during recessions.

Secondly, we observed that Pederzoli, Toricelli and Tsomocos (2009) analyzed the problem of procyclicality with comparing two rating systems. They built up a general equilibrium model which contains 2 heterogeneous banks, 2 companies and 1 household. They found that the cyclical rating system results higher default rates and lower profit in the case of banks in recession times.

Kashyap and Stein (2004) argue that if the shadow value of bank capital is low in expansions and high in recessions, optimal capital charges for each type of risk should depend on the state of the business cycle. Without such adjustments, capital requirements would be too low in expansions, when bank capital is relatively plentiful and has a low shadow value, and too high in recessions, when the shadow value of bank capital goes up, leading to the amplification of business cycle fluctuations. Greenspan (2002) noted that "the supervisory leg of Basel II is being structured to supplement market pressures in urging banks to build capital considerably over minimum levels in expansions as a buffer that can be drawn down in adversity and still maintain adequate capital."

Lastly, Caprio (2009) studied the counter-cyclical capital requirements definition and Repullo, Saurina and Trucharte (2010) analyzed and compared the procedures which mitigate the effects of the procyclical capital. The foundation of Caprio's research was a macroeconomic data analysis from Spain and Columbia. His conclusion was that the risk-based capital regulatory system's rectification results only short term adjustments. On the other side, Repullo, Saurina and Trucharte used data from Spanish companies and estimated a PD model. His results from this

research were very complex. Adjusting the output side of the Basel II formula with a credit growth multiplier or a yield multiplier, we don't receive the optimal level of capital from the procyclical point of view. They found two possible solutions for handling the procyclicality: the first one is the input side smooth tuning, and the second one is on the output side, which can be received with the help of a multiplier based on GDP growth.

III. Cyclical adjustments of Basel II capital requirements

The recent financial crisis, with its boom and bust lending cycle, has brought to the forefront the need to address the potential procyclical effects of risk-sensitive bank capital regulation. To see how Basel II capital requirements evolve over the business cycle, we construct a model economy that is composed of one commercial bank and ten firms. The model is practically a simulation of the Romanian economy (also its banking and financial sector) over the period 2000-2010. The firms' sector is composed of 2 corporate, 4 medium and 4 small companies, whose total exposures equal the aggregate credit portfolio to companies in the respective period. Our model economy is explicitly characterised by Romanian macroeconomic data regarding the specified period.

To compute how regulatory capital levels would evolve over the business cycle, we estimate a logistic model of the one month ahead PDs of Romanian firms. The dependent variable, $DEFAULT_t$, is a binary variable that takes value 1 when a firm defaults in the course of a year on its outstanding loans at the end of the previous year, and zero otherwise. The explanatory variables comprise characteristics of the firm, characteristics of its loans, and macroeconomic variables. A borrower is considered to have defaulted if it is 90 days overdue failing to meet his financial obligations on a certain loan or if, with high probability, it is considered to be unable to meet its obligations.

The explanatory variables used in the model (dated in month t) are firm-specific variables and Romanian macroeconomic controls. COL_t represents the proportion of guarantees in a firm's borrowing, proxying the amount of collateral. Jiménez, Salas and Saurina (2006) show that banks ask for collateral to those firms that they denote as being riskier. AGE_t captures the age of each firm, with the idea that younger firms are more prone to default than older ones. $FSIZE_t$ proxies the size of a firm, it is calculated via deflating the EAD_t , growth of a firm by the consumer price index; $FSIZE_t$ enters the model in logarithmic terms. $HISTDEF_t$ is considered to be the main risk profile variable that captures whether a certain borrower defaulted in the past. In each observed default event, the variable value is increased by 1. Similar to $HISTDEF_t$, we use $HISTDEL_t$, that stands for the borrowers' record of overdue loans (1). $UTIL_t$ is the ratio between the amount of credit drawn by a borrower and the credit line.

The macroeconomic explanatory variables are GDP_t , that is the rate growth of the gross domestic product, $CREDIT_t$, the rate growth of non-financial (commercial and industrial) loans over the one month period, BET_t , the monthly average return of the Romanian stock market, and $MATURITY_t$, that is the ratio between long-term exposures (2) and the total exposures in the economy. Our database contains a total number of 126 monthly observations, over the last 10 years.

Table 1 in the Appendix presents the results of the estimation of the model (all coefficients are statistically significant at the 10% level). It's interesting to note that some variables' impacts on the default condition (especially macroeconomic variables) are significant after up to 3 or 4 lags. The results show that firms that post collateral when granted a loan have higher probabilities of default. Also, firms whose exposures show a bigger growth rate than the average, have bigger probability of default. Yet vital to notice that the coefficients of GDP and $MATURITY_4$ are negative, meaning that as the growth rate of real GDP and proportion of long term exposures increase in the model economy, the PD decreases. The coefficient of variable $UTIL_3$ shows that the higher the utilization of credit lines the higher the PD, so liquidity constraints also seem to

play a role in a firm's default. Summing up the analysis of the logit model, we can say that firm's defaults increase during downturns and decrease during and economic upward trend.

PIT capital requirements

Based on the results in Table 1, we compute the point in time (PIT) capital requirements, k_{it} , for each borrower and month using the formula

$$k = PD * LGD * EAD * M,$$

the estimated probability of default, PD_{it} , and assuming a loss given default (LGD) of 45%, as in the foundation IRB approach of Basel II. The PIT capital requirements per unit of loans for each month is calculated via

$$k_t = \frac{\sum_i k_{it}}{\sum_i l_{it}},$$

where l_{it} denotes the value of the loans to firm i at the end of the month t .

Figure 1 shows how PIT capital requirements evolve among the GDP in the observed period. The cyclical effects can be easily captured by applying the Hodrick-Prescott(HP) trend to the series, with a lambda value of 500. Regarding the HP-smoothed PIT capital series, a significant cyclical variation can be observed, with a gap of 5.82% between the peak and the worst point of the business cycle.

TTC capital requirements – Adjusting the input of Basel II formula

A possible solution for mitigating the cyclical effects of regulatory capital is the use of through the cycle (TTC) capital requirements. To estimate DEFAULT by the TTC approach, we follow the idea of Saurina and Trucharte (2007), that is, replacing the current values of macroeconomic variables by their average values over the sample period. We then compute the monthly capital requirements with the Basel II foundation IRB approach. The results of the re-estimation of the logit model are found in Table 2. Comparing TTC capital requirements with the PIT values, the cyclical variability declines significantly, as it can be observed in Figure 2. The peak-low deviation in the TTC series is of 3.03%, significantly better than in the PIT capital requirements.

The business cycle multiplier - Adjusting the output of the Basel II formula

The second approach for adjusting the Basel II capital requirements is to smooth the output of the formula. Basically, we adjust the PIT-capital requirements series obtained from Table 1 with a business cycle multiplier, as it can be seen in the following formula:

$$k_{adj_t} = \mu_t * k_t.$$

The multiplier can be of various forms, but we use a simple and conventional approach:

$$\mu_t = 2N\left(\alpha * \frac{g_t - g_{avg}}{h_g}\right).$$

In the equation k_t denotes the original PIT capital series, and k_{adj_t} the adjusted series. Regarding the multiplier equation, g_t is the growth rate of one of the macroeconomic variables, g_{avg} its average over the sample period, h_g its standard deviation over the sample period. $N(x)$ is the standard normal cumulative distribution function and α is a positive constant parameter. The key features of the business cycle multiplier are: it is continuous and increasing in the proxy for the business cycle g_t , so capital requirements are increased in favourable periods and lowered during downturns or recessions. Also, μ is bounded, so capital requirements do not increase without bound or become negative. Parameter α is defined as 0.1, however, we tested various other values. The purpose of α is to minimize the root mean square deviation (RMSD) of the adjusted series, and also to obtain a reasonable amount of capital adjustment. Summing up, we choose the value of α that is best in terms of smoothing the cyclical component of the pit capital requirements series. Figure 3 shows the μ -adjusted capital series (when g =GDP), together with

the PIT series. Note that the adjusted series has been applied a HP-filter of $\lambda=500$, so that the cyclical-smoothing can be easily observed.

IV. Results

Taking into account the HP-filter fitted values, we compare the different smoothing procedures by computing the RMSD of each adjusted capital requirements series. The values obtained are shown in Table 3. The output-formula adjusted values show a much smaller deviation, as the TTC-series stands out with a RMSD of 0.16%. Regarding the output-smoothing procedure, a choice has to be made in order to specify the best smoothing macro-component. As the GDP and CREDIT deviations are more or less the same, we consider the amount of adjustment made during economic booms and downturns for the respective series. Results are shown in Table 4.

In terms of the GDP adjustment, regulatory capital levels should increase with approx. 1.31% during an economic growth period and decrease with 4.03% during a recession. Having a look at the CREDIT-adjustment, results say that capital levels should increase with 0.86% in case of an upward trend and decrease with 0.88% in case of a downturn in the economy. As the CREDIT variable adjustment makes no significant (reasonable) changes regarding Basel II regulatory capital, we consider the output adjustment based on GDP growth to be the best smoothing procedure. As mentioned earlier, Figure 3 shows the GDP smoothed series together with the real GDP. Note that this result is not due to the fact that GDP growth is one of the explanatory variables in our logit model.

V. Conclusions

In this paper we focused on finding the optimal method for mitigating the procyclical effects of Basel II capital regulation. We analysed two major approaches regarding the issue, which is estimating TTC PDs, and fine-tuning the output of the Basel II formula. By building up a model-economy that simulates the Romanian banking and finance sector, we observed that a GDP growth based smoothing of Basel II capital requirements would be a good solution regarding the procyclicality issue. However, we emphasize that the TTC-approach should not be “written off”, as it is clearly a simple and effective way to make a quick and basic-level fine-tunement to regulatory capital levels. We stick to our statement knowing that the use of TTC PDs has been criticized by Gordy and Howells (2006), who underline the fact that changes in a bank’s capital requirements over time would be only weakly correlated with changes in its economic capital, and there would be no means to infer economic capital from regulatory capital. Our results are similar to those of Repullo, Saurina and Trucharte (2010) agreeing that GDP growth based output adjustment of the Basel II formula is the “way to go” in terms of simplicity, transparency, low cost of implementation and even consistency with the idea of a single aggregate risk factor that underlies the capital requirements of Basel II.

Two major issues are still the purpose of our further research regarding Basel II. The first one, regulatory arbitrage, is mostly threatening safe and sound banking in the European Union, where its hazard is higher than in the countries outside the EU. To reduce this hazard, the specialists started to create a supervisory convergence. From this step, they expect that the discretionary assets will become reduced. The European Commission started a public consultation in 2010, in association with the fact that the 2009th Decree concerning the CRAs does not handle a lot of problems regarding the credit rating agencies. In this consultation document they discuss in detail the possible payment models and new measures, which prevent the potential risk of a rating arbitrage. The supervision of the rating agencies will be done by the European Securities and Markets Authority. The second, regarding the correct estimation of PD-LGD correlation, is a vital in building up a safe and sound banking system. The model standing behind the Basel II formula is the standard one factor model developed by Vasicek (1987). Many studies argue that this method cannot capture well the correlation between PD and LGD on a large (asymptotic)

portfolio. The innovative approach of Witzany (2009) proposes a two factor model. Results of testing the model prove that it is able to estimate more punctually and as realistic as possible the correlation between the two parameters, implemented on real banking data. The lack of reliable information however on public LGDs in the Romanian banking sector makes further research difficult.

VI. Notes

- (1) Overdue loans are the ones that have been paid before the 90-day threshold.
- (2) Long term exposures are the ones that exhibit 5 years.

VII. References

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VIII. Appendix

Table 1: Initial estimation, PIT PDs

Model 45: Logit, using 1220 observations
Dependent variable: DEFAULT

| | coefficient | std. error |
|--------------------|--------------|-------------|
| const | -12.0615 | 4.72765 |
| COL_1 | -5.69615e-07 | 2.25951e-07 |
| FSIZE | 1.33542 | 0.715938 |
| HISTDEF | 0.642915 | 0.140766 |
| HISTDEL | -0.0886016 | 0.0502533 |
| UTIL_3 | 1.11269 | 2.71241 |
| CREDIT_1 | -4.49947 | 8.14027 |
| BET_4 | 85.8620 | 32.9714 |
| MATURITY_4 | -0.0644921 | 0.774427 |
| GDP | -0.372822 | 1.77291 |
| Mean dependent var | 0.037705 | |
| McFadden R-squared | 0.108445 | |
| Log-likelihood | -174.6628 | |

Source: Authors' calculations

Table 2: Adjusted estimation, TTC PDs

Model 3: Logit, using 1220 observations
Dependent variable: DEFAULT

| | coefficient | std. error |
|--------------------|--------------|-------------|
| const | -12.6307 | 4.76106 |
| COL_1 | -5.70913e-07 | 2.28224e-07 |
| FSIZE | 1.29090 | 0.722443 |
| HISTDEF | 0.639954 | 0.140788 |
| HISTDEL | -0.0948422 | 0.0499572 |
| UTIL_3 | 1.99794 | 2.57275 |
| GDP_TTC | -11.4930 | 24.1395 |
| CREDIT_TTC_1 | 11.4815 | 18.3083 |
| BET_TTC_4 | 28.4766 | 97.8715 |
| MATURITY_TTC_4 | 0.103762 | 0.893742 |
| Mean dependent var | 0.037705 | |
| McFadden R-squared | 0.089853 | |
| Log-likelihood | -178.3052 | |

Source: Authors' calculations

Table 3: Results of output-adjustment

| | Adjustment | | | |
|--------------|------------|--------|--------|----------|
| | GDP | CREDIT | BET | MATURITY |
| Upward trend | 1.31% | 0.86% | 0.47% | 4.37% |
| Recession | -4.03% | -0.88% | -0.59% | -3.57% |

Source: Authors' calculations

Table 4: Overall Results

| RMSD | Type of adjustment | | | | |
|------|--------------------|---------|---------|---------|-------|
| | GDP | CREDIT | BET | MATUR | TTC |
| | 0.0498% | 0.0498% | 0.0500% | 0.0530% | 0.16% |

Source: Authors' calculations

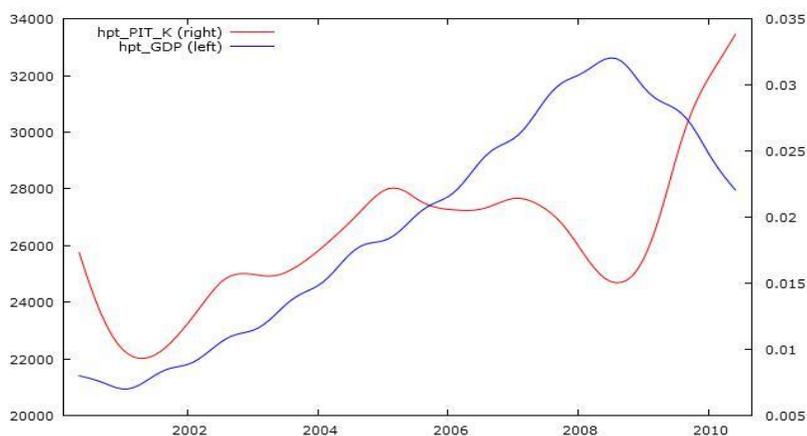


Figure 1: PIT Capital Requirements Vs. GDP growth

Source: Own calculations

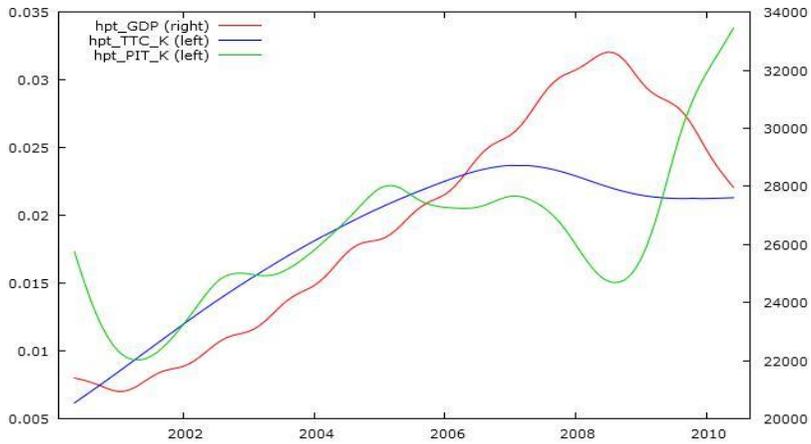


Figure 2: PIT Capital Requirements Vs. TTC Capital Requirements and GDP growth

Source: Own calculations

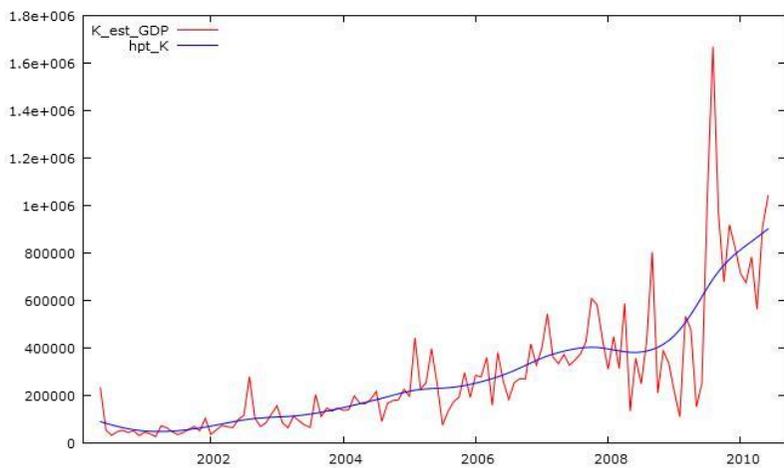


Figure 3: GDP-adjusted Capital Requirements Vs. GDP growth

Source: Own calculations

EXTERNAL FACTORS INFLUENCE ON INFLATION: THE CASE OF ROMANIA

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In this paper we try to assess the main external determinants of inflation dynamics in Romania. The literature in the field of measuring inflation dynamics is wealthy and various. There are many developing country - level studies that examine inflation dynamics: Blavy (2004) - Guinea, Duma (2008) - Sri Lanka, Gottschalk et al (2008) - Sierra Leone, Moriyama (2008) - Sudan, Mwase (2006) - Tanzania, Williams and Adedeji (2004) - Dominican Republic, Hossain (2005) - Indonesia, Almounsor (2010) - Yemen. The issue of Romanian inflation dynamics is present in many and various studies, like Hammermann (2007), Pelinescu and Dospinescu (2006), Budina et al (2006) etc. There are no other recent studies that analyze the external determinants on Romanian inflation dynamics.

In our paper we estimate an OLS single equation model, using a methodology derived from Almounsor (2010). The empirical analysis uses monthly data from August 2005 to January 2011. The start point of the data series is the moment of a major change in the National Bank of Romania (NBR) monetary policy: adoption of the inflation targeting regime. The independent variables used in our research are: harmonized consumer price index of EU-25 countries, EUR/RON exchange rate, crude oil price index (for analyzing the external shocks effect) and M2 monetary aggregate (intermediate money supply) as a control variable.

The outcomes suggest that inflation in Romania is driven mainly by international price shocks – harmonized consumer price index of EU-25 countries. The EUR/RON exchange rate depreciation has a small influence on domestic inflation. In the short run, the effect of the international oil price is insignificant. Money supply, used here as a control variable, is shown to have a very small effect on inflation in Romania when using OLS regressions. The results show that 66% of the domestic inflation variance is explained by the independent variables in our model.

Key words: inflation dynamics, external shock, international prices, exchange rate, Romania

JEL classification: E31, E52, E58

1. Introduction

In a world of fiat money inflation is a widely spread phenomenon that concerns both theorists and practitioners. The determinants of inflation can be split into two main categories: external and domestic factors. This paper assesses the main external determinants of inflation dynamics in Romania using an OLS single equation model. In this model, various regressions were performed to reach the benchmark regression, with the best fit and predictability. The period assessed is August 2005 – January 2011, highlighting the evolution of inflation under external shocks in a framework of inflation targeting monetary policy regime.

2. Literature Review

The literature in the field of measuring inflation dynamics is wealthy and various. Among them, there are many developing country level studies that examine inflation dynamics: Blavy (2004) - Guinea, Duma (2008) - Sri Lanka, Gottschalk et al (2008) - Sierra Leone, Moriyama (2008) - Sudan, Mwase (2006) - Tanzania, Williams and Adedeji (2004) - Dominican Republic, Hossain

(2005) - Indonesia etc. Almounsor (2010) studies the underlying determinants of inflation dynamics in Yemen using three different approaches: (i) a single equation model, (ii) a Structural Vector Autoregression Model, and (iii) a Vector Error Correction Model. The outcomes suggest that inflation dynamics in Yemen are driven by international price shocks, exchange rate depreciation, domestic demand shocks, and monetary innovations. Arratibel et al (2002) examine inflation dynamics in EU - accession countries in Central and Eastern Europe between 1990 and 2001, focusing particularly on the determinants of “dual inflation”, diverging inflation rates for tradable and non-tradable goods.

Also, there are many country level empirical studies on the effects of the exchange rate regime on inflation. Ghosh et al. (1997) conducted one of the first studies of this kind in a wide cross section of countries. Their analysis uses a tripartite classification system (“pegs”, “intermediate” and “float”) and includes the experience of 140 countries over the time period 1960 to 1990, using annual data.

The issue of Romanian inflation dynamics is also present in many and various studies. Hammermann (2007) uses panel estimation based on ten Central and Eastern European countries allowing him to decompose the inflation differential between Romania and the EU-8. The decomposition suggests that neither the revenue, nor the balance of payments, nor the financial stability motives are driving inflation; rather structural differences are at play. Pelinescu and Dospinescu (2006) focus on the short-term impact of changes in money, foreign exchange and wage policies and controlled prices, as well as the impact of the external shocks (as international price of oil) on future inflation in Romania. Their research uses VAR models to analyze the impact of factors like oil price and exchange rate on inflation and builds a model for predicting the inflation level in Romania. Budina et al (2006) demonstrate that for the period of 1992 – 2000 inflation was largely a monetary phenomenon in Romanian economy.

3. Methodology and Data

The empirical analysis uses monthly data from August 2005 to January 2011 (Appendix 1). The start point of the data series is the moment of a major change in the National Bank of Romania (NBR) monetary policy: adoption of the inflation targeting regime. This moment concur, also, with the privatization of the PETROM national oil company, at the end of 2004, when Romanian authorities quit administering the domestic fuel prices (a major determinant of domestic inflation).

We used data series from the IMF International Financial Statistics database (harmonized consumer price index in Romania (100=2005) - 96864HZF series and the M2 monetary aggregate in Romania - 96859MBZF series), from the Eurostat database (harmonized consumer price index of EU-25 countries (100=2005) and EUR/RON monthly average exchange rate series), from the Indexmundi database (crude oil price index (100=2005)) and National Statistics Institute of Romania (monthly average of the fuel price index, IPC102A series, transformed to consider 2005 the base year).

We used the EU-25 countries consumer price index as the Romanian external trade with other EU countries is prevalent (the EU27 data series already includes the Romanian price dynamics and is available only after year 2007). The EUR/RON exchange rate was also used due to the structure of the external trade of Romania; in the same time, euro is the main reserve currency of NBR. The international oil price may be relevant to the domestic inflation dynamics as most of the energy carriers in Romania are imported. To increase the robustness of our model we used the M2 monetary aggregate (intermediate money supply) as a control variable.

All data series were transformed as natural logarithms. We tested the data with the ADF unit root tests and the results showed that all the series (except the crude oil price index) are first order integrated. Consequently we had to difference them once to obtain stationary data series (we also differenced the crude oil price index to may use the data in the regression).

The paper uses a methodology derived from the one used by Almounsor (2010). We have based our research on a single-equation model as follows:

$$\Delta p_t = \alpha + \beta_1 \Delta p_t^f + \beta_2 \Delta e_t + \beta_3 \Delta o_t + \beta_4 \Delta m_t + \phi z + \varepsilon_t \quad (1)$$

where Δ is the difference operator, p is the domestic HCPI, pf is the foreign (EU-25) HCPI, e is the EUR/RON exchange rate, o is the crude oil price index, m is the domestic M2 monetary aggregate (control variable), z is a set of binary variables controlling for outliers and ε is the error term.

Equation (1) states that inflation is driven by foreign inflation (pf), exchange rate (e) depreciation/appreciation, international oil prices (o) and growth of money supply (m), with the appropriate lags for the coefficients validation and AIC and SIC statistics minimization.

The model allows the analysis of the short term relationship of the variables with standard regression techniques. We tested for and eliminated the outliers (2007M8, 2007M9, 2010M1, 2010M7), based on the results of the RStudent test. To capture their impact, the paper uses four dummy variables. We tested the residuals' properties for checking the biasness, consistency and efficiency of the estimators.

As the domestic fuel price is an important component of the HCPI, we used the Johansen co-integration test for checking its long term relation with the international oil price.

4. Results

The results of equation (1) estimation are shown below:

$$\Delta p_t = 0.003 + 0.46^{***} \times \Delta p_{t-1}^f + 0.05^{**} \times \Delta e_{t-1} - 0.01^{***} \times \Delta o_{t-2} + 0.03^* \times \Delta m_{t-2} + \varepsilon_t$$

(0.00) (0.11) (0.02) (0.00) (0.01)

(2)

Note: values in parenthesis are the standard errors of the estimators; *** significant at 99%, ** significant at 95%, * significant at 90%; t-1 = one month lag, t-2 = two months lag

The outcomes of the single equation model show that Romania's inflation is driven mostly by international prices (with one month lag) and also by the exchange rate depreciation (pass-through). Empirically, a 1 percent increase in the EU-25 countries CPI amplifies the next month domestic prices by about 0.46 percent. The impact of exchange rate depreciation is significantly smaller: a 1 percent increase in the EUR/RON exchange rate is followed by a 0.05 percent increase of the next month domestic inflation.

The effect of international oil price is insignificant, a 1 percent increase driving to a decrease of about 0.01 percent of the domestic inflation (two months lagged). This result is quite surprising when observing the dynamics of the local fuel price and considering the weight of this component in the domestic HCPI. To confirm this outcome we have tested the two fuel price data series for co-integration and found out that the local fuel price is not driven by the international oil price, on a short run (Appendix 5).

Money supply, used here as a control variable, is shown to have a very small effect on inflation in Romania when using OLS regressions. Empirically, a 1 percent increase in the intermediate monetary aggregate adds two months lagged 0.03 percent to domestic inflation (however the coefficient is significant at 90% only).

The results show that 66% of the domestic inflation variance is explained by the independent variables in our model (Appendix 2).

5. Conclusions

The outcomes suggest that inflation in Romania is driven mainly by international price shocks – harmonized consumer price index of EU-25 countries. The EUR/RON exchange rate depreciation has a small influence on domestic inflation. In the short run, the effect of the international oil price is insignificant. Money supply, used here as a control variable, is shown to have a very small effect on inflation in Romania when using OLS regressions. The results show that 66% of the domestic inflation variance is explained by the independent variables in our model.

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Appendix I: Data series

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|--------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 2005 | | | | | | | | | | | |
| HCPIRO | -- | -- | -- | -- | -- | -- | -- | 100.6 | 101.2 | 102.1 | 103.3 | 103.9 |
| HCPIEU25 | -- | -- | -- | -- | -- | -- | -- | 100.3 | 100.7 | 101.0 | 100.8 | 101.0 |
| EURRON | -- | -- | -- | -- | -- | -- | -- | 3.50 | 3.51 | 3.60 | 3.65 | 3.66 |
| OIL | -- | -- | -- | -- | -- | -- | -- | 116.0 | 115.6 | 109.0 | 103.2 | 105.8 |
| M2 | -- | -- | -- | -- | -- | -- | -- | 76.7 | 80.2 | 81.1 | 81.4 | 86.3 |
| COMBUSTIBILI | -- | -- | -- | -- | -- | -- | -- | 106.7 | 110.2 | 110.3 | 109.2 | 109.0 |
| | 2006 | | | | | | | | | | | |
| HCPIRO | 105.0 | 105.2 | 105.4 | 105.9 | 106.5 | 106.7 | 106.8 | 106.7 | 106.8 | 107.0 | 108.2 | 109.0 |
| HCPIEU25 | 100.6 | 100.9 | 101.4 | 102.1 | 102.4 | 102.5 | 102.4 | 102.6 | 102.7 | 102.7 | 102.8 | 103.2 |
| EURRON | 3.64 | 3.54 | 3.51 | 3.49 | 3.51 | 3.55 | 3.57 | 3.53 | 3.53 | 3.52 | 3.50 | 3.41 |
| OIL | 117.1 | 112.1 | 114.3 | 127.6 | 128.9 | 128.2 | 136.0 | 134.8 | 116.6 | 108.8 | 109.2 | 114.5 |
| M2 | 85.7 | 85.7 | 87.5 | 88.0 | 91.7 | 95.1 | 95.9 | 98.3 | 99.3 | 100.6 | 101.9 | 111.7 |
| COMBUSTIBILI | 109.6 | 109.4 | 109.2 | 109.4 | 110.8 | 111.1 | 111.9 | 112.6 | 113.1 | 112.3 | 110.9 | 110.5 |
| | 2007 | | | | | | | | | | | |
| HCPIRO | 109.2 | 109.3 | 109.4 | 109.9 | 110.6 | 110.8 | 111.2 | 112.1 | 113.3 | 114.4 | 115.5 | 116.3 |
| HCPIEU25 | 102.7 | 103.1 | 103.7 | 104.3 | 104.6 | 104.7 | 104.4 | 104.5 | 104.9 | 105.4 | 105.9 | 106.4 |
| EURRON | 3.39 | 3.38 | 3.37 | 3.33 | 3.28 | 3.22 | 3.13 | 3.22 | 3.35 | 3.35 | 3.47 | 3.54 |
| OIL | 100.5 | 108.1 | 113.9 | 122.3 | 122.5 | 128.1 | 138.1 | 131.6 | 144.1 | 153.8 | 171.4 | 168.1 |
| M2 | 106.3 | 109.2 | 112.4 | 112.9 | 112.7 | 116.1 | 119.9 | 124.3 | 126.5 | 128.7 | 136.1 | 147.9 |
| COMBUSTIBILI | 109.7 | 108.4 | 108.4 | 110.2 | 112.0 | 112.4 | 112.4 | 112.1 | 112.3 | 113.1 | 115.0 | 116.7 |
| | 2008 | | | | | | | | | | | |
| HCPIRO | 117.2 | 118.1 | 118.9 | 119.5 | 120.1 | 120.4 | 121.3 | 121.2 | 121.7 | 123.0 | 123.4 | 123.7 |
| HCPIEU25 | 106.1 | 106.6 | 107.5 | 107.9 | 108.6 | 109.0 | 108.9 | 108.9 | 109.2 | 109.2 | 108.7 | 108.6 |
| EURRON | 3.69 | 3.66 | 3.72 | 3.64 | 3.66 | 3.66 | 3.58 | 3.53 | 3.62 | 3.75 | 3.78 | 3.92 |
| OIL | 170.3 | 175.3 | 191.1 | 204.2 | 230.5 | 247.0 | 249.7 | 215.3 | 187.1 | 136.3 | 101.2 | 77.7 |
| M2 | 147.4 | 149.7 | 152.0 | 157.0 | 157.6 | 161.5 | 161.2 | 162.3 | 166.0 | 162.1 | 164.4 | 173.7 |
| COMBUSTIBILI | 117.5 | 119.0 | 121.8 | 124.2 | 127.0 | 128.6 | 130.4 | 129.3 | 129.3 | 128.9 | 124.6 | 119.9 |
| | 2009 | | | | | | | | | | | |
| HCPIRO | 125.2 | 126.2 | 126.9 | 127.2 | 127.2 | 127.5 | 127.4 | 127.2 | 127.6 | 128.2 | 129.1 | 129.5 |
| HCPIEU25 | 107.8 | 108.4 | 108.8 | 109.1 | 109.4 | 109.6 | 109.1 | 109.4 | 109.4 | 109.6 | 109.8 | 110.1 |
| EURRON | 4.24 | 4.29 | 4.28 | 4.20 | 4.17 | 4.21 | 4.22 | 4.22 | 4.24 | 4.29 | 4.29 | 4.23 |
| OIL | 82.6 | 78.8 | 87.9 | 94.6 | 109.3 | 130.0 | 121.6 | 134.7 | 128.5 | 139.2 | 145.8 | 140.9 |
| M2 | 175.8 | 175.8 | 174.9 | 175.8 | 176.2 | 179.5 | 180.4 | 182.8 | 182.5 | 182.6 | 184.1 | 188.0 |
| COMBUSTIBILI | 121.7 | 125.7 | 126.6 | 126.9 | 127.5 | 130.2 | 131.2 | 132.9 | 132.4 | 133.8 | 136.1 | 135.7 |
| | 2010 | | | | | | | | | | | |
| HCPIRO | 131.7 | 131.9 | 132.2 | 132.6 | 132.8 | 133.0 | 136.5 | 136.8 | 137.5 | 138.3 | 139.0 | 139.8 |
| HCPIEU25 | 109.5 | 109.9 | 110.9 | 111.4 | 111.6 | 111.6 | 111.2 | 111.4 | 111.7 | 112.0 | 112.2 | 112.9 |
| EURRON | 4.14 | 4.12 | 4.09 | 4.13 | 4.18 | 4.24 | 4.26 | 4.24 | 4.27 | 4.28 | 4.29 | 4.29 |
| OIL | 145.0 | 140.4 | 148.9 | 158.1 | 142.2 | 140.4 | 140.0 | 142.6 | 143.1 | 153.6 | 158.9 | 169.3 |
| M2 | 184.3 | 185.7 | 187.8 | 188.3 | 190.1 | 192.3 | 190.8 | 192.7 | 192.6 | 191.7 | 194.2 | 199.6 |
| COMBUSTIBILI | 140.3 | 140.1 | 142.9 | 144.3 | 144.9 | 145.5 | 148.9 | 147.9 | 149.9 | 150.9 | 152.1 | 156.5 |
| | 2011 | | | | | | | | | | | |
| HCPIRO | 140.9 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| HCPIEU25 | 112.4 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| EURRON | 4.26 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| OIL | 174.3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| M2 | 196.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| COMBUSTIBILI | 159.9 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

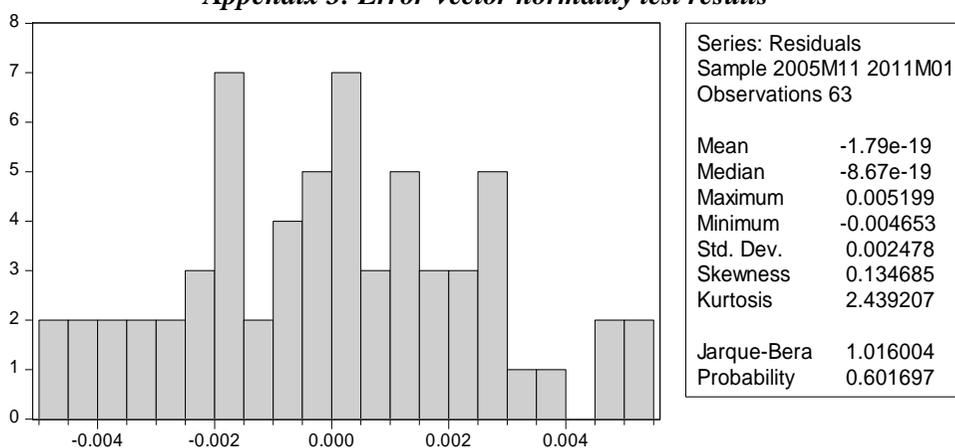
Note: HCPIRO = harmonized consumer price index in Romania, HCPIEU25 = harmonized consumer price index in EU-25 countries, M2 = M2 monetary aggregate, EURRON = EUR/RON exchange rate, OIL = foreign crude oil price index
Source: IMF (International Financial Statistics), Eurostat, Indexmundi and Romanian National Statistics Institute

Appendix 2: Main regression statistics

Dependent Variable: DLOG(HCPIRO)
 Method: Least Squares
 Sample (adjusted): 2005M11 2011M01
 Included observations: 63 after adjustments

| | | | |
|--------------------|----------|-----------------------|-----------|
| R-squared | 0.705091 | Mean dependent var | 0.005107 |
| Adjusted R-squared | 0.661401 | S.D. dependent var | 0.004563 |
| S.E. of regression | 0.002655 | Akaike info criterion | -8.892853 |
| Sum squared resid | 0.000381 | Schwarz criterion | -8.586691 |
| Log likelihood | 289.1249 | Hannan-Quinn criter. | -8.772438 |
| F-statistic | 16.13840 | Durbin-Watson stat | 1.555438 |
| Prob(F-statistic) | 0.000000 | | |

Appendix 3: Error-vector normality test results



Appendix 3: Error-vector autocorrelation test results

Breusch-Godfrey Serial Correlation LM Test:

| | | | |
|---------------|----------|---------------------|--------|
| F-statistic | 1.812487 | Prob. F(3,51) | 0.1566 |
| Obs*R-squared | 6.069728 | Prob. Chi-Square(3) | 0.1083 |

Appendix 4: Error-vector heteroscedasticity test results

Heteroskedasticity Test: Breusch-Pagan-Godfrey

| | | | |
|---------------------|----------|---------------------|--------|
| F-statistic | 1.321230 | Prob. F(8,54) | 0.2530 |
| Obs*R-squared | 10.31287 | Prob. Chi-Square(8) | 0.2437 |
| Scaled explained SS | 5.452293 | Prob. Chi-Square(8) | 0.7083 |

Appendix 5: Domestic and international fuel price co-integration test

Sample (adjusted): 2005M11 2011M01

Included observations: 63 after adjustments

Trend assumption: Linear deterministic trend

Series: COMBUSTIBILI OIL

Lags interval (in first differences): 1 to 2

Unrestricted Cointegration Rank Test (Trace)

| Hypothesized No. of CE(s) | Eigenvalue | Trace Statistic | 0.05 Critical Value | Prob.** |
|------------------------------|------------|--------------------|------------------------|---------|
| None * | 0.246054 | 26.75971 | 15.49471 | 0.0007 |
| At most 1 * | 0.132658 | 8.966305 | 3.841466 | 0.0028 |

Trace test indicates 2 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

FLUCTUATION IN PENSION FUND ASSETS PRIVATELY MANAGED UNDER THE INFLUENCE OF CERTAIN FACTORS. STATISTICAL STUDY IN ROMANIA

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On international level, the economic and financial crisis has determined a diminution of the asset value of compulsory pension funds, reflecting a reallocation of funds towards alternative or low-risk investments. The present paper indicates how the net asset value of privately managed pension funds in Romania may be affected or not by certain influence factors in direct correlation with different asset allocation strategies of pension funds. In this way, on literature review there are many studies which have analyzed the fluctuation of pension funds assets and a better reallocation of their investment in order to improve their efficiency. The experience of the value fluctuation of privately administered pension fund net assets is highly important, firstly because of its effects on the increase and the decrease of invested values for the insured persons' accounts, under the circumstances of constantly maintaining their contributions and, implicitly, the results achieved through these investments. The research methodology consists in testing of five variables: currency exchange rate, credit interest rate, bank deposit interest rate, reference interest rate and value of the stock exchange market index (BET-C index), by means of the multiple linear regression method. The conclusion is that only two of these factors, namely, the currency exchange rate and the reference interest rate, influence net asset value of privately managed pension funds, the second pillar, one in direct and the other in indirect correlation. In order to neutralize the effects generated by the diminution of the net asset value of privately managed pension funds, considering a short time horizon, we shall elaborate a dynamic mix of their investments able to adapt to the fluctuations of the influence factors. Thus, new opportunities will be generated in order to achieve the efficiency of pension funds and to prevent the diminution of the value of insured individuals' contributions to these pension funds.

Keywords: privately managed pensions, net assets, investments, factors of influence, statistical correlations

JEL Codes: G23, C15

1. Introduction

Internationally, there are systems of diversified pensions, which, in general, present a combination of the public and the private component. To the European Union level, there is no mutual system of pensions available for all Member States, but most of the Member States of the European Union have approached the multi-pillar pension system proposed by the World Bank. In Romania, the pension system is, as well, structured according the pattern proposed by the World Bank, thus: **-the public pension system**, which represents the **first pillar**, monitored by the National House of Public Pensions – CNPP; **-the private pension system**, under the observation of the Private Pension System Supervisory Commission – CSSPP, including its two components: the **second pillar** – *privately managed compulsory component*, introduced in May 2008.

According to the law, the designation of the pension fund includes the collocation *privately managed pension fund*; the **third pillar** – *privately managed optional component*, introduced in May 2007.

The compulsory component of private pensions, the second pillar, stirs up a series of discussions on international level, as, against the economic crisis background, certain States have no longer complied with the initial pension reform model, and we mention here countries in Central and Eastern Europe adopting certain adjustments of contributions to the pension second pillar.

Therefore, Hungary has adopted, at the end of 2010, a governmental plan for nationalization of compulsory private pension funds, the second pillar, meant to diminish the budgetary deficit. In 2009, Lithuania and Estonia have decreased the contributions to compulsory private pensions, from 5.5% to 3%, respectively, from 6% to 2%, and Latvia intends a decrease from 8% to 2%. In Slovakia, the second Pillar is no longer compulsory, and the contributions register a decrease of two thirds. In order to reduce the budgetary deficit, Poland has announced at the beginning of April 2011 the diminution of the level of contributions transferred towards the second Pillar from 7.3% to 2.3%. Romania, as well, has not succeeded in following the legal provision stipulating an annual growth of 0.5 percentage points for contributions to the second pillar. This growth was achieved only for 2009, for 2010, the contribution remained to 2.5%, and for 2011, it has increased to 3%.

The representatives of the European Commission claim that, as the States have assumed the implementation of a certain pension reform model, they should maintain the adopted system, regardless the economic context.

Considering these current issues of the system of compulsory private pensions, numerous studies and analyses were elaborated taking into account the efficiency of investments performed, their guarantee and regulation schemes and other aspects.

2. Theoretical Basis

The economic financial crisis manifested on international level has considerably reduced the asset value of pension funds, all over the world. A study undertaken in 2010, by Towers Watson (1), considering the evolution of pension fund assets on the greatest markets of pension funds in the world, has revealed the fact that the main issues disturbing their activity, as a result of the financial crisis, remain: “liquidity; the management of credit/collateral risk; asset manager underperformance; and new challenges in strategic allocation” (Watson, 2010).

The role of private pensions has great importance, particularly “...in countries that have introduced a mandatory private pillar as part of a systemic pension reform” (Tapia, 2008). For preventing “market failure” and the diversification of fund asset investments in order to reduce their risks, for most of the pension systems, on international level, diverse alternatives are established according to Pension Benefit Guarantee Schemes, as “A pension guarantee fund cannot work properly *without* adequate funding rules.” (Stewart, 2007)

In Romania, the system of privately administered pensions, for each component of private pension funds, namely, the second pillar of compulsory private pensions and the third pillar of optional private pensions, there is a pension scheme enforced by the law which provides a broad series of “risk control instruments: active dissociation, actuarial reserves, verification through depository, guarantee fund, audit, minimum rate of profitability.” (Zavoianu, 2010).

The best practices for the management of pension fund investments reveals the fact that a strategic mix of asset investments, adjustable in time, considering the situational influence factors, offers opportunities for achieving the best results. Therefore, various studies on international level, concerned with diversified ways of allocating pension fund assets show that, on the main markets, “pension funds continued to diversify into alternative assets” (Watson, 2009). As well, the economic crisis effects have determined a reallocation of pension fund asset investments from the member countries OECD towards low risk investments mainly internally

oriented (Antolin and Stewart, 2009). Other countries have indicated that the appreciation of the currency exchange has determined an increase of the value of private pension fund assets (Watson, 2010).

Consequently, the insight of the value of pension fund assets becomes crucial as the diminution of their value influences, on one hand, their solvability and, on the other hand, the values accumulated in the accounts of insured individuals.

Considering numerous factors influencing private pension assets, as well as the unemployment rate, the evolution of the currency exchange rates and of the monetary policy interest rates (Mot, 2010), the present paper attempts at selecting few of them in order to determine how far they influence the net asset value of compulsory private pension funds, the second pillar.

3. Concepts and Methodology

In Romania, the system of privately administered pensions becomes a compulsory system for the individuals newly entered in the work market, below 35 years of age, and remains optional for the rest of the individuals aged under 45, who are already insured and contribute to the public pension system. The *administrators of privately administered pension funds* are represented by distinct companies, authorized by the supervisory body, the Private Pension System Supervisory Commission. The situation of authorized administrators of privately administered pension funds indicated 18 administrators at the initiation of the system (July 2007) and 14 at the end of the participant selection process (January 2008), presently, the system counts only 9 administrators (according to the last reports of CSSPP on January, 31st 2011). The *investments* deriving from the assets of these funds are controlled, monitored and undertaken according to the risk range specific to each fund, in an efficient and prudential manner. Except for one single pension fund administered by Generali, registering a high level of risk, the other 8 pension funds indicate an average level of risk.

In Romania, the main indices of privately administered pension funds, the second pillar, at the end of the year 2010, according to CSSPP reports, are as it follows (the indices are indicated by the Newsheet, CSSPP, 3rd year no 12/2010):

- the presence of 9 active pension funds, divided into two risk categories according to the investments performed: average risk funds (8 funds) and high risk funds (a single fund);
- the number of participants to privately administered pension funds is 5,186.37 thousand indicating an increase of 5.6% reported to the end of the year 2009 (December). From the total number of participants, 59% are aged under 35 (for this category, the adhesion is compulsory) and 41% are aged over 35 (for this group, the adhesion is optional). The coverage rate of number of participants in total employees of Romania reached 80% of the total number of employees (Newsheet, CSSPP, page 10);
- the involvement level related to the number of participants reached 67% for the first three privately administered pension funds, which belong to the following pension administrators: ING, Allianz-Țiriac și Generali, and 81% for the first five pension funds;
- the net assets estimated to 1,010.9 million euros (4,331.9 million lei) registered an increase of almost 82% as compared to December 2009 and of 4.3% compared to the previous month;
- from the total of net assets of privately administered funds, 86.3% have been invested on national level, and the rest of 13.7%, abroad.

The evolution of net assets of privately administered pension funds during the entire period of their collection, since their settlement to the present, is illustrated in Figure no. 1, Annex no. 1.

The investments of net assets of privately administered pension funds, in Romania, on investment categories agreed by the law, are presented in Figure no 2, Annex no. 1, from what it can observe that, the investments of privately administered pension funds are mostly oriented towards *State bonds, shares and corporate bonds*, registering about 90% of their total.

We may notice a slightly gradual decrease of the active total value owned by bank deposits from the moment of the system settlement till present, namely, from 43.44% in June 2008, to 7.18% in December 2010.

Considering the structure of the privately administered pension fund investments, we will test the level to which **certain factors influence the evolution of the assets managed by privately administered pension funds, the second pillar**. Thus, we will mention certain factors of influence determining the evolution of privately administered pension fund assets:

-the level of interests, which may influence the transaction value of instruments with fixed income backward the evolution of interests. For the analysis, we consider the interest rates for credits and deposits, as well as the reference interest rate;

-the exchange rate, which influences the value of foreign currency denominated assets at the moment of their evaluation. Generally, a depreciation exchange rate of the national currency reported to the euro exchange rate determines a value increase of these assets;

-the stock market and its evolution influence, as well, the value of assets included by the pension funds. The value of investments in shares, for the second pillar, represented at the end of December 2010, 12.2% of the total of fund assets. The investments in shares rated on stock markets from the Member States of the European Union indicated 3.2% of the total of privately administered pension fund assets.

For the analysis, we use monthly data provided by the Private Pension System Supervisory Commission, the National Bank of Romania and Bucharest Stock Exchange, for the period May 2008 - December 2010 (the research is applied for a number of 32 monthly observations).

According to these factors of influence, the following variables have been applied for testing statistical correlations:

-the net asset of privately administered pension funds, as a dependent variable (its values during the studied period, May 2008 – December 2010, are outlined in Figure no 1, Annex no 1);

-the currency exchange lei/euro, the credit interest rate, the deposit interest rate, the reference interest rate and the value of the BET-C index, as independent variables (values which are pointed out in Figures no 3-7 from Annex no 1).

4. Results and discussions

The analysis of the correlation between the dependent variable and the five independent variables already identified may be achieved either separately, using the correlation coefficient, analyzing the correlations between the dependent variable and one independent variable selected among the group of studied variables, or globally, applying the linear regression.

Concerning the analysis of the correlation between the dependent variable, the value of the net asset of privately administered pension funds, the second pillar, and independent variables: the currency exchange lei/euro, the credit interest rate, the deposit interest rate, the reference interest rate and the value of the BET-C index, the Table no 1, Annex no 2, illustrates for each regression model the value of the correlation coefficient (R), the value of the determination report (R Square) and the standard error.

As we may notice in table no 1, Annex no 2, the first independent variable introduced in the model is “reference interest rate”, which exercises the greatest influence over the value of the net asset of the pension second pillar. The second stage introduces the second independent variable, namely “the currency exchange lei/euro”. The value of the correlation coefficient “R” is significant, which implies the presence of a very strong correlation according to the model.

Model no 1 presents the reliance between “net assets of privately administered pension funds” and the “reference interest rate”, achieving a correlation coefficient of 0.950 and a determination report of 0.903, which suggests the existence of a correlation between the two variables, highly important due to the fact that 90.3% of the fluctuation of “net assets of privately administered pension funds” is determined by the modification of the “reference interest rate”.

Model no 2 introduces the second independent variable “the currency exchange lei/euro”, resulting a correlation coefficient of 0.978 and a determination report of 0.956. This implies the fact that 95.6% of the fluctuation of “net assets of privately administered pension funds” is explained by the fluctuation of the “reference interest rate”, respectively, of “the currency exchange lei/euro”. Moreover, by introducing the second independent variable into the regression model, the standard error of the estimate significantly decreases from 390.75 to 266.86.

According to table no 2, it becomes obvious that the other three independent variables studied, namely, the credit interest rate, the deposit interest rate and the BET-C index, are not considered in the model, because of their insignificant level of influence over the value of the net asset of privately administered pension funds.

The test t and the value Sig. serve for testing the regression coefficients, meaning the hypothesis according to which there is no significant correlation between the dependent variable and the independent variable. One may notice that, for the resulting model no 2, considered as the final alternative for the analysis, the significance threshold, Sig., takes higher values than those allowed, namely, the value of 0.05, which rejects the hypothesis according to which there is a significant correlation between analyzed variables, they being excluded from the model.

The regression coefficients calculated for each of the two models of the variables included here are illustrated in Table no 3, Annex no 2.

According to this study, the test t assumes high values for each variable, and the significance threshold, Sig., takes very low values (inferior to 0.05), which allows us to reject the hypothesis indicating a significant correlation between the analyzed variables, meaning slight errors determined by certain random measurements.

We observe that, the influence of the two selected variables over the net asset of privately administered pension funds, the second pillar, is optimum (Sig. <0.05), and the tolerance is higher than $1 - Adjusted R square$ ($1 - 0.953 = 0.047$) for each dependent variable which *eliminates the risk of non-collinearity*. VIF (Variance Inflation Factor = $1/Tolerance$) supports the collinearity analysis, being able to express a non-collinearity if it exceeds the value of 10.

In our case, for the two variables included in the model, the value of VIF is lower than 10, which confirms the lack of non-collinearity for these variables.

Considering the calculated coefficients expressed in the column B of the Table no 3, Annex no 2, the equation no 1 presents the linear model of multiple regression identified for the studied variable:

$$Y = 1659,258 - 619,85 \cdot X_1 + 1376,999 \cdot X_2 \quad (1)$$

where: Y – net asset of privately administered pension funds, the second pillar;

X_1 – reference interest rate;

X_2 – currency exchange lei/euro.

5. Conclusions

The present paper aims at providing an evaluation of the impact generated by certain factors of influence on the value of compulsory private pension fund assets, based on statistical methods and on series of data on a gap of 32 months. This goal is achieved by means of the multiple linear regression equation which allows the estimate of the value of total net asset of privately administered pension funds according to two variables selected in the model.

The interpretation of the coefficients achieved from the equation (equation no 1) reveals that, according to data analyzed for the period of May 2008 – December 2010, on a short time horizon, the following correlations are manifested:

-if the value of the currency exchange lei/euro increases with one point, the value of the net asset increases with 1,376 million lei;

-if the reference interest rate increases with one percentage, the value of the total net asset decreases with 0.619 million lei.

The experience of the value fluctuation of privately administered pension fund net assets is highly important, firstly because of its effects on the increase and the decrease of invested values for the insured persons' accounts, under the circumstances of constantly maintaining their contributions and, implicitly, the results achieved through these investments.

Thus, the evolution of the currency exchange rate and of the monetary policy interest rate (reference interest rate) highly influences the assets of privately administered pension funds.

According to the achieved analysis, we should consider that, on a short time horizon, an increase of the reference interest rate will determine a slight decrease of the net asset of privately administered pension funds, an effect which has to be counter-balanced by a potential reallocation of pension funds towards investments providing better results. The analysis reveals the fact that, the evolution of the credit interest rate and of the deposit interest rate does not affect privately administered pension fund assets, while we have already pointed out, in a previous study, that it influences the optional pension fund assets, the third pillar. As well, the stock market index BET-C does not influence privately administered pension fund assets, although, shares register a significant value, of 12% of the total investments of privately administered pension fund assets.

Therefore, in order to counter-balance the effects determined by the diminution of the net asset value of privately administered pension funds, we should elaborate, on a short time horizon, a dynamic mix of their investments able to adapt to the fluctuations of their influence factors. Thus, new opportunities will be generated in order to achieve the efficiency of pension funds and to prevent the diminution of the value of insured individuals' contributions to these pension funds.

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Notes

(1)Markets submitted to the study: Great Britain, Switzerland, Holland, Germany, France, United States of America, Canada, Brazil, Australia, Hong Kong, South Africa, Ireland, Japan.

This paper represents a synthesis of a study which will be published entirely into a future publication.

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Annex no 1.

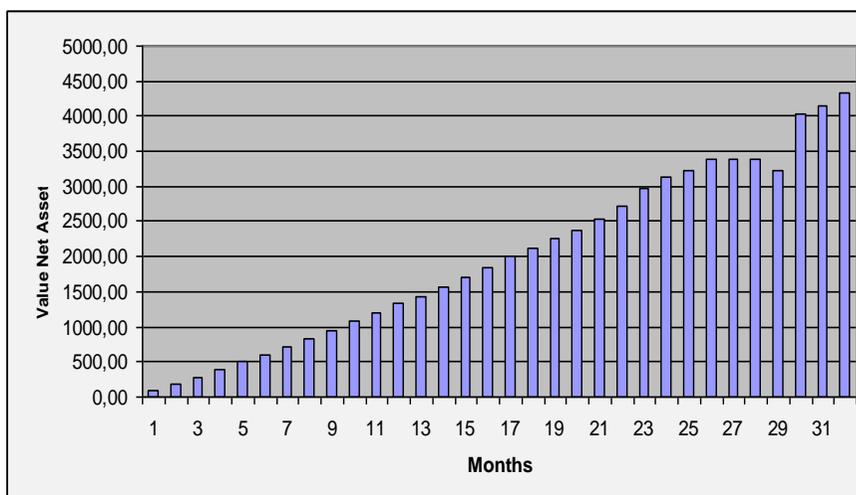


Figure no 1. Net assets evolution of privately administered pension funds in Romania, 2nd Pillar, during May 2008 - December 2010 (thousands RON)

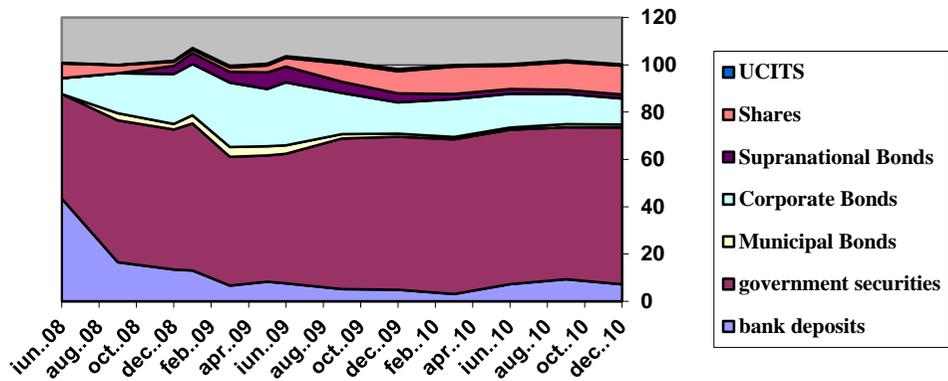


Figure no 2. Evolution of net assets of privately administered pension funds in Romania, the second pillar, for the period June 2008 – December 2010

Source: Data processed based on the data published on the website CSSPP, <http://www.csspp.ro/evolutie-indicatori/>, section statistics - data series

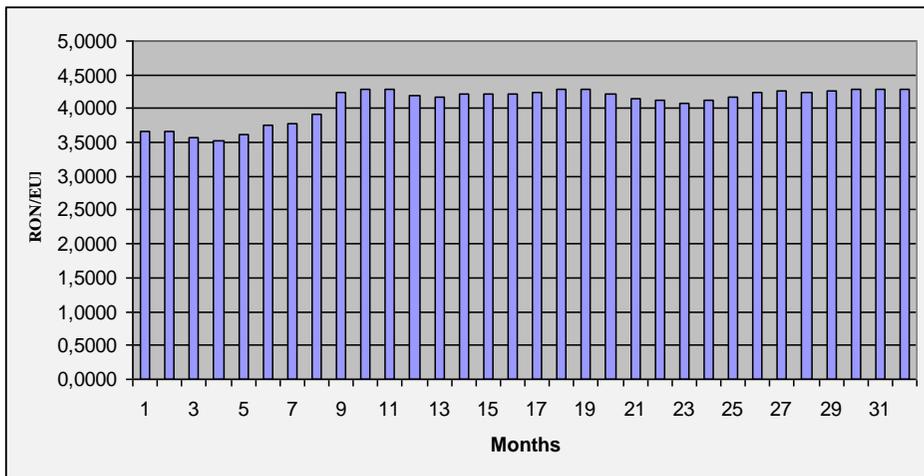


Figure no. 3. Evolution of currency exchange rate RON/Euro in Romania, during May 2008 - December 2010

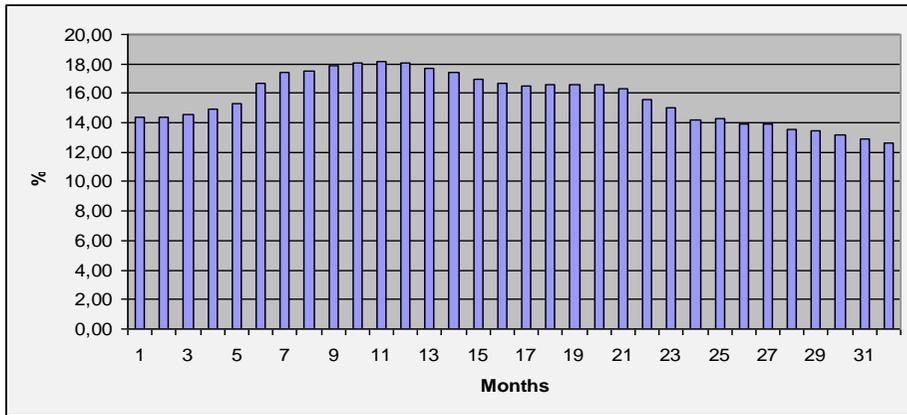


Figure no 4. Evolution of credit interest rate in Romania, during May 2008 - December 2010 (%)

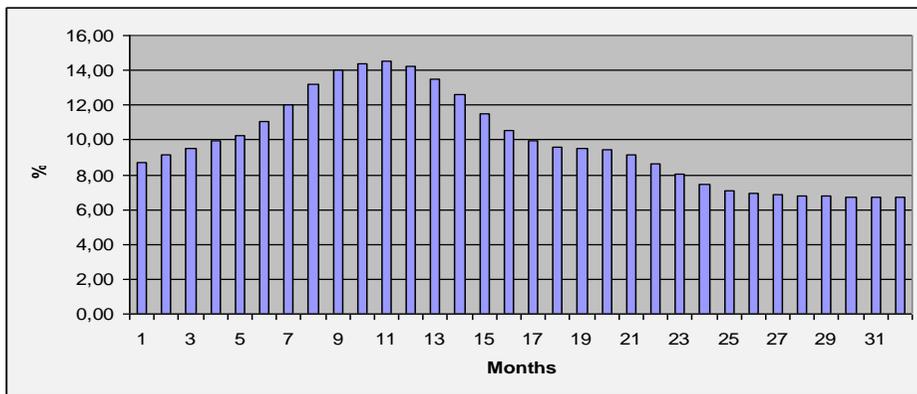


Figure no 5. Evolution of deposit interest rate in Romania, during May 2008 - December 2010 (%)

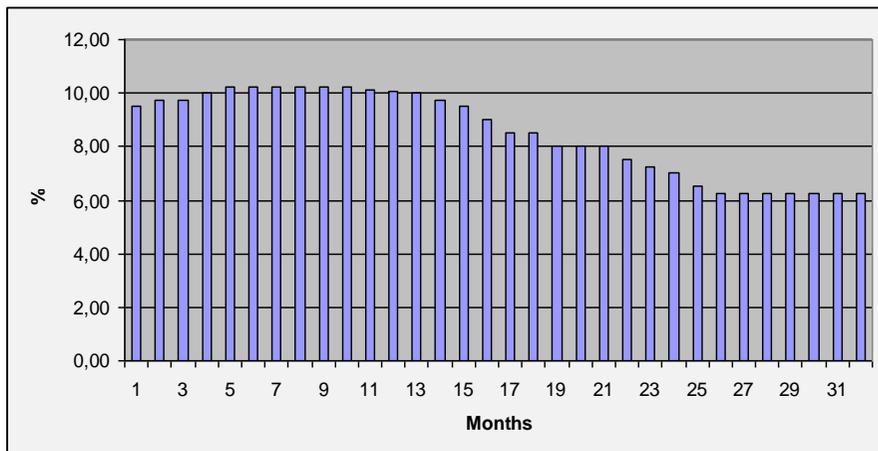


Figure no 6. Evolution of reference interest rate in Romania, during May 2008 - December 2010 (%)

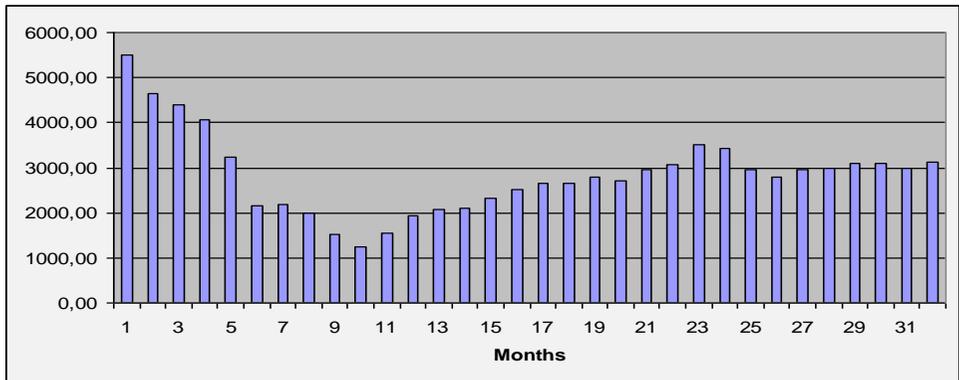


Figure no. 7. Evolution of BET-C index in Romania, during May 2008 - December 2010

Annex no 2

Model Summary

Table no 1

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
|-------|-------------------|----------|-------------------|----------------------------|-------------------|----------|-----|-----|---------------|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | .950 ^a | .903 | .900 | 390.74947 | .903 | 271.089 | 1 | 29 | .000 |
| 2 | .978 ^b | .956 | .953 | 266.85732 | .053 | 34.178 | 1 | 28 | .000 |

a. Predictors: (Constant), Reference interest rate

b. Predictors: (Constant), Reference interest rate, Currency exchange rate lei/euro

c. Dependent Variable: Net assets of privately administered pension funds

Excluded Variables

Table no 2

| Model | | Beta In | t | Sig. | Partial Correlation | Collinearity Statistics | | |
|-------|---------------------------------|--------------------|--------|------|---------------------|-------------------------|--------|-------------------|
| | | | | | | Tolerance | VIF | Minimum Tolerance |
| 1 | Currency exchange rate lei/euro | .268 ^a | 5.846 | .000 | .741 | .739 | 1.354 | .739 |
| | Credit interest rate | .285 ^a | 3.502 | .002 | .552 | .363 | 2.756 | .363 |
| | Deposit interest rate | .491 ^a | 5.420 | .000 | .716 | .205 | 4.869 | .205 |
| | BET-C Index | -.239 ^a | -5.456 | .000 | -.718 | .875 | 1.143 | .875 |
| 2 | Credit interest rate | -.091 ^b | -.784 | .440 | -.149 | .118 | 8.473 | .087 |
| | Deposit interest rate | .185 ^b | .973 | .339 | .184 | .043 | 23.175 | .032 |
| | BET-C Index | -.109 ^b | -1.465 | .155 | -.271 | .269 | 3.712 | .227 |

a. Predictors in the Model: (Constant), Reference interest rate

b. Predictors in the Model: (Constant), Reference interest rate, Currency exchange rate lei/euro

c. Dependent Variable: Net assets of privately administered pension funds

Regression coefficients for the dependent variable, net assets of privately administered pension

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|---------------------------------|-----------------------------|------------|---------------------------|---------|------|-------------------------|-------|
| | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 (Constant) | 8193.433 | 379.023 | | 21.617 | .000 | | |
| Reference interest rate | -724.315 | 43.992 | -.950 | -16.465 | .000 | 1.000 | 1.000 |
| 2 (Constant) | 1659.258 | 1147.263 | | 1.446 | .159 | | |
| Reference interest rate | -619.850 | 34.956 | -.813 | -17.732 | .000 | .739 | 1.354 |
| Currency exchange rate lei/euro | 1376.999 | 235.538 | .268 | 5.846 | .000 | .739 | 1.354 |

a. Dependent Variable: Net assets of privately administered pension funds funds

Table no 3

CENTRAL BANK INDEPENDENCE AND MACROECONOMIC PERFORMANCES – AN EMPIRICAL APPROACH

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The empirical evidence upon the macroeconomic performances of the independent central banks do not always have been successfully. In some cases, the consistency of the indices based on the interpretation of central banks statues used for measuring the degree of central bank independence is controversial, particularly for some of the indices. Moreover, the correlations between central bank independence and macroeconomic performance variables are not always confirmed, the causal relationship between central bank independence and inflation is controversial, and the higher disinflation costs, as a result of a higher sacrifice ratio correlated with the degree of independence is controversial, too. The effects of central bank independence upon macroeconomic performances focalized upon the empirical evidence of inflation, output or economic growth and the disinflation costs. This is due to the lack of studies vis – á – vis of relationship between central bank independence and macroeconomic performances regarding some variables like interest rates and budgetary deficits. Specialists consider inflation and output as the main determinats of the social welfare. The economic literature regarding this fact suggests that the central bank is seen as a free lunch institution. This hypothesis sustains that independent central banks will have social benefits in terms of lower inflation rates, but without any costs in terms of the real macroeconomic performances as a higher output volatility or a lower economic growth. In this article we provide a qualitative analyses regarding the relationship between central bank independence and macroeconomic performances. For this purpose the authors' used the new index for measuring central bank independence and inflation targeting based on three pillars: political and legal central bank independence, central bank governance and conduct of monetary policy, central bank transparency and accountability. For estimating the connections between the evolution of central bank independence and macroeconomic performances we used five macroeconomic variables: GDP in constant prices, Harmonised Price Consumer Index, unemployment rate, budgetary deficit and current account deficit. Both measuring the degree of central bank independence and evaluating the average levels of the macroeconomic variables were analysed in the period 1990 – 2009, within 20 less developing countries. The final results will help clarify the complex relationship between central bank independence and macroeconomic performances in countries who fostered a large amount of institutional shift in recent years.

Keywords central bank transparency, central bank accountability, inflation targeting, macroeconomic outcomes, free lunch hypothesis

JEL Classification E50, E52, E58

I. Introduction

In the past, most central banks around the world had functioned as departments of the Finance Ministers. These institutions were obliged by law, by custom or by both to dispose of the monetary policy instruments for attaining a large number of objectives, including high levels of economic growth and employment, to finance the public spending of the governments by getting

funds and solving problems related to the payment balance. Today, contrary to what happened twenty five years ago most central banks around the world gain high levels of legal and actual central bank independence. Central bank independence and institutional arrangement like inflation targeting have become largely accepted mechanisms by many specialists. In this sense, the prior responsibility of the central bank is attaining and maintaining price stability and financial stability.

The reasons behind this institutional shift in the structure of the central banks differ from country to country. In the European Union, some amendments brought to the central banks statutes imposed in order to accomplish legal convergence imposed by the Maastricht Treaty and the European System of Central Banks Statute. An example in this sense is the amendments brought to law no. 22 of December 1997 of the German central bank who raised the tenure of the Governing Board members from two to five years, abolishing government the veto right. Moreover, price stability has been established as the primary objective of monetary policy. Once European Central Bank was established, the monetary policy in the member countries is delegated to one supranational institution, with a high degree of legal independence from the national governments interests.

In this paper we focused upon the degree of central bank independence of twenty less developing countries and their institutional evolution since 1990 by testing a new index for measuring central bank independence and inflation targeting. Moreover, we analyze the compliance between the degree of central bank independence and five important macroeconomic variables: GDP, inflation, unemployment rate, budgetary deficit and current account deficit in these twenty less developing countries in the period 1990 – 2009.

II. Track recorded of the relationship between central bank independence and macroeconomic performances

One of the most important studies dealing with the relationship between central bank independence and macroeconomic performances suggests that monetary discipline associated with central bank independence reduces the level and variability of inflation but does not have either large benefits or costs in terms of macroeconomic performance. This observation represents at least a fragment of evidence in support of theories emphasizing the neutrality of money (Alesina and Summers 1993: 159).

Some other studies find a negative correlation between central bank independence and long-average inflation. They show a negative correlation between independence and long-run average government deficits as a percent of GDP. In general they find no evidence of a possible correlation between output growth and central bank independence (Pollard 2003: 34).

Better macroeconomic performance and more efficient policy are present in more credible and, to some extent, more transparent central banks. Independence and accountability, to the extent that we are able to measure them, do not seem to explain much of the cross-country variation in macroeconomic outcomes, either individually or in conjunction with other variables (Cecchetti and Krause 2002: 56).

To examine the links between central bank independence and economic performance it is necessary to devise appropriate criteria for measuring central bank independence. In the industrialized countries, measures of central bank independence are based mainly on the interpretation of central bank laws and therefore concern legal independence only. The construction of so-called legal indices is done by structuring those criteria regarded as relevant and assigning them a value on the same numerical scale of independence (Healey and Harrison 2004: 109; Touffut 2008: 9; Laurens, Arnone, Segalotto 2009: 24).

The correlation between central bank independence and inflation rate in the developed and emerging countries is a positive one; this fact can be justified by the Philips curve, in which

governments prefer a decrease in the unemployment rate and an increase in wages, and consequently an automatic increase in the inflation rate (Dumiter 2010a: 185).

Summarizing, the most important fact is that the different indices used by one or another author distorted the accuracy of the empirical results because of the gap between *de jure* and *de facto* independence. In this study, we want to eliminate those problems by analyzing central bank independence and macroeconomic performances through the new index for central bank independence and inflation targeting.

III. Estimating the connections and correlations between central bank independence and macroeconomic performance in less developing countries

In order to evaluate and assess the impact of central bank independence regarding the macroeconomic performances we have considered appropriate to use a new index. The new index for central bank independence and inflation targeting (ICBIIT) has three main pillars: political and legal central bank independence (PLBCI), central bank governance and conduct of monetary policy (CBGCMP), central bank transparency and accountability (CBTA) (Dumiter 2009a: 39-42). The new index for central bank independence and inflation targeting is constructed as a sum of thirty eight institutional arrangements both in law and practice of the central banks: nine attributed to political and legal central bank independence, regarding variables like turnover rate of central bank Governor and political vulnerability, tenures of central bank Governor and the members of the Governing Board, the appointment and dismissal procedures of the Governor and the members of the governing board; fifteen attributed to central bank governance and conduct of monetary policy regarding aspects as: price stability, the central bank prevaillance over government in case of policy conflicts, the authority in managing the exchange and interest rates, granting direct and indirect credit to the government, the degree of central bank independence in setting the monetary policy objectives, targets and instruments; fourteen attributed to central bank transparency and accountability: disclosing time series for the main economic variables and the macroeconomic models used for policy analyses, communicating with the public and the media, announcing the current and future paths of monetary policy, auditing central bank activities.

The index is better called as a *de facto* or actual index rather than a *de jure* one, because the aggregated value is based on the actual institutional practices or norms of the central banks and not necessarily what is written in the central bank laws (Dumiter 2009b: 87). However, the new index for central bank independence and inflation targeting is an interpretation based on these laws, which are put into actual practice and those practices that are not stipulated by law.

In order to evaluate the soundness of the index for measuring central bank independence and inflation targeting (ICBIIT) it is very important to measure this index in the less developing countries. For this purpose we have considered for our study a less developing group formed by twenty countries: Argentina, Bostwana, Brasil, Chile, Ghana, Jamaica, Jordan, Malaezia, Mexico, Namibia, Nepal, Phillippines, Ruanda, Saudi Arabia, South Africa, Sri Lanka, Tanzania, Thailand, Trinidad Tobago, Zambia, in order to evaluate the degree of central bank independence and its evolution in countries with many institutional shifts. The measure was made by analyzing central banks laws and statues, norms, regulations, publications, studies and other important material regarding institutional matters and actual practices of the central banks according to their websites in the period 1990 – 2009.

Given the lack of studies dealling with the relationship between central bank independence and macroeconomic performances in the less developing countries we have been focusing upon this country group. Measuring central bank independence was made by using the index for central bank independence and inflation targeting (Dumiter 2010b: 102-106). The analyses was made by comparing the levels of central bank independence and the average of five macroeconomic variables in the period 1990 – 2009, as: GDP in constant prices, Harmonized Price Consumer

Index (HPCI), unemployment rate (UR), budgetary deficit as a percent of GDP (BG) and current account deficit as a percent of GDP(CAD); they were extracted of the International Monetary Fund website, *World Economic Outlook Database*.

IV. Results of measuring central bank independence and their correlation with the macroeconomic performances in less developing countries

Measuring central bank independence according to the index of central bank independence and inflation targeting in the less developing country group (Fig. no. 1) has emerged with the following results: regarding the first pillar, central bank political and legal independence only a few countries: Mexico, Philippines and Tanzania exhibit higher levels, whereas the rest of the countries have lower scores; this is due to the government active participation in the appointment and dismissal procedures of the Governor and the members of the Board, the political vulnerability and the higher turnover rate of the central bank Governor. Moreover, the tenures of the central bank Governor and the members of the Board are beneath the length of the political cycle.

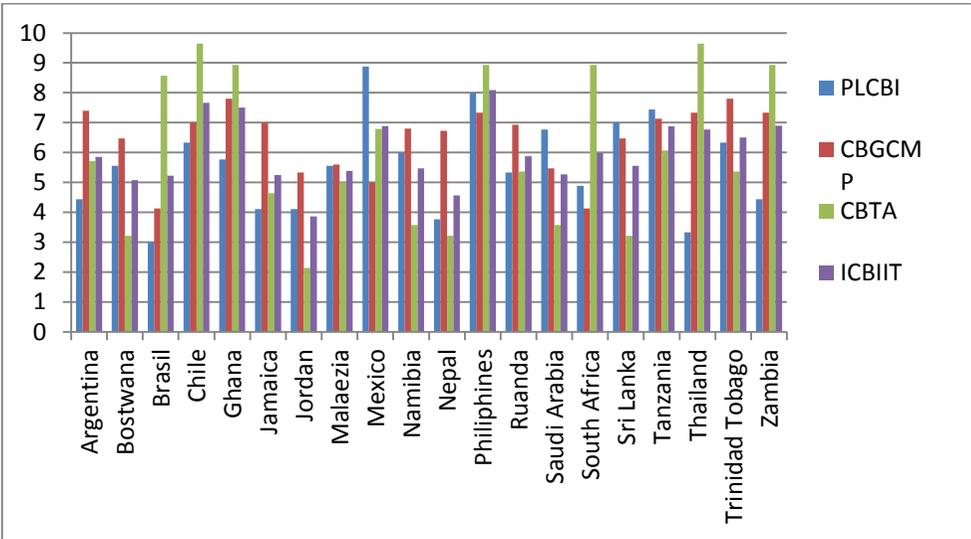


Fig. no. 1 Measuring central bank independence according to the Index for central bank independence and inflation targeting in twenty less developing countries
Source: realized by authors'

The second pillar of the index, central bank governance and conduct of monetary policy, measured in the less developing country group reveals in the majority of the countries medium to low scores due to some factors as: government prevaillace over the central bank in case of policy conflicts, multiple objectives of monetary policy without any prioritisation of one or another, financing government deficits in direct and indirect manners, government interference in establishing and managing the interest rate and exchange rate, government active implication in establishing and applying monetary policy objectives, targets and instruments.

With the exception of Chile, country that has adopted the inflation targeting as monetary policy strategy, countries in the less developing country group attain lower levels of central bank transparency and accountability pillar, due to some factors as: an unclear process of communicating and debating with the public and media regarding the monetary policy stance, lack of time series for the main economic variables and the macroeconomic models used for

policy analyses, lack of forecasts regarding inflation and output paths, lack of transparency in modifying the path and course of present and future monetary policy.

Regarding the correlation between the degree of central bank independence and macroeconomic performances in the less developing country group, the results are the following (Fig. no. 2): between central bank independence, using the index for central bank independence and inflation targeting and GDP countries as: Chile, Phillippines, Ghana and Zambia foster medium levels of central bank independence associated with good track record in terms of economic growth, while the rest of the countries gathered in this group exhibit lower levels of central bank independence and satisfactory levels of GDP.

Central bank independence and average inflation in the less developing country group are inverse correlated in countries as: Argentina, Brasil and Zambia, countries who foster lower levels of central bank independence and higher average inflation rates. Other countries as: Phillippines, Ghana, Thailand register acceptable levels of central bank independence and lower levels of inflation, while the rest of the countries exhibit lower levels both of central bank independence and inflation rates.

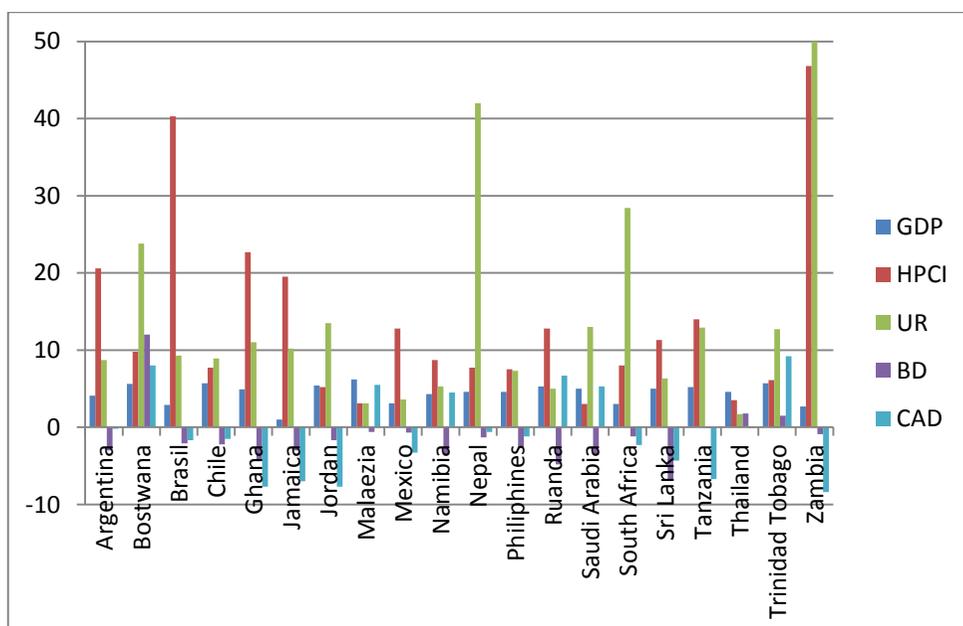


Fig. no. 2 Central banks' macroeconomic performances average in twenty less developing countries between 1990 – 2009
Source: realized by authors'

For the relationship between central bank independence and average unemployment rate in the less developing country group, South Africa, Saudi Arabia, Bostwana, Jordan, Jamaica, Nepal, Tanzania, Trinidad Tobago and Zambia, countries who gain lower levels of central bank independence and higher average levels of the unemployment rate. At the opposite side we can remark Argentina, Brasil, Chile, Malaezia, Mexico, Namibia, Ruanda, Sri Lanka and Thailand, countries characterized by lower levels of central bank independence and of the unemployment rate.

The relationship between central bank independence and budgetary deficit in less developing countries is split in two parts: in the first one, countries as Trinidad Tobago, Thailand, Bostwana exhibit medium levels of central bank independence and positive budgetary deficits, while for the

rest of the countries we can identify an inverse relationship between central bank independence and budgetary deficits.

Finally, the correlation of central bank independence with the current account deficit is a positive one in countries as: Saudi Arabia, Botswana, Malaysia, Namibia, Rwanda and Trinidad Tobago, while for the rest of the countries of the less developed group we can identify an inverse correlation between central bank independence and current account balance.

V. Conclusions

The vast empirical studies dealing with the relationship between central bank independence and macroeconomic performance identify a problem around the construction of the indices regarding measuring central bank independence. This situation leads to an inadequate measure of the degree of central bank independence in developed and developing countries, results which distort the connections with the macroeconomic performances.

In this article we have used the new index for measuring central bank independence and inflation targeting in order to eliminate the differences between *de jure* and *de facto* independence to a more accurate perception of central bank independence. Moreover, we focused upon several macroeconomic indicators as the average over a twenty years time horizon. The sample that we have constructed consists in twenty less developed countries that have evolved in recent years both economically and socially.

The result of our analyses suggests that central bank independence is positively correlated with the economic growth in the vast majority of countries, meaning that an increase in the degree of independence will improve the economic growth. Regarding the inflation and employment performances and the degree of central bank independence the results are very interesting: some countries with relatively independent central banks exhibit higher levels of inflation and employment, meanwhile other countries with politically dependent central banks gather lower levels of inflation and employment. This means that in less developed countries central bank independence is not an important factor to explain the inflationary trends and the unemployment rate movements.

Finally, the relationship between both current account balance and budgetary deficits are emerging: in some countries there is a positive relationship between central bank independence and budgetary deficit and current account balance, meanwhile in other countries we can identify an inverse relationship between these two variables.

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COMPETITION IN THE BANKING SYSTEM OF REPUBLIC OF MOLDOVA

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The banking system is one of the financial market segments which plays an important role in the financial circuit both at the country level and as a component of the international financial system. Developing a competitive banking system allows to avoid monopoly situations creating the possibility for each bank to be oriented to a certain range of services and products provided willing to increase continuously their quality and attractiveness. The dynamic analysis of effective competition in the domestic banking system would allow determination of factors with negative influence on the rate of participation of each bank in the total bank portfolio items, and also the possibility of reviewing the financial policies pursued in the banking sector. Study of bank system competition is a topic of interest both for financial analysts, and for authorities, given the opportunities arising: qualitative assessment of competition in the banking sector, verifying in which way the regulations in force have influenced the dynamics of competition, measuring the intensity of competition in the banking sector, detection, based on statistical analysis of competitive situation, of the main qualitative types (categories) of financial institutions active in the financial market. Moldova's banking system, according to the results obtained by analyzing the competition, has a moderate competition, even if it is obvious its increasing trend. Banking policies, trends in international financial markets, internationalization of capital markets affect the position of the banking system on domestic financial market, implicitly calculating the contribution of each bank in the formation of the portfolio: bank assets, total regulatory capital, the volume of loans and deposits.

Keywords: banking system, competition, Gini coefficient, Herfindahl–Hirschman, Lorentz distribution.

Study of bank system competition is a topic of interest both for financial analysts, and for monetary authorities. Main concerns regarded qualitative assessment of financial-banking sector competition, verifying the degree in which way the regulations in force have influenced the dynamics of competition, measuring the intensity of competition in the banking sector and qualitative appreciation of competitions' dynamics, detection, based on statistical analysis of competitive situation, of the main qualitative types (categories) of financial institutions etc. It is important for Republic of Moldova to know how did the banking system evolve, in time, what measures and actions were taken and what other measures are necessary to be implemented. Or, it is absolutely necessary to know, pertinently and reliably, main force relations of the financial-banking actors of the market and their evolution in time. The article presents the results of some instruments and mathematical-statistical methods used in worldwide theory and practice for qualitative appreciation of the level and dynamics (changes) of competition in the banking sector of Republic of Moldova.

Statistical data used in this article include the years 1999-2010, on portfolio elements, mentioning the following categories: total assets of the commercial bank, normative capital, amount of credits and deposits for 15 banks that activate (as an exception, in 2008 the number of commercial banks equaled to 16).

The methodology of analysis and appreciation is as plentiful and various, as well as complex. The theory proposes a wide range of procedures and graphical and numeric instruments to

measure the level and dynamics of competition, and for interpretation of the obtained results. Among them, the mostly used, worldwide, are those from the domain of study and analysis of units' concentration in a statistical collectivity, in our case, statistical collectivity being the banking system, and the units – commercial banks.

The analysis of concentration in the banking system regards the assessment of the concentration degree of diverse elements from a commercial bank portfolio (assets, deposits, credits, ATMs, released cards, clients, etc.) and, on this base, of the level of competition and the main force ratios between commercial banks in Republic of Moldova.

Also, the assessment of concentration is used for market structure reference (credit market, deposit market, etc.). In this case, the concentration study might be supplemented with diversification assessment.

Concentration study is applicable just for positive value variables; with values that are susceptible to addition (addition of values makes economic sense!).

Statistical characterization of concentration can be achieved by two categories of procedures: numeric procedures (computation) and graphical procedures.

Assessment of the concentration degree through numeric procedures consists of computing some concentration indicators, such as the coefficients of the concentration degree:

- Gini concentration indicator
- Herfindahl–Hirschman indicator

Assessment of the concentration through graphical way consists in putting up the concentration curve — Lorentz–Gini curve.

The concentration curve

The graphical procedure for concentration reference was belabored by Corrado Gini (Italy) and Lorentz (USA) for the study of income disparity. In our days, this procedure has numerous applications, inclusively in illustration and concentration assessment of sundries portfolio elements in the banking sector.

Graphical determination of concentration assumes putting up the concentration curve, also named Lorentz–Gini curve. For competition analysis in the banking system, the Lorentz curve is applied for graphical representation of percentage distribution of a variable (portfolio elements: assets, normative capital, credits, deposits etc.) in every commercial bank of a banking system. Generally, the curve is represented as cumulated values of the variable (on the ordinate), in percentage, as a function of relative effectives (in percentage) cumulated of commercial banks (on the abscissa).

The concentration curve is a graphical representation of q variable as a function of p variable. The values of the two variables are defined by the relations:

$$p_i = \frac{n_i}{N}, i = 1 \dots N, n_0 = 0, n_i = n_{i-1} + 1 \quad (1)$$

$$q_i = \frac{x_i}{\sum_{j=1}^N x_j}, i = 1 \dots N, L_0 = 0, L_i = L_{i-1} + x_j \quad (2)$$

The values of p_i and q_i variables vary between 0 and 1. If the values of characteristics is totally and equally distributed, the Gini indicator equals to zero, expressing a perfect equality in the banking system, namely every commercial bank has the same level of the characteristic (which states for a high competition level between commercial banks). If the indicator is equal to 1, the situation states for maximum inequality, because just one bank has entirely the studied characteristic (a situation with minimum competition and monopoly of a bank). The more the concentration curve is closer to the diagonal, the stronger the concentration is.

Numeric procedures for concentration assessment

From the category of numeric procedures, the following two will be treated: Gini concentration indicator and Herfindahl–Hirschman indicator.

Gini concentration indicator - i_G - is a concentration synthetic indicator of distributions, defined as a ratio between two surfaces: concentration surface S_c and half of square surface (Gini), as given below:

$$i_G = \frac{\text{Concentration_Surface}}{\frac{\text{Square_Surface}}{2}} \quad (3)$$

Because the surface of the square equals to 1, the concentration indicator i_G is twice the surface between the concentration curve and the first diagonal of Gini square, which is the double of the concentration surface:

$$i_G = 2 \times S_c \quad (4)$$

The value of the concentration indicator is always between 0 and 1, respectively between 0 and 100%, reflecting the variation from the null concentration to a maximum concentration.

Herfindahl–Hirschman indicator

Herfindahl–Hirschman indicator expresses the concentration degree of a market (e.g. credits market, deposits market etc.) taking into account the dispersion (distribution inequalities) existing between the biggest commercial banks. It's being defined as the sum of squares of market shares held by commercial banks.

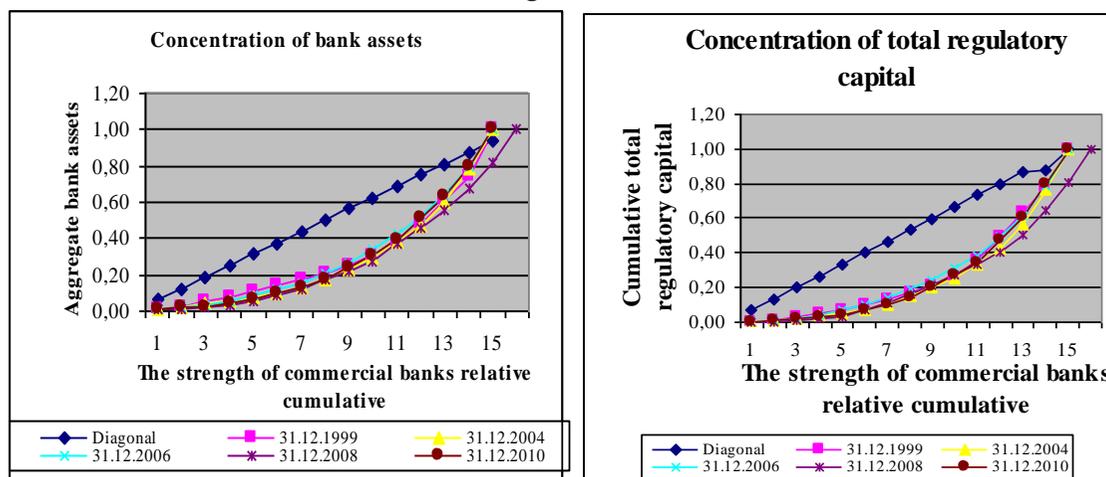
$$H = \sum_{i=1}^N (S_i)^2 \quad (5)$$

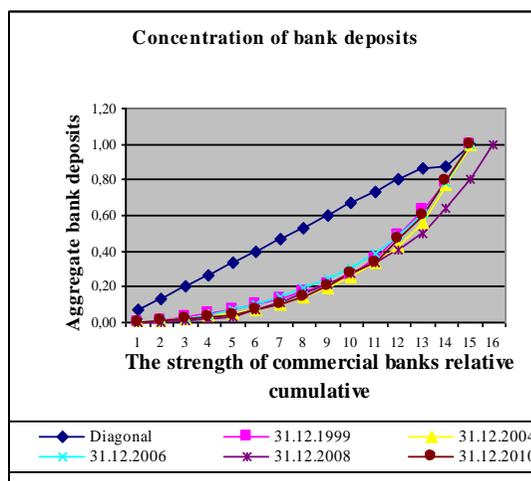
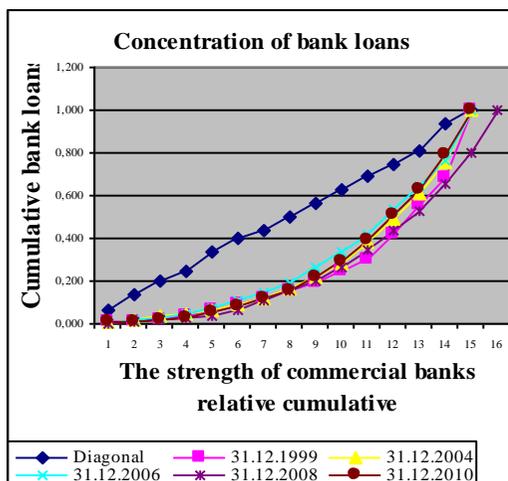
- where s_i represents market shares of all commercial banks.

The market shares are expressed in percent. The value of Herfindahl–Hirschman indicator varies between 0 and 10000. The bigger the value of Herfindahl–Hirschman indicator is, the more concentrated the market is. In case of monopoly (maximum concentration), the indicator is equal to 10000, but in case of a competition market, with an infinite number of participants (the perfect situation), the indicator approximates to zero.

The graphics of concentration curves, on portfolio elements, are presented below.

Figure nr. 1





Source: executed by the authors

The main concentrations of portfolio elements' indicators are presented in the table below:

Concentrations of portfolio elements' indicators for RM banking system in 1999 - 2010

| | Total Assets | | Total normative capital | | Credits | | Deposits | |
|------|----------------|--------------------------------|-------------------------|--------------------------------|----------------|--------------------------------|----------------|--------------------------------|
| | Gini Indicator | Herfindahl-Hirschman Indicator | Gini Indicator | Herfindahl-Hirschman Indicator | Gini Indicator | Herfindahl-Hirschman Indicator | Gini Indicator | Herfindahl-Hirschman Indicator |
| 1999 | 0,429 | 2420,709 | 0,546 | 2644,740 | 0,499 | 2938,849 | 0,471 | 1731,848 |
| 2000 | 0,389 | 2090,808 | 0,507 | 2509,308 | 0,458 | 2806,662 | 0,450 | 2111,654 |
| 2004 | 0,454 | 1950,131 | 0,316 | 2542,820 | 0,444 | 2212,030 | 0,509 | 2024,688 |
| 2005 | 0,484 | 1937,654 | 0,316 | 2542,820 | 0,425 | 2455,837 | 0,495 | 2069,307 |
| 2006 | 0,444 | 1810,695 | 0,322 | 2219,239 | 0,457 | 1945,635 | 0,480 | 1878,579 |
| 2007 | 0,438 | 1805,08 | 0,361 | 1688,08 | 0,463 | 1890,59 | 0,473 | 1923,01 |
| 2008 | 0,453 | 1522,44 | 0,392 | 1576,83 | 0,483 | 1611,06 | 0,489 | 1653,06 |
| 2009 | 0,469 | 1592,89 | 0,389 | 1676,98 | 0,470 | 1531,44 | 0,502 | 1703,62 |
| 2010 | 0,468 | 1741,29 | 0,393 | 1898,53 | 0,482 | 1774,10 | 0,507 | 1824,56 |

Source: executed by the authors

Analyzing the presented graphics, as well as the numeric values of concentration indicators (Gini and Herfindahl–Hirschman), authors conclude that:

The concentration of all portfolio elements analyzed is stressed (the Gini indicator is between 0.316 and 0.546). For the analyzed period (years 1999 to 2010), the competition between commercial banks intensified (decrease of the concentration degree of portfolio elements and of diverse financial market segments). The competition in the banking system is determined, inclusively, by foreign banks' penetration in the inland market, connection of activity standards to international standards, extension of proposed services and performed operations.

Concentration curves' graphics have underlined the main qualitative types of commercial banks, traced by the individual concentration degree of portfolio elements, by the position on the market and by the main relations between commercial banks from Republic of Moldova. Based on the results of the statistical analysis, there were defined three main categories of commercial banks:

- 1ST TYPE — *Moldova–Agroindbank*, which is detaching from the other commercial banks of Republic of Moldova’s banking system, due to important market shares (app. 20% out of every portfolio element)
- 2ND TYPE — *Four big commercial banks*: Victoriabank, Banca de Economii, Moldindconbank and Eximbank.
- 3RD TYPE — *Next ten commercial banks*.

In numeric expression, the main relations between commercial banks (stressed out by concentration curves), are presented as follows:

- first 10 commercial banks (3rd type) hold approximately 30% of total bank assets, the rest of 70% is hold by the five big commercial banks (1st and 2nd type)
- first 10 commercial banks (3rd type) hold approximately 37% of total normative capital, the rest of 63% is hold by the five big commercial banks (1st and 2nd type)
- first 10 commercial banks (3rd type) hold approximately 40% of total bank deposits, the rest of 60% is hold by the five big commercial banks (1st and 2nd type)
- first 10 commercial banks (3rd type) hold approximately 29% of total bank credits, the rest of 71% is hold by the five big commercial banks (1st and 2nd type)
- 1ST TYPE *Moldova-Agroindbank*, at the end of 2010, for the first time in the analyzed period, conceded the position of market leader on attracted deposits, for Victoriabank, registering a drop of 0,8 p.p.

It was observed that the group of ten 3rd type banks, in analyzed period, had increased their contribution to every portfolio element, in average with 2-4%, the market share of 1st and 2nd type banks being decline.

In the 2nd type group of banks, repeated reshufflings have been registered, determined by evolution trends of national banking segment, as well as by financial market in general, Mobiasbancă and Banca Socială conceded their positions.

In respect to Republic of Moldova, combined analyses are preferred, both in real terms, and in nominals.

Although the analysis of indicators’ dynamics (Gini, Herfindahl–Hirschman), stress out the tendency of competition intensification in the national bank system, however, the analyzed portfolio elements are concentrated by three banks: *Moldova-Agroindbank*, *Victoriabank* and *Banca de Economii* in direct ratio of 50%. Financial crisis from 2007-2008 had reduced the concentration movement of the portfolio elements, increasing the market share of banks with a significant weight on the market, simultaneously, decreasing the influence of small banks.

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EXCHANGE-RATES FORECASTING: EXPONENTIAL SMOOTHING TECHNIQUES AND ARIMA MODELS

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Exchange rates forecasting is, and has been a challenging task in finance. Statistical and econometrical models are widely used in analysis and forecasting of foreign exchange rates. This paper investigates the behavior of daily exchange rates of the Romanian Leu against the Euro, United States Dollar, British Pound, Japanese Yen, Chinese Renminbi and the Russian Ruble. Smoothing techniques are generated and compared with each other. These models include the Simple Exponential Smoothing technique, as the Double Exponential Smoothing technique, the Simple Holt-Winters, the Additive Holt-Winters, namely the Autoregressive Integrated Moving Average model.

Keywords: Forecasting, Simple Exponential Smoothing, Double Exponential Smoothing, Holt-Winters Additive, Holt-Winters Multiplicative.

JEL clasification: G17, F31, F47.

I. Introduction

The exchange rate reflects the ratio at which one currency can be exchanged with another currency, namely the ratio of currency prices. The relevant literature implies, by the purchasing power parity theory, that in the long-run exchange rates converge to an equilibrium level. The question that arises is related to the behavior in the short-term of the exchange rates, and how these fluctuations might affect the financial market players, the investors as well as those directly influenced by changes in the exchange rate. To forecast exchange rates there are numerous models, which are more or less complicated for modeling the relationship between currencies, but those interested do not always have the resources needed to fully benefit from them, or as suggested by the literature, most of exchange rate models based on macro economic data are considered outperformed. So prediction methods based on the random walk models and exponential smoothing techniques can be used in capturing the fluctuations the short-run. The main goal of this study is to present the performance of methods for the task of exchange rate forecasting, using the exchange rates of Romanian Leu versus the most important currencies in terms of international trade, namely the Euro, United States Dollar, British Pound, Japanese Yen, Chinese Renminbi and the Russian Ruble.

II. Literature Review

The efficiency of exchange rate predictability by models based on past information in time series is the main question raised. The relevant literature on currency forecasting issues includes a wide range of methods. (Meese and Rogof: 1983) have shown that models that are based on the random walk hypothesis in forecasting exchange rates outperform those based on macroeconomic indicators. But when the time horizon is extended past 12 months, the same

authors, together with (Chinn and Meese: 1995), respectively (Mark: 1995) argue that this efficiency is lost. (Mark: 1995) investigates the movements of the U.S Dollar against four major currencies in a time period of 18 years, his findings indicating that exchange-rate models based on macroeconomic fundamentals have a higher forecast ability than those based on random walk. (Chinn and Meese: 1995) using non-parametric and parametric models examine the predictive performance of both types of models, using the exchange rate of U.S Dollar against four currencies, over a time horizon of 17 years. They reach to the conclusion that random walk models outperform the models based on fundamentals, but only in the short-term, when it comes to larger periods of time, more than 36 months, this superiority is lost. (Marsh and Power: 1996) use 22 forecasters to predict movements in three major currencies against the U.S. Dollar, including the random walk estimators. (Andreou, Georgpoulus and Likothanassis: 2002) employ neural networks to predict four currency movements against the Greek Drachma, using information about macroeconomic factors from the point of view of the market participants, concluding that the greatest impact have those information which correspond to the trend of the time series. (Goldberg and Frydman: 1996), testing a time period over 15-years the exchange rate of the U.S. Dollar against German Mark, found that all structural exchange rate models are outperformed by the random walk model. They consider that the failure of empirical exchange rate models is largely due to periodic shifts in the long-run relationship governing the exchange rate and macroeconomic fundamentals, due to an instable monetary-policy, which in turn produces shifts in the cointegrating vector. However (Hwang: 2001) finds long-term cointegrating relationships between exchange rate and macroeconomic factors in some of the analyzed series, but in the short-term two random walk models are found to exceed the traditional models. (Kilian and Taylor: 2001) try to combine the models based on macroeconomic indicators with those on random walk, considering that in the long-run these models are optimal. It is apparent that in the related literature both types of models are used, but the ones using macroeconomic indicators are efficient in the long-run, while predictability in the short-term is ensured by models based on random walk.

III. Methodology

A. Single Exponential Smoothing Technique (MNES)

To forecast the exchange rates in the first step the single exponential smoothing procedure is applied, this model assuming that the series is stationary, without a trend. Simple exponential smoothing is used for short-range forecasting, usually just one month into the future. The relationship which characterizes the the single exponential smoothing procedure is:

$$Y_n = a + \varepsilon_n \quad (1)$$

Where a represents the constant, while ε_n stands for the residuals. To forecast the $n+1$ moment in the moment n , the following series is computed recursively :

$$\hat{Y}_{n+1} = \alpha \cdot Y_n + (1-\alpha) \cdot \hat{Y}_n, \text{ where } n = \overline{1, t+k}; \quad (2)$$

The number of available observations is shown by t , where k stands for the time horizon for which forecasts is made. α is the smoothing factor, which can take values between 0 and 1, a close value to 0 means that the expected values for $n+1$ are equal to the prior forecast, and a value close to 1 suggests that the forecasts are equal to the previous observation. The value of α is usually determined by minimizing the sum of squares of the forecast errors:

$$\frac{1}{n} \sum_{i=0}^{n-1} (Y_{n+1} - \hat{Y}_{n+1})^2 = \frac{1}{n} \sum_{i=0}^{n-1} e_{n+1}^2 \quad (3)$$

The (2) relationship is applied recursively for each observation from the series, each new smoothed value \hat{Y}_{n+1} is computed as the weighted average of the current observation, Y_n and the previous smoothed observation, \hat{Y}_n . Thus each smoothed value \hat{Y}_{n+1} is the weighted average of the previous a n observations, the weights of these decrease exponentially in the past, so Y_1 has a weight of $\alpha \cdot (1-\alpha)^{n-1}$, Y_2 a weight of $\alpha \cdot (1-\alpha)^{n-2}$, Y_{n-1} being weighted with $\alpha \cdot (1-\alpha)$. So equation (2) can be written as:

$$\hat{Y}_{n+1} = \alpha \cdot \sum_{i=1}^n (1-\alpha)^i \cdot \hat{Y}_{n+1-s} \quad (4)$$

The initial value of \hat{Y}_1 is usually equal to Y_1 , or with the average of the initial values of the series.

B. Double Exponential Smoothing Technique (MNED)

This method applies two equations recursively for the Y_n , namely:

$$S_n = \alpha \cdot Y_n + (1-\alpha) \cdot S_{n-1} \quad (5)$$

$$D_n = \alpha \cdot S_n + (1-\alpha) \cdot D_{n-1} \quad (6)$$

where S_n is the single smoothed series and D_n is the double smoothed series. α stands for the smoothing parameter, between $0 < \alpha \leq 1$. This method is appropriate for series with a linear trend, the forecasts from double smoothing are computed as:

$$\hat{Y}_{n+h} = \left(2 + \frac{\alpha \cdot k}{1-\alpha}\right) \cdot S_n - \left(1 + \frac{\alpha \cdot k}{1-\alpha}\right) \cdot D_n = \left(2S_n - D_n + \frac{\alpha}{1-\alpha} \cdot (S_n - D_n) \cdot k\right) \quad (7)$$

Expression (7) can be interpreted as an equation with intercept $2S_n - D_n$ and slope $\frac{\alpha}{1-\alpha} \cdot (S_n - D_n)$. The initial values for S_1 , respectively D_1 are usually set to be equal with Y_1 , or with the average of the initial values of the series.

C. Holt –Winters Simple Exponential Smoothing Technique (MHWES)

This method is appropriate for series with a linear trend and no seasonal variations. This technique is using two recursions, the forecasted series being:

$$Y_{n+k} = a + b \cdot k \quad (8)$$

Where a is the intercept, while b, stands for the slope, which are computed recursively:

$$a_n = \alpha \cdot Y_n + (1-\alpha) \cdot (a_{n-1} + b_{n-1}) \quad (9)$$

$$b_n = \beta \cdot (a_n - a_{n-1}) + (1-\beta) \cdot b_{n-1} \quad (10)$$

α and β are smoothing factors, where these can be found within the interval $\alpha, \beta \in [0,1]$, being determined by minimizing the sum of squares of the forecast errors. Each prediction is computed based on the previous one, so the slope b_n of the series is multiplied by the forecast horizon, k,

and this will be added with the intercept of the series, a_n the estimated values of the series will be determined by the relationship:

$$\hat{Y}_{n+k} = \hat{a}_n + \hat{b}_n \cdot k \quad (11)$$

The initial value of a_1 , is usually Y_1 , while b_1 is general set to be equal with 0, or with the average of the initial values of the series, or with the difference of the initial observations.

D. Holt –Winters Multiplicative Exponential Smoothing Technique (MHWEM)

This method is appropriate for series with a linear trend and multiplicative seasonal variation, the smoothed series is given by:

$$\hat{Y}_{n+k} = (a + b \cdot k) \cdot c_{n+k} \quad (12)$$

Where a_n a is the intercept, while b_n is the trend of the series and c_n the multiplicative seasonal factor, each of these three coefficients are defined by the following recursions:

$$a_n = \alpha \cdot \frac{Y_n}{c_{n-s}} + (1 - \alpha) \cdot (a_{n-1} + b_{n-1}) \quad (13)$$

$$b_n = \beta \cdot (a_n - a_{n-1}) + (1 - \beta) \cdot b_{n-1} \quad (14)$$

$$c_n = \gamma \cdot \frac{Y_n}{a_n} + (1 - \gamma) c_{n-s} \quad (15)$$

Where α, β and γ are smoothing factors, where these can be found within the interval $\alpha, \beta, \gamma \in [0,1]$, and are determined by minimizing the sum of squares of the forecast errors while s is the seasonal frequency component. The forecasts are computed as:

$$\hat{Y}_{n+k} = (\hat{a}_n + \hat{b}_n \cdot k) \cdot \hat{c}_{n-s+k} \quad (16)$$

The initial value of a_s are equal with the average of the initial values of the series from the first

seasonal cycle, $a_s = \frac{1}{s} \cdot \sum_{i=1}^s Y_i$, while b_s is given by $b_s = \frac{1}{s} \cdot \left(\frac{Y_{s+1} - Y_1}{s} + \frac{Y_{s+2} - Y_1}{s} + \dots + \frac{Y_{2s} - Y_s}{s} \right)$,

and the the multiplicative seasonal component is estimated by $c_1 = \frac{Y_1}{a_s}; c_2 = \frac{Y_2}{a_s}, \dots, c_s = \frac{Y_s}{a_s}$.

E. Holt –Winters Additive Exponential Smoothing Technique (MHWEA)

This method is appropriate for series with a linear trend and additive seasonal variation, the smoothed series is given by:

$$\hat{Y}_{n+k} = a + b \cdot k + c_{n+k} \quad (17)$$

Where a_n, b_n and c_n are defined as in the prevoius model, only this time c_n is the additive seasonal factor, each of these three coefficients are defined by the following recursions:

$$a_n = \alpha \cdot (Y_n - c_{n-s}) + (1 - \alpha) \cdot (a_{n-1} + b_{n-1}) \quad (18)$$

$$b_n = \beta \cdot (a_n - a_{n-1}) + (1 - \beta) \cdot b_{n-1} \quad (19)$$

$$c_n = \gamma \cdot (Y_n - a_n) + (1 - \gamma) c_{n-s} \quad (20)$$

Where α, β and γ are smoothing factors, within the interval $\alpha, \beta, \gamma \in [0,1]$, and are determined by minimizing the sum of squares of the forecast errors, while s is the seasonal frequency component. The forecasts are computed as:

$$\hat{Y}_{n+k} = \hat{a}_n + \hat{b}_n \cdot k + \hat{c}_{n-s+k} \quad (21)$$

The initial values of the additive seasonal factor are estimated by: $c_1 = Y_1 - a_s$; $c_2 = Y_2 - a_s$, ..., $c_s = Y_s - a_s$.

F. ARIMA Models

Autoregressive moving average models -ARMA(p,q)- are recommended to be based on stationary series, with the form:

$$Y_n = a_1 Y_{n-1} + a_2 Y_{n-2} + \dots + a_p Y_{n-p} - b_1 \varepsilon_{n-1} - b_2 \varepsilon_{n-2} - \dots - b_q \varepsilon_{n-q} + \varepsilon_n \quad (22)$$

$$\rightarrow Y_n - Y_{n-1} + a_2 Y_{n-2} + \dots + a_p Y_{n-p} = \varepsilon_n - b_1 \varepsilon_{n-1} - b_2 \varepsilon_{n-2} - \dots - b_q \varepsilon_{n-q} \quad (23)$$

$$\rightarrow (1 - a_1 L - a_2 L^2 - \dots - a_p L^p) Y_n = (1 - b_1 L - \dots - b_q L^q) \varepsilon_n \quad (24)$$

$$\rightarrow \phi(L) Y_n = \theta(L) \varepsilon_n \quad (25)$$

Where p is the order of the autoregressive part, while q is the order of the moving average part, and ε_n represents the white noise. Validation of ARMA (p, q) models is based on minimizing the AIC and BIC criterias, also by verifying the correlation of the error terms of the model, finally measuring the departure from normality of these. The ARMA models, as stated, can only be used on stationary series. A series is stationary if its values oscillate around a reference level. In the terminology of time series analysis, if a time series is stationary it is said to be integrated of order zero, or I(0) for short. If a time series needs one differential operation to achieve stationarity, it is an I(1) series, and a time series is I(n) if it is to be differenced for n times to achieve stationarity. So for nonstationary series the ARIMA (p, d, q) models will be used, namely the autoregressive integrated moving average models, where d is the order of differentiation for the series to become stationary. So an ARIMA (p, d, q) model can be rewritten as:

$$\phi(L)(1-L)^d Y_n = \theta(L) \varepsilon_n \quad (26)$$

Where L is the lag operator, and the order of differentiation is equal to: $\Delta^d Y_n = (1-L)^d Y_n$ (27)

E. Forecasting results:

The forecasting results are measured by the following indicators:

$$\text{Sum of squared errors: } SPE = \sum_1^{n+k} e_{n+1}^2 = \sum_1^{n+k} (\hat{Y}_n - Y_n)^2 \quad (28)$$

$$\text{Root mean squared error: } RME = \sqrt{\sum_1^{n+k} (\hat{Y}_n - Y_n)^2 / (n+k)} \quad (29)$$

$$\text{Mean absolute error: } MAE = \sum_1^{n+k} |\hat{Y}_n - Y_n| / (n+k) \quad (30)$$

$$\text{Bias Proportion: } DM = \left(\left(\sum_1^{n+k} \hat{Y}_n / (n+k) \right) - \bar{Y} \right)^2 / \sum_1^{n+k} (\hat{Y}_n - Y_n)^2 / (n+k) \quad (31)$$

Shows how far the mean of the forecast is from the mean of the actual series.

$$\text{Variance Proportion: } DV = (\sigma_{\bar{Y}} - \sigma_Y)^2 / \sum_1^{n+k} (\hat{Y}_n - Y_n)^2 / (n+k) \quad (32)$$

Where $\sigma_{\bar{Y}}$, σ_Y represent the standard deviation of the series \hat{Y}_n respectively Y_n , indicating how far the variation of the forecast is from the variation of the actual series Y_n .

$$\text{Covariance Proportion: } DCOV = 2(1 - \text{cov}(\hat{Y}_n, Y_n)) \cdot \sigma_{\hat{Y}} \cdot \sigma_Y / \sqrt{\sum_1^{n+k} (\hat{Y}_n - Y_n)^2 / (n+k)} \quad (33)$$

Where $\text{cov}(\hat{Y}_n, Y_n)$ represents the relationship between the forecasted series \hat{Y}_n , and the actual series Y_n ; the proportion measuring the remaining unsystematic forecasting errors.

Theil Inequality Coefficient:

$$CT = \sqrt{\sum_1^{n+k} (\hat{Y}_n - Y_n)^2 / (n+k)} / \left(\sqrt{\sum_1^{n+k} \hat{Y}_n^2 / (n+k)} + \sqrt{\sum_1^{n+k} Y_n^2 / (n+k)} \right) \quad (34)$$

This coefficient lies between $[0;1]$, where a value close to 0 indicates a perfect fit of the forecasted series, \hat{Y}_n to the actual one Y_n .

IV. Empirical findings

The statistical data used in this study consist of daily exchange rate between 6 currencies, which were extracted from <http://bnr.ro/>. The sample period is from 03 January, 2011 to 22 April, 2011; totalling 80 daily observations for each series, on 16 weeks. The exchange rates are: EUR/RON, USD/RON, GBP/RON, JPY/RON, CNY/RON, RUB/RON.

These exchange rates were selected because of their role in international transactions of Romania. The results of the first five models are compressed in (Table 1), namely in (Table 2), together with the forecast evaluation coefficients.

To identify the adequate $ARIMA(p, d, q)$ model, the stationarity of the series was tested, by applying the *testele ADF-Augmented Dickey-Fuller* and *PP-Phillips-Perron* unit root tests. At these tests the results regarding the stationarity of the indices are the same, namely the series EUR/RON, USD/RON, JPY/RON, CNY/RON are stationary, in the case in which the observed series has no intercept and no trend, $\Delta y_t = \theta y_{t-1} + \sum_{i=1}^p \phi_i \Delta y_{t-1} + \varepsilon_t$, with a probability of 95%, so $d=0$.

The other series, GBP/RON și RUB/RON, are nonstationary, at first differentiation they become stationary, so they are $I(1)$, and $d=1$.

Table 1. Forecast results obtained by applying the Single, Double and Holt –Winters Simple Exponential Smoothing Techniques

| | <i>A. MNES</i> | | | <i>B. MNED</i> | | | <i>C. MHWES</i> | | | |
|-----------------|----------------|------------|------------|----------------|------------|------------|-----------------|---------|------------|------------|
| | α | <i>SPE</i> | <i>RME</i> | α | <i>SPE</i> | <i>RME</i> | α | β | <i>SPE</i> | <i>RME</i> |
| EUR/RON | 0,999 | 0,009 | 0,010 | 0,412 | 0,010 | 0,011 | 0,930 | 0,000 | 0,008 | 0,010 |
| USD/ RON | 0,999 | 0,037 | 0,021 | 0,554 | 0,041 | 0,023 | 1,000 | 0,000 | 0,032 | 0,020 |
| GBP/RON | 0,999 | 0,065 | 0,028 | 0,508 | 0,079 | 0,031 | 1,000 | 0,020 | 0,060 | 0,027 |
| JPY/ RON | 0,772 | 0,000 | 0,000 | 0,382 | 0,000 | 0,000 | 0,720 | 0,000 | 0,000 | 0,000 |
| CNY/RON | 0,983 | 0,001 | 0,003 | 0,528 | 0,001 | 0,003 | 0,960 | 0,000 | 0,001 | 0,003 |
| RUB/RON | 0,999 | 0,000 | 0,001 | 0,522 | 0,000 | 0,001 | 1,000 | 0,020 | 0,000 | 0,001 |

(Source: Author`s calculations)

Table 2. Forecast results obtained by applying Holt –Winters Multiplicative and Additive Exponential Smoothing Techniques

| | | | | <i>D. MHWEM</i> | | <i>E. MHWEA</i> | |
|-----------------|----------|---------|----------|-----------------|------------|-----------------|------------|
| | α | β | γ | <i>SPE</i> | <i>RME</i> | <i>SPE</i> | <i>RME</i> |
| EUR/RON | 0,920 | 0,000 | 0,000 | 0,008 | 0,010 | 0,001 | 0,010 |
| USD/ RON | 1,000 | 0,000 | 0,000 | 0,033 | 0,020 | 0,033 | 0,020 |
| GBP/RON | 1,000 | 0,000 | 0,000 | 0,061 | 0,028 | 0,061 | 0,028 |
| JPY/ RON | 0,740 | 0,000 | 0,000 | 0,000 | 0,000 | 0,000 | 0,000 |
| CNY/RON | 0,980 | 0,000 | 0,000 | 0,001 | 0,003 | 0,001 | 0,003 |
| RUB/RON | 1,000 | 0,000 | 0,000 | 0,000 | 0,001 | 0,000 | 0,001 |

(Source: Author`s calculations)

To determine the autoregressive order, namely the moving average order the PAC- partial autocorrelation coefficients and the AC- autocorrelation coefficients were evaluated. To validate the obtained models the significance of the coefficients was tested, all the parameters of the model are significant with a probability of 95%. The second set of tests was applied to the residuals, to establish if they follow a white noise process. So the autocorrelation of the residuals was tested by the Q Statistics, at Q(10), Q(15) and Q(30), all indicating that the first 30 correlations between the residual are insignificant. To investigate the normality of the residuals the Jarque-Bera test was applied, which indicates that they are normally distributed. The final results of ARIMA models (p, d, q) can be found in (Table 3) while the forecast coefficients indicators are in (Table 4.).

Table 3. Forecast results obtained by applying the ARIMA(p, d, q) model

| | ARIMA(p,d,q) | AIC | BIC | R ² | Q(10) Statistics | Q(15) Statistics | Q(30) Statistics) | Jarque-Bera |
|-----------------|--------------|-------------|-------------|----------------|-------------------|-------------------|-------------------|------------------|
| EUR/ RON | ARIMA(1,0,0) | -6,331 | -6,300 | 0,976 | 11,331 (0,254) | 14,162 (0,438) | 25,108 (0,673) | 0,649 (0,723) |
| USD/ RON | ARIMA(1,0,0) | -4,942 | -4,911 | 0,977 | 5,404 (0,798) | 9,546 (0,795) | 17,898 (0,946) | 0,094 (0,954) |
| GBP/ RON | ARMA(1,1,1) | -4,377 | -4,287 | 0,082 | 0,686 (0,877) | 10,204 (0,667) | 17,962 (0,927) | 2,269 (0,322) |
| JPY/ RON | ARMA(4,0,6) | - 13,056 | - 12,933 | 0,959 | 4,265 (0,641) | 5,040 (0,929) | 9,631 (0,999) | 3,729 (0,155) |
| CNY/ RON | ARMA(1,0,0) | -8,852 | -8,822 | 0,977 | 4,885 (0,844) | 8,481 (0,863) | 15,821 (0,977) | 1,749 (0,417) |
| RUB/ RON | ARMA(1,1,3) | - 12,137 | - 12,046 | 0,052 | 8,288 (0,308) | 10,640 (0,560) | 28,774 (0,372) | 2,022 (0,364) |

(Source: Author's calculations)

Table 4. Forecast evaluation coefficients for the ARIMA(p, d, q) model

| | RME | MAE | DM | DV | DCOV | CT |
|-----------------|-------|-------|-------|-------|-------|-------|
| EUR/ RON | 0,034 | 0,027 | 0,500 | 0,119 | 0,380 | 0,004 |
| USD/ RON | 0,054 | 0,042 | 0,526 | 0,117 | 0,358 | 0,009 |
| GBP/ RON | 0,103 | 0,088 | 0,677 | 0,024 | 0,298 | 0,011 |
| JPY/ RON | 0,001 | 0,001 | 0,265 | 0,036 | 0,699 | 0,009 |
| CNY/ RON | 0,007 | 0,006 | 0,441 | 0,151 | 0,408 | 0,008 |
| RUB/ RON | 0,002 | 0,002 | 0,021 | 0,978 | 0,000 | 0,011 |

(Source: Author's calculations)

V. Conclusions

All the results indicate the appreciation of the Romanian Leu against the other currencies. In the case of the first five forecast techniques the results are similar, from the point of view of the forecast coefficients, which points out that the optimal models were found. The exponential smoothing techniques in some cases outperform the ARIMA models, because of the speed with which they adapt to the smallest changes to the market conditions. In addition, the ARIMA models present some difficulties in estimating and validating the model, are more effective in rendering the medium-term trend, in our case 4 months. So these models show the changes in trend, while the forecasting models based on exponential smoothing techniques are an effective tool for those interested in the evolution of the exchange rate.

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MEASURES AND INSTRUMENTS USED AS A RESPONSE TO CRISES IN EUROPEAN UNION – AN OVERVIEW

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During latest times, financial crises have been a common occurrence in emerging market (and transition) countries with negative influence for the economies. Financial crises have had negative effects on real output, work force, poverty and political instability. Latest crises (2008) that struck US become international, its consequence being received in European countries too. This paper wants to discuss some intervention measures taken in the European Union Area and some important funds used as tools for crises fighting. The European Economic Recovery Plan and EU funding mechanisms (The European Social Fund (ESF) and The European Globalization Adjustment Fund (EGF)) are taken into discussion.

Key words: crises prevention instruments , financial system, The European Economic Recovery Plan and EU funding mechanisms (The European Social Fund (ESF) and The European Globalization Adjustment Fund (EGF))

JEL classification: G10, G20

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Actual crises (started in summer 2007) is considered to be without precedent in post-war economies related to its size and extend, but also has many common features with recessions in the past. The crises was headed, in an international approach, by a rapid credit growth, availability of liquidity at a low price, low risk premiums, strong leveraging, development of bubbles in real estate sector (US subprime market). In Romania, the crises was preceded by easy credit access (so called “creditul cu buletinul”), rising prices in real estate sector explained by trouble-free admission to credit, growth in imports and consumption, growing wedges (in some sectors). These factors contribute to vulnerable financial institutions that jeopardize the entire system. Such occurrences happened before (Japan and the Nordic countries in the early 1990s, the Asian crisis in the late-1990s), but this time, the crisis became global.

In its early stages, the crisis manifested with an heightened liquidity shortage among financial institutions, rising the concerns about solvency of financial institutions, and culminating with the default of Lehman Brothers. After that, confidence collapsed, investors considerable liquidate their positions, and stockmarket went into crisis. Related to EU economy, this downturn was compared to facts happened during the Great Depression of the 30’s.

International background

Crises in statistic data- an overview

The world economy faced during latest period severe stress tests and criticisms of the authorities and civil society around the world, the banks being made responsible for the financial crisis started in 2008. Recently, the Basel Committee on Banking Supervision, the agency to monitor international banking activity, said the world's largest banks have a cash deficit of 1.730 trillion

Euros (2.287 trillion U.S. dollars), a problem are required to solve in the next three years. Also, the 91 largest banks and a capital deficit of 577 billion Euros compared to 7% level that you must meet to enter into class I, a measure of financial stability. Although markets were ready to hear capital deficit, and the reduction of liquidity shock could be more difficult to repair, since the euro area faced market dysfunctions.

For the first time since 1980, world economic growth fell into negative trend (-0.6%), with the euro area economy declining 4.1 %. Trade has been adversely affected, dropping more than 20% at global level and 16% at European level.. It is estimated that the performance of EU Member States will be among the weakest, with a growth of 1 % against 4.6%, on average, at world level. Government stimulus was significant in 2009: average fiscal deficit at EU level reached almost 7% of GDP and public debt as a share in GDP increased by 12 %age points (and an additional rise by around 6 %age points is foreseen for 2010). These developments are not sustainable and therefore call for fiscal consolidation measures in most European economies. The withdrawal of fiscal stimuli may hamper the resumption of economic growth in Romania's main trading partners and could adversely affect demand for Romanian exports in the future. The international financial system received a strong support from monetary and fiscal authorities in 2009. Central banks in many developed economies resorted to extraordinary policy measures to provide liquidity². Monetary policy rates dropped to historical lows (1 % in the case of the single European currency and near 0 % in the case of the US dollar). Given that the standard monetary policy easing measures have been almost exhausted, some central banks switched from the yield-based approach to a quantitative one.

The central banks of those advanced economies saw a significant increase in the size of their balance sheets and in the maturities of their asset holdings. Most major global banks meet minimum capital requirements, but many would be forced to restrict the payment of bonuses and dividends, if the new rules of Basel III (which regulates banking activity) should be applied immediately. That is why, according to the agreement, the requirements will be met by one, over eight years. It is believed that new regulations, much tougher to maintain a capital "healthy" for at least 7% (compared to 4.5% as it was before), will have a modest impact on the overall economy, despite business feared a negative impact on output and unemployment (see below - 1.4. Basel Accords requirements). Basel Committee said that if measures are implemented over a period of eight years, as is planned, would result in a maximum decline of 0.22% of global GDP. In addition, given that Basel III will be introduced between 2013 and 2019, the maximum impact on GDP would not be seen only in nine years. These new regulations could "cut" 3% of economic growth over the next five years in the U.S., Euro zone and Japan could eliminate 10 million jobs.

The debt crisis emerged in the Euro area , where banks are deeply involved. German banks have borrowed amount equivalent to 6% of GDP in Germany to Ireland and another 6.2% to Spain. Thus, over 12% of the GDP of most powerful countries in the European Union is in the hands of two countries with the highest risk. Also, British banks such as Barclays and HSBC should be to recover loans to Ireland, which is equivalent to 9.4 per cent of UK GDP. Amounts equivalent to 5.7% of British GDP is in the form of bank loans in Spain.

Dutch banks appear to be located in the worst case, the amount representing 16.4% of GDP of the country borrowed Spain. Amounts due to banks equivalent are closed to 13% of GDP in Portugal, and 8.9% of GDP in France. Ireland, which just received a loan of around EUR 85 billion from the IMF and the EU. Irish banks have lost a third of deposits due to fears of bankruptcies and, moreover, have borrowed amount equivalent to 14.5% of GDP. American banks are not better from this point of view, borrowing, together, 353 billion dollars to Portugal, Ireland, Greece and Spain. To prevent a real disaster, Ireland is already the fourth nationalization of the banks, Allient Irish Banks (AIB), which offered 3.7 billion Euros. (all data is in

concordance with). The world economy deteriorated significantly in 2009 (down 0.6 %), its first contraction in 30 years, while the EU economy saw a sharper fall (more than 4 %), the important government stimulus packages notwithstanding.

The Romanian economy followed a similar trend as the other countries in Central and Eastern Europe, except Poland. The economic contraction was sharp (7.1%) and the fiscal deficit widened substantially (to 7.4 % of GDP) (according to European economic statistics, Eurostat, 2010, accessed on epp.eurostat.ec.europa.eu/cache/ITY.../KS-GK.../KS-GK-10-001-EN.PDF: 1-7).

Global crises and effects on EU

Some authors suggests that actual crises has three phases:

The first phase – so called “toxic securities” – began in the United States, than spread to Europe through the banking systems in which these high-yield and financial instruments with high-risk accounted for large intermediation.

The second phase of the crisis was marked by the reduction of the economic activity in 2009. To combat the effects of the crises, the ECB adopted a expansion monetary policy, and fiscal stimulus was introduced in almost all EU countries.

The third phase of the crisis, that is typically assigned to EU, began with the “discovery” of the critical state of the public finances in Greece in early 2010 (other countries faced the same situation e.g. Portugal) and the rapid contagion of most of the European sovereign debt market.(Saccomani, 2001: 3)

In response to downturn of the European economy, EU took a series of actions, most important of the measures for crises fighting being as follows:

- the stimulus package – the European Economic Recovery Plan (EERP)
- EU funding mechanisms: The European Social Fund (ESF) and the European Globalization Adjustment Fund (EGF).
- Europe 2020 strategy – New skills for new jobs.

The European Economic Recovery Plan

Objectives, major pillars and key principle of the EERP

As a response to crises, a European Economic Recovery Plan (EERP) was proposed by the Commission in a communication to Parliament in November 2008, with the declared goal of crises fighting. The EERP had two major pillars and one key principle. The first pillar was aiming the boost of economic demand and stimulation of consumer s confidence. The second pillar referred the competitiveness in the long term. The underlying principle was solidarity and social justice. Regarding the first pillar the Commission’ proposal was that Member States and the EU to agree a budgetary impulse amounting 200 billion Euros (1.5% of EU GDP) in order to boost demand. The second pillar proposed “smart” investments for tomorrow needs: investing in energy efficiency to create jobs and save energy; investing in infrastructure and inter-connection; investing in clean technology to boost construction and automobiles sectors for preceding the low-carbon future market. As regards of the challenges the EERP was to open up new finances for SMEs, cut administrative burdens and start investments to modernize infrastructure (Barroso 2008: 3).

The strategic aims of the EERP were: stimulate demand and boost confidence of the consumers; lessen the human cost of economic crises; tune the economy for future needs as Lisbon Strategy for Growth and Jobs statutes by structural reforms, innovation and building knowledge economy; speed up shifts to low carbon economy through new technologies, new green collar jobs, open up new opportunities in fast growing world markets.

For achieving tactical aims the EERP proposed to exploit the synergies and avoid spillover effects, use all available policies, focusing on fiscal policies, structural and financial market reform, also ensuring coherence between strategic and tactical aims.

Actions for supporting real economy in boosting confidence

In order to achieve this goal, taken actions had to combine monetary and credit aspects, budgetary policies and actions in Lisbon strategy for growth and jobs. Even if all actions are important, our paper focuses on budgetary policy actions. Even though some monetary and credit conditions are taken into discussion. In this approach, it become important to emphasize the role of the European Central Bank and other central banks, the role of national banks, and the role of European Investment Bank and the European Bank for Reconstruction and Development.

Role of ECB, central banks, EU banks, EIB and EBRD

In time of crises, it is considered that monetary policy has a crucial role in order to achieve the reduction of inflation over the medium-term. Some actions had been done; ECB along with other EU central banks had been already cut interest rates, being a scope for further reductions. The objective was to the stabilization of markets and contribution to liquidity.

Reliable and well function financial system (primarily the financial sector) is a premise to a healthy, growing economy, so stabilizing the banking system becomes an important step for promoting a sustainable recovery. The Commission proposal refers to major financial support provided by the Member States to the banking sector for encouraging normal lending activities and boost investments. Related to EIB and EBRD, current crises reinforced interventions, EIB was expected to increase its early intervention with 15 billions Euro, to incorporate reserves to reinforce its capital base (60 billions Euro), and EBRD was also supposed to add 500 millions Euro per year to its level of financing (according to *Communication from the Commission to the European Council – A European Recovery Plan*, COM (2008) 800, 2008: 7, presented on the official website of the European Commission).

Proposals related to Budgetary Policy

In time of crises budgetary policy has an even important role in stabilization of the economy and sustain demand. The Commission recommended a co-ordinated policy in the Member States, focused on budgetary stimulation packages. The proposals for 2009 Related to national budgets included an budgetary impulse of 170 billions Euro (1.2% of Union's GDP) in order to achieve the growth of the European economy and lower the unemployment. Growing expenditures and/or reductions of taxation were also proposed. The budgetary stimulation should have taken account of the starting position of the states. For states, particularly those from outside the Euro area, which were facing significant external and internal imbalances, policy had to essentially target the correction of such imbalances.

The budgetary stimulation was designed to respect the following principles:

- should be co-ordinated and used temporarily;
- should use revenue and expenditure as budgetary instruments;
- Stability and Growth Pact should be respected;
- should be accompanied by other structural reforms in order to grow the demand.

Conclusions of the EERP

The European Economic Recovery Plan was designed to impulse Europe's economy. It was proposed for achieving the following targets:

- European Commission and the Council should work together to ensure that national and EU measures would amount 1.5% of GDP;

- make use of impulse measures respecting the flexibility in accordance with the Stability and Growth Pact;
- accelerate the proposed actions outlined in the European Economic Recovery Plan by legislative activity needed for implementing these measures;
- identify any further measures necessary at EU and Member State level to stimulate the recovery;
- work together with international partners to implement global solutions to strengthen global governance and achieve the economic recovery.

EU funding mechanisms

The European Social Fund (ESF)

The Fund is considered to be the EU's largest instrument for intervention on labour markets and for investing in people. The amount of money spending is more than €10 billion per year. The goal is to give support for Member States to reform labour markets and their institutions. The crises intervention through this instruments consisted in €19 billion of the ESF's operations in 2009-2010 targeted to assist Member States for "rapid reaction packages" together with social partners.

Related to Fund management during crises, the rules were simplified, in order to achieve the following goals:

- guidance on good practices to foster implementation;
- interventions for targeted employment services with upskilling and training measures;
- mobility and entrepreneurship incentives,
- support for those in particularly difficult situations, such as young people or older workers.
- training measures focused on the shift towards a green economy.

The European Globalization Adjustment Fund (EGF)

The Fund was created to support workers who lose their jobs in cases where enterprises shut down, factories are relocated to a country outside the EU, or a sector loses many jobs in a regio., The EGF can help workers to find new jobs . The intervention is set to maximum annual amount of €500 million. The EGF provides one-off, time limited individual support through active measures as follows:

- job search assistance, occupational guidance, tailor-made training and retraining, including IT skills and certification of acquired experience, outplacement assistance and entrepreneurship promotion or aid for self-employment;
- special time-limited measures, such as job search allowances, mobility allowances or allowances to individuals participating in lifelong learning and training activities.

In order to fight the crises, some amendments were introduced for simplifying the Fund procedures. Some major changes are presented below:

- the redundancy threshold was lowered to a ceiling of 0.35 % of the annual maximum amount of the EGF, used to finance administrative and technical assistance
- co-financing rate was increased.
- indirect costs of Grants (declared on a flat-rate basis) became eligible for a contribution from the EGF of up to 20 % of the direct costs of an operation.
- period for the eligible actions was extended. (***, EU's Response to the Crisis:2)

Conclusions

The EU recession recovery is proving to be slow and fragile, with lots of disparities through European countries. The growth was modest in some Member States, and other are still in recession. Given the future economic growth foreseen for 2011, unemployment is likely to begin

declining this year. Future challenges for the EU and its Member States are related to the balance and measures to fight crisis, called crises exit strategies. The main objective is to support further economic growth and employment, the minimization of difficult labor market conditions during the recovery and beyond. This increase is needed for labor market policies. Those are aimed at preventing long-term unemployment, helping peoples to maintain or find a job.

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EMPIRICAL STUDY OF THE PROBABILITY OF DEFAULT IN CASE OF ROMANIAN COMPANIES LISTED ON STOCK EXCHANGE

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The importance of estimation of a firm's probability of default increased significantly during the economic and financial crisis for financial institutions, which can be explained by the fact that the share of nonperforming loans increased in this period. The probability of default can be estimated with structural models, which have on base the methodology developed by Merton (1974), methodology used by Moody's Corporation (known as KMV Merton model).

The aim of this study is to estimate the probability of default of companies listed on Bucharest Stock Exchange using this methodology.

This approach was widely used in the literature by many researchers (i.e., Kealhofer and Kurbat (2000), Crosbie and Bohn (2002), Duffie and Wang (2004), Bharath and Shumway (2004, 2008)). In Romania this methodology was empirically tested by Codirlaşu (2007), who estimated using Merton's methodology the probability of default of companies listed on the Bucharest Stock Exchange, respectively by Bobircă et al. (2008), where the probabilities of default were estimated in case of 42 companies listed on the Bucharest Stock Exchange for 2000-2008 time period.

In this paper we used Merton's model, which assumes that a company defaults if the value of its assets is less than the promised debt repayment at time T . The process of estimating the probability of default starts from the following firm specific variables: the market value of the firm's assets, the share prices, the value of the liabilities and the risk-free rate. The analyzed period is 2003-2010, containing the economic and financial crisis period, too. Analyzing the financial statements of the companies listed on the Bucharest Stock Exchange, we determined the input parameters of the model and calculated the quarterly probabilities of default of each analyzed company. According to our results the probabilities of default have a reduced value in the majority of the cases.

Keywords: Merton model, probability of default, credit risk, structural models, companies listed on the stock exchange.

JEL codes: G12, G17, G32, G33

I. Introduction

The importance of estimation of a firm's probability of default increased significantly during the economic and financial crisis for financial institutions, which can be explained by the fact that the share of nonperforming loans increased in this period. Nowadays, the question for the credit institutions and investors is not about to use statistic forecasting methods to estimate the default risk or not, it's rather about which method should be chosen. The purpose of this paper is to

estimate the probability of default in case of companies listed on the Bucharest Stock Exchange by using the Merton model, which is often used in the literature. This method can determine the probability that in subsequent period company will go bankrupt or not, based on the financial statements of each company. The Merton model prices the companies' assets and liabilities according to the theory of options. According to this model, a company goes bankrupt when the value of its liabilities exceeds the market value of its assets. The indicators used in the model are the market value of the assets, the share prices, the value of the liabilities and the risk-free rate. The investigated period is 2003-2010.

II. Literature review

The methodology developed by Merton was widely used in the literature by many researchers (for example Kealhofer and Kurbat (2000), Crosbie and Bohn (2002), Duffie and Wang (2004), Bharath and Shumway (2004, 2008)).

Duffie and Wang (2004) showed that the KMV Merton model can be used for the estimation of probability of default having a good predictive power. Tudela and Young (2003) investigated the probability of default (PD) of the companies from United Kingdom by using the Merton model. After the estimation of the probabilities of default the companies were divided into groups of defaulting and non-defaulting companies. An estimation of probability of default for the group of non-default companies was also made, with the purpose of controlling. To evaluate the results of the estimation made by the Merton model in relation with the companies' accounting information Probit-regression was used.

Erken (2008) studied that the Merton model is valid for the Dutch companies. He examined the KPN Company, which is the biggest Dutch company. The year 2000 was very instable for the firm, this way the examined period is from January 1st 2000 till December 31st 2000. The purpose is to show how this unfortunate year is reflected in the Merton model. The variables as financial information used in the model are the value of the firm namely the market value of the assets, the liabilities from the balance sheet, the risk free rate. Three steps were necessary to determine the probability of default: the estimation of the value of assets and volatility of assets, which was made by the Black-Scholes model, the calculation of the distance to default and the estimation of the probability default. Based on the case study and empirical research of KPN, as the result of the paper was established that the Merton model is appropriate for the estimation of the KPN company's probability of default, because in the examined unfortunate period the PD was 28.7%, while the volatility of assets 49.83%.

In Romania the model was tested empirically by Codirlasu (2007), who examined the probability of default (PD) for companies listed on the Bucharest Stock Exchange using the Merton model and its extension. The author analyzes 7 listed companies, and 5 investment funds between 1998 and 2006. As a conclusion he established that investment funds have the lowest (near zero) probability of default because of their diversified portfolios. From the companies, the SNP Petrom had the lowest PD, while the Oltchim had the highest PD between 2001 and 2004.

Bobircă et al. (2008) examined the probability of default for 42 companies listed on the stock market in the period of 2000 to 2008 by using Merton model. The results of their analysis show that nearly 20% of examined companies have probability of bankruptcy close to zero during the examined period, while the another 20% of companies have default probability of 50%. Between the two extreme values there were only a few companies.

III. Methodology

Merton in 1974 developed a model which prices the credits and liabilities of a company according to the theory of options.

Taking a company which finances the bought of (risky) assets (V) from two sources: the equity (E) granted by the shareholders and issuing a zero coupon bond (the nominal value of it is F , the maturity T and the market value B). The company is exposed to credit risk because of the loan, which means that in the moment T the value of the assets (V_T) is less than the nominal value of the liabilities (F).

The credit risk is present till the probability of default of the company is greater than zero (i.e., $P(V_T < F)$). In conclusion, at moment t_0 , we have that $B_0 < F \cdot e^{-rT}$, namely the yield of bond (y_T) is bigger than the risk free rate (r), furthermore the spread (π), a compensation for the assumption if the risk of the owners of the bond, can be stated as:

$$\pi = y_T - r.$$

If in the market there are no frictions, transaction expenses or expenses that appear if the company defaults, then the market value of the company's asset is equal with the sum of the equity and the value of the loan, that is:

$$V_0 = E_0 + B_0.$$

As a conclusion, the credit risk is the function of the company's financial structure:

- the leverage ratio, $LR = \frac{F \cdot e^{-rT}}{V_0}$;
- the volatility of the asset yield, σ_V ;
- the maturity of liabilities, T .

The basic idea of Merton (1974) is that if at moment T we have that $V_T < F$, then the company defaults and the value of its equity is 0. While if at moment T we have that $V_T > F$, then the firm is able to pay its liabilities and its capital values ($V_T - F$). Thus, at moment T the value of this company's capital is:

$$E_T = \max(V_T - F, 0).$$

Consequently, the value of a company's capital (E_t) can be seen as a call option on the market value of the firm's assets (V_t) and the trading price (F). So, E_t can be written as the following function $E_t = f(V_t, F, \sigma_V, r, T - t)$.

Using Black-Scholes's (1973) option pricing formula we get:

$$E_0 = V_0 \cdot N(d_1) - F \cdot e^{-rT} \cdot N(d_2),$$

where

$$d_1 = \frac{\ln \frac{V_0}{F} + \left(r + \frac{\sigma_V^2}{2} \right) \cdot T}{\sigma_V \cdot \sqrt{T}},$$

$$d_2 = d_1 - \sigma_V \cdot T.$$

The market value of the loan is $V_0 - E_0$.

The probability that a company goes bankrupt is $N(-d_2)$, and for the calculation of this, it is necessary to calculate the V_0 and σ_0 , but they are not directly observed. For companies that are listed on the stock exchange the value of the equity (E_0) can be estimated. Using Ito's lemma the equity volatility can be calculated:

$$\sigma_E \cdot E_0 = N(d_1) \cdot \sigma_V \cdot V_0.$$

Building a two-equation system on these relationships, we can estimate the values of V_0 and σ_0 .

IV. Main results

Our research includes 21 companies listed on the Bucharest Stock Exchange. We selected those companies, which have fulfilled our predefined criteria for liquidity. Under the liquidity criterion a company was analyzed, if the company's the annual number of transactions exceeded the 0.5% threshold for the total annual transactions of listed companies. The following companies were included in our sample:

- Financial intermediaries: SIF1, SIF2, SIF3, SIF4, SIF5, BRK.
- Extractive industry: SNP, DAFR, PTR.
- Processing industry: AMO, AZO, OLT, ATB, BIO, ALR, EPT, CMP, - TBM, RRC.
- Heat and electric energy: TEL.
- Transport and storage: OIL.

We collected the data of these companies for the period of 2003. IV. – 2010. III. The input data are the followings:

- accounting value of the assets of the company;
- accounting value of the company's short / long-term obligations;
- market value of the company's capital, which is calculated as the product of the value of issued shares by the company and the market price of shares;
- volatility of the annual stock price (as a proxy variable for the market value of equity), which is based on the calculation of the $\sigma \cdot \sqrt{t}$ formula, where the daily volatility is σ and the number of days(250) is t ;
- average of the monetary market rate as a proxy variable for risk-free rate.

In order to determine the probability of default, it is necessary for a hypothesis regarding the volatility of the assets of the company. We assumed that this value ranks between 20% and 40%. The model was estimated using the Matlab program.

Appendix 1 summarizes the results of Merton model, the probabilities of default of the 6 companies operating as financial intermediaries. It can be seen that the values are very low, almost 0 %. Higher values may be noticed only in the case of the BRK Company in the first three quarters of 2005, but it can be seen that the following periods have more reduced probabilities of the default.

In *Appendix 2* we summarized the results of the Merton model estimation of 5 companies, which carry out their activities in the following 3 areas of activity: extractive industry, heat and electric energy, transport and storage. It can be seen that the values in many cases remains low, which means that it is almost 0% the probability that any of the companies defaults next year. We can observe a few higher values of estimated probabilities, which mean that the probability for a company to become insolvent in the subsequent period is higher.

The *Appendix 3* contains the results of the Merton model regarding the probabilities of default of some of the companies operating in manufacturing sector. We can observe that the values can vary from a minimum value of 0.00% to a maximum value 95.87%. The high values can also indicate that the share price of the company dropped considerably in the examined period.

V. Conclusions

In this article we analyzed the probability of default of 21 companies listed on the Bucharest Stock Exchange, using the Merton methodology in 2003-2010 time periods. The results show that this methodology can be used for the estimation of probability of default in case of Romanian listed companies. Our results are in accordance with the earlier studies. The estimated probabilities of default are higher in the economic and financial crisis period. As further research can be concern the comparison of the prediction power of the structural models with other

models used for the estimation of the probability of default (such as: discriminant analyses, logit regression, neural networks) in case of Romanian companies.

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VII. Appendices

Appendix 1: Annual probability of default in case of companies with the following stock symbols SIF1, SIF2, SIF3, SIF4, SIF5

| | SIF1 | SIF2 | SIF3 | SIF4 | SIF5 |
|---------|-------|-------|-------|-------|-------|
| 2003 Q1 | 0,00% | 0,00% | 5,31% | 0,00% | 4,23% |
| 2003 Q2 | 0,00% | 0,00% | 3,27% | 0,00% | 3,76% |
| 2003 Q3 | 0,00% | 0,00% | 4,53% | 0,00% | 4,06% |
| 2003 Q4 | 0,00% | 0,00% | 3,27% | 0,00% | 3,15% |
| 2004 Q1 | 0,00% | 0,00% | 2,38% | 0,00% | 0,00% |
| 2004 Q2 | 0,00% | 0,00% | 0,00% | 0,00% | 0,00% |
| 2004 Q3 | 0,00% | 0,00% | 1,07% | 0,00% | 0,00% |
| 2004 Q4 | 0,00% | 0,00% | 0,00% | 0,00% | 0,00% |
| 2005 Q1 | 0,00% | 0,00% | 0,00% | 0,00% | 0,00% |
| 2005 Q2 | 0,00% | 0,00% | 0,00% | 0,00% | 0,00% |
| 2005 Q3 | 0,00% | 0,00% | 0,00% | 0,00% | 0,00% |
| 2005 Q4 | 0,00% | 0,00% | 0,00% | 0,00% | 0,00% |
| 2006 Q1 | 0,00% | 0,00% | 0,00% | 0,00% | 0,00% |
| 2006 Q2 | 0,00% | 0,00% | 0,00% | 0,00% | 8,28% |
| 2006 Q3 | 0,00% | 0,00% | 0,00% | 0,00% | 0,00% |
| 2006 Q4 | 0,00% | 0,00% | 0,00% | 0,00% | 0,00% |
| 2007 Q1 | 0,00% | 0,00% | 0,00% | 0,00% | 0,00% |
| 2007 Q2 | 0,00% | 0,00% | 0,00% | 0,00% | 0,08% |
| 2007 Q3 | 0,00% | 0,00% | 0,00% | 0,00% | 0,00% |
| 2007 Q4 | 0,00% | 0,00% | 0,00% | 0,00% | 0,00% |
| 2008 Q1 | 0,00% | 0,00% | 0,00% | 0,00% | 0,00% |
| 2008 Q2 | 0,00% | 0,00% | 0,00% | 0,00% | 0,00% |
| 2008 Q3 | 0,00% | 0,00% | 0,00% | 0,00% | 0,00% |
| 2008 Q4 | 0,00% | 0,00% | 0,00% | 0,00% | 0,00% |
| 2009 Q1 | 2,06% | 0,00% | 0,00% | 0,00% | 0,00% |
| 2009 Q2 | 0,00% | 0,00% | 1,12% | 0,00% | 1,09% |
| 2009 Q3 | 0,00% | 0,00% | 0,00% | 0,00% | 0,00% |
| 2009 Q4 | 0,00% | 0,00% | 0,00% | 0,00% | 0,00% |
| 2010 Q1 | 0,00% | 0,00% | 0,00% | 0,00% | 0,00% |
| 2010 Q2 | 0,00% | 0,00% | 0,00% | 7,02% | 1,11% |
| 2010 Q3 | 0,00% | 0,00% | 0,00% | 0,00% | 0,00% |

Source: own calculations in Matlab

Appendix 2: Annual probability of default in case of companies with the following stock symbols *SNP, DAFR, PTR, OIL, TEL*

| | SNP | DAFR | PTR | OIL | TEL |
|---------|-------|--------|--------|--------|-------|
| 2004 Q1 | 0,08% | 0,00% | 34,57% | 25,26% | |
| 2004 Q2 | 0,00% | 0,00% | 45,54% | 0,00% | |
| 2004 Q3 | 0,00% | 0,00% | 46,48% | 0,00% | 0,00% |
| 2004 Q4 | 0,00% | 32,27% | 42,49% | 0,00% | 0,00% |
| 2005 Q1 | 0,00% | 0,00% | 33,93% | 0,00% | 0,00% |
| 2005 Q2 | 0,00% | 14,24% | 34,95% | 0,00% | 0,00% |
| 2005 Q3 | 0,00% | 0,00% | 23,25% | 0,00% | 0,00% |
| 2005 Q4 | 0,00% | 9,27% | 28,15% | 0,00% | 0,00% |
| 2006 Q1 | 0,00% | 0,00% | 25,02% | 0,00% | 0,00% |
| 2006 Q2 | 0,00% | 18,45% | 0,00% | 0,00% | 0,00% |
| 2006 Q3 | 0,00% | 0,00% | 0,00% | 0,00% | 0,00% |
| 2006 Q4 | 0,00% | 6,75% | 0,00% | 0,00% | 0,00% |
| 2007 Q1 | 0,00% | 0,00% | 0,00% | 0,00% | 0,00% |
| 2007 Q2 | 0,00% | 7,28% | 0,00% | 0,00% | 0,00% |
| 2007 Q3 | 0,00% | 0,00% | 0,00% | 0,00% | 0,00% |
| 2007 Q4 | 0,00% | 1,11% | 0,00% | 0,00% | 0,00% |
| 2008 Q1 | 0,00% | 1,88% | 0,00% | 0,00% | 0,00% |
| 2008 Q2 | 0,00% | 2,14% | 0,00% | 0,00% | 0,00% |
| 2008 Q3 | 0,00% | 3,86% | 0,00% | 0,00% | 0,00% |
| 2008 Q4 | 0,07% | 18,75% | 0,00% | 12,25% | 0,00% |
| 2009 Q1 | 0,08% | 26,47% | 0,00% | 59,61% | 0,00% |
| 2009 Q2 | 0,05% | 30,30% | 0,00% | 0,00% | 0,00% |
| 2009 Q3 | 0,05% | 5,25% | 0,00% | 0,00% | 0,00% |
| 2009 Q4 | 0,05% | 6,10% | 0,00% | 0,00% | 0,00% |
| 2010 Q1 | 0,00% | 3,89% | 0,00% | 0,00% | 0,00% |
| 2010 Q2 | 0,05% | 5,31% | 0,00% | 0,00% | 0,00% |
| 2010 Q3 | 0,00% | 5,07% | 0,00% | 0,00% | 0,00% |

Source: own calculations in Matlab

Appendix 3: Annual probability of default in case of companies with the following stock symbols AMO, AZO, OLT, ATB, BIO

| | AMO | AZO | OLT | ATB | BIO |
|---------|--------|-------|--------|-------|-------|
| 2003 Q1 | 75,24% | | | | |
| 2003 Q2 | 22,67% | | | | |
| 2003 Q3 | 12,08% | | | | |
| 2003 Q4 | 8,71% | | | | |
| 2004 Q1 | 10,71% | 4,01% | 65,49% | 6,08% | |
| 2004 Q2 | 16,22% | 3,39% | 59,63% | 5,93% | |
| 2004 Q3 | 6,38% | 3,85% | 49,27% | 4,29% | |
| 2004 Q4 | 6,93% | 3,20% | 79,16% | 3,15% | |
| 2005 Q1 | 5,09% | 5,29% | 63,30% | 0,00% | |
| 2005 Q2 | 9,98% | 6,98% | 55,27% | 0,00% | |
| 2005 Q3 | 7,70% | 3,50% | 0,41% | 0,00% | |
| 2005 Q4 | 9,96% | 6,37% | 0,41% | 0,00% | 0,00% |
| 2006 Q1 | 12,34% | 6,31% | 0,38% | 0,00% | 0,00% |
| 2006 Q2 | 16,17% | 6,02% | 0,36% | 0,00% | 0,00% |
| 2006 Q3 | 8,15% | 6,29% | 0,47% | 0,00% | 0,00% |
| 2006 Q4 | 6,58% | 7,53% | 0,46% | 0,00% | 0,00% |
| 2007 Q1 | 8,88% | 6,04% | 0,56% | 0,00% | 0,00% |
| 2007 Q2 | 7,48% | 6,07% | 0,22% | 0,00% | 0,00% |
| 2007 Q3 | 15,60% | 8,07% | 0,17% | 0,00% | 0,00% |
| 2007 Q4 | 83,69% | 5,41% | 56,13% | 0,00% | 0,00% |
| 2008 Q1 | 90,12% | 6,28% | 43,27% | 0,00% | 0,00% |
| 2008 Q2 | 30,14% | 1,64% | 41,27% | 0,00% | 0,00% |
| 2008 Q3 | 89,57% | 2,58% | 38,75% | 0,00% | 0,00% |
| 2008 Q4 | 32,20% | 7,04% | 35,68% | 3,35% | 0,00% |
| 2009 Q1 | 18,92% | 5,65% | 33,27% | 3,04% | 0,00% |
| 2009 Q2 | 31,51% | 4,17% | 30,23% | 2,32% | 0,00% |
| 2009 Q3 | 33,68% | 3,36% | 27,55% | 0,00% | 0,00% |
| 2009 Q4 | 0,00% | 3,76% | 25,16% | 1,99% | 0,00% |
| 2010 Q1 | 0,00% | 3,59% | 45,56% | 2,18% | 0,00% |
| 2010 Q2 | 1,11% | 3,52% | 24,23% | 3,60% | 0,00% |
| 2010 Q3 | 0,00% | 2,28% | 16,26% | 3,19% | 0,00% |

Source: own calculations in Matlab

Appendix 4: Annual probability of default in case of companies with the following stock symbols ALR, EPT, CMP, TBM, RRC

| | ALR | EPT | CMP | TBM | RRC |
|---------|-------|--------|--------|--------|--------|
| 2004 Q1 | 0,00% | 35,51% | 20,70% | 0,00% | |
| 2004 Q2 | 0,00% | 43,44% | 13,00% | 22,65% | |
| 2004 Q3 | 0,00% | 35,26% | 0,00% | 0,49% | |
| 2004 Q4 | 0,13% | 16,62% | 5,35% | 0,00% | |
| 2005 Q1 | 0,61% | 57,61% | 8,01% | 84,22% | 0,59% |
| 2005 Q2 | 0,55% | 18,03% | 8,23% | 95,87% | 0,61% |
| 2005 Q3 | 0,41% | 69,83% | 9,65% | 91,27% | 0,35% |
| 2005 Q4 | 0,00% | 31,25% | 7,33% | 80,61% | 0,30% |
| 2006 Q1 | 0,00% | 15,87% | 5,48% | 74,33% | 0,35% |
| 2006 Q2 | 0,00% | 24,82% | 4,54% | 0,00% | 0,24% |
| 2006 Q3 | 0,00% | 68,63% | 3,64% | 0,00% | 0,24% |
| 2006 Q4 | 0,00% | 75,49% | 4,17% | 0,00% | 0,29% |
| 2007 Q1 | 0,00% | 51,87% | 3,85% | 0,00% | 0,45% |
| 2007 Q2 | 0,08% | 3,03% | 2,74% | 0,00% | 0,29% |
| 2007 Q3 | 3,35% | 4,01% | 1,87% | 0,00% | 0,35% |
| 2007 Q4 | 0,00% | 6,46% | 1,54% | 0,00% | 0,28% |
| 2008 Q1 | 0,03% | 8,01% | 2,46% | 3,46% | 0,30% |
| 2008 Q2 | 0,03% | 49,43% | 2,92% | 4,14% | 0,25% |
| 2008 Q3 | 0,00% | 36,55% | 5,63% | 15,29% | 0,24% |
| 2008 Q4 | 0,60% | 76,48% | 9,16% | 22,02% | 0,41% |
| 2009 Q1 | 0,57% | 17,13% | 16,27% | 19,29% | 0,58% |
| 2009 Q2 | 0,48% | 48,38% | 19,36% | 21,52% | 0,71% |
| 2009 Q3 | 0,32% | 64,03% | 6,90% | 19,68% | 19,84% |
| 2009 Q4 | 0,32% | 64,44% | 9,10% | 26,17% | 11,27% |
| 2010 Q1 | 0,00% | 62,10% | 6,65% | 12,79% | 0,69% |
| 2010 Q2 | 0,37% | 71,89% | 7,96% | 21,96% | 0,51% |
| 2010 Q3 | 0,37% | 68,33% | 6,29% | 23,13% | 0,41% |

Source: own calculations in Matlab

THE IMPLICATIONS OF VARYING EXCHANGE RATES FOR THE INTERNATIONAL TRADE

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The benefit of international trade is a more efficient employment of the productive forces of the world.

(John Stuart Mill)

The exchange rate is a primary factor that influences economy. This instrument is used by some countries in order to improve the lack of balance caused as a result of the financial crisis felt in many countries considered by then infallible. The negative effects of the financial crisis can also be found in the decreased volume of commodities involved in international trade exchanges, as a consequence of modified prices and decreased offer. The globalizing trend leads to a constant expansion of exchanges between countries and to the consolidation of international cooperation. Except that economic interdependence generates an increased risk under the influence of economic, financial, monetary or political factors. The currency risk can generate either a gain or loss during foreign trade operations. The long period of RON depreciation made possible the entry of Romanian products on the international markets due to their prices. Sheltered by the gain generated by the evolution of the exchange rate, most of the exporters were not concerned by the increase of product competitiveness or by avoiding the currency risk. The fact that, for many years, the evolution of the exchange rate generated substantial losses for the exporters shows that risk coverage in Romania is, in most cases, a purely theoretical concept.

Key words: exchange rate, currency, depreciation, appreciation, J Curve.

Jel Clasification: F31, G15

1. The depreciation and its effect on the international trade exchanges

Generally, by depreciation we understand any decrease of the exchange rate on the currency market. Taking this into consideration, a clear differentiation has to be made between two different circumstances:

- one in which the depreciation phenomenon manifests itself unintentionally, involuntarily or, in other words, without acting in an administrative manner towards deliberate depreciation;
- the second situation, where the depreciation phenomenon is a direct consequence of some actions undertaken by the monetary authority itself in this regard, and which is a voluntary, deliberate depreciation by the monetary authority. As regards the first situation, depreciation can be caused by – as a main element – the lack of equilibrium of the balance of payments, meaning that the level of imports frontloads the level of exports as opposed to a previous time, an element that is usually combined with: the weak competitiveness of domestic products on foreign markets and the diminished purchasing power of the domestic currency caused by inflationary phenomena.

However, studies have been made and practice has shown that choosing voluntary currency depreciation can constitute a monetary policy for using the exchange rate in order to balance the country's trade balance. This monetary policy option was based on a scheme of set foreign exchange rates, especially where depreciation could be established through administrative means, but was also applicable in the case of exchange rate schemes with managed floating.

The monetary authority can act deliberately upon the national currency exchange rate by buying foreign currency, so as to determine an increase in the exchange rate compared to other currencies, and thus, a depreciation of the currency. The direct consequence is the stimulation of exports which, according to the new terms, become more attractive and, on the other side, the inhibition of imports which, although there might be demand, are more expensive, and as the importer's profit margins are getting thinner, it is possible that his activity will be performed at the limits of return of profit, thus causing him to give up.

Under these conditions, the impact of deliberate depreciation on international exchange becomes a way of shifting the demand for goods and services from one country to another instead of changing the international demand level. (Rădulescu Magdalena 2005:64):

internally, depreciation will move the demand from imported goods towards the domestic ones; externally, deliberate depreciation of an exporting country's national currency will move the demand of another importing country from the area of domestic goods to the one of imported goods, made by the first country.

In general, it has been noticed that, if a country depreciates its exchange rate, it will then succeed, in fact, in attracting a more significant amount of the international demand to its own products and, accordingly, the domestic production will be stimulated, since under the new conditions, it will have to adapt to a developing level of demand (the export component).

The national currency depreciation (Ghe. M. Voinea 2007: 99) stimulates the exports of that country because the exporters cash a higher amount in national currency and impedes imports, since the importers spend a higher amount in order to pay for the goods obtained on the external market. Also, the currency depreciation gives advantages to the debtor because they are paying their debts in a depreciated currency, and disadvantages the creditors because they collect the debts in a weaker currency.

A country depreciates its currency in order to improve the price competitiveness of the products made by its companies, so as to increase exports, to reduce imports and, therefore, to rebalance the external balance of payments.

The success of depreciation is not guaranteed because its immediate effects are negative. The positive effects are visible only when exports and imports are flexible enough in comparison with the costs, i.e. the volume of exports increases as the prices of exported goods on external markets are falling, and the volume of imports is falling as the prices of imported goods are increasing.

3. The “J curve” and the impact of depreciation

In economic theory, the effect of national currency depreciation is described based on the pattern of the “J curve”. So, the pattern was based on the regime of set rates, but can also be applied to the exchange rate scheme with managed floating. In both cases, a significant amount of foreign currency will be used as backup for the central bank interventions on the currency exchange market. This system is very expensive, but can affect net exports in the desired way by appreciation or depreciation of the national currency.

Paul Krugman and Richard Baldwin introduced the J curve in specialised theory (Krugman Paul, Baldwin Richard 1987:11-56). Their research uses data specific to the European and American economies and shows that a negative monetary shock reduces GDP for almost half a year, generating the currency appreciation for the same period. The trade balance achieves a surplus for one year and a half, followed by a trade deficit.

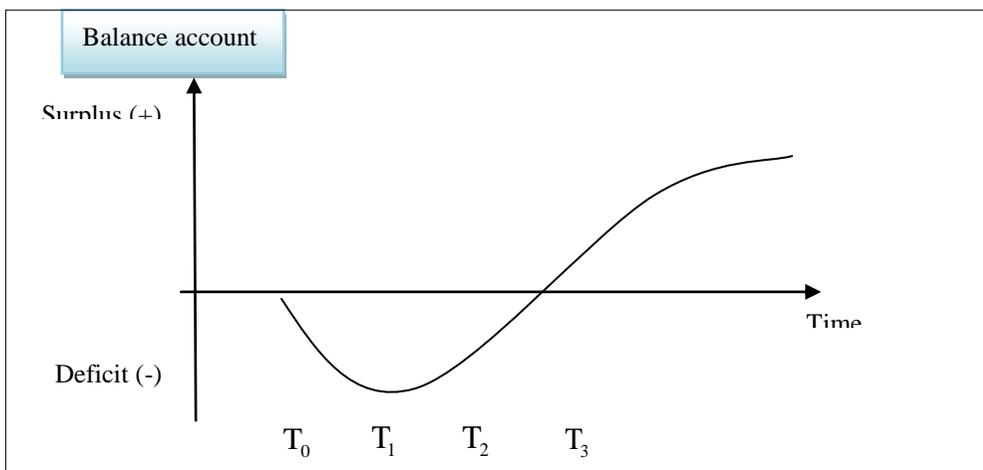
The J curve theory assumes that the positive effects of currency devaluation on the equilibrium of the foreign balance of payments is not visible immediately, but only after a certain a period of time. According to the J curve, if national currency depreciates, then imports rise due to the influence of import prices, even if the quality remains unchanged. In time, imports fall and exports rise, contributing to the equilibrium of the trade balance.

These positive effects can only exist under certain conditions (Ghe. M. Voinea 2007: 99), such as: increasing the competitiveness of goods, expanding trade relations with other partners, developing the production capacity for transport, the transfer of product offer from one market to another.

The pattern of the J curve underlines the fact that a deliberate decision for the depreciation of the national currency can stimulate exports so as to equilibrate the trade balance within certain limits, but the positive effect will occur with some delay.

The impact of national currency depreciation on the external balance of payments, when the positive effect does not occur immediately, is represented graphically as follows:

Chart no. 1: The effects of foreign currency depreciation in a “J curve”



Source: Ghe. M. Voinea - "Relații valutare-financiare internaționale", Ed. Universității "Al. I. Cuza" Iași, p.99

Therefore, *the immediate or the short-time effect of depreciation* (T_0 and T_1 moments) show the worsening of the balance of trade deficit due to the increase of imports as a consequence of the influence of import prices (the prices of foreign commodities in the national currency are higher), although, as regards quantity, there is no change. In this situation, the so-called *price-effect of depreciation* can be noticed.

In the next period (T_2 and T_3 moments), depreciation has positive effect on the trade balance because the country considerably reduces its imports as they are more expensive, and increases the exports, these being cheaper on foreign markets. In this situation, there is the so-called *volume-effect of depreciation* which progressively compensates and surpasses the price effect.

However, the national currency depreciation also has some negative effects:

the growth of inflation even if only through the growth of prices for imported products, which reflects on the prices of domestic products (imported inflation);

foreign currency inflows into the country (through exports) lead to increasing money supply and bank liquidities, which favour the growth of credit, lower rates, thus increasing domestic demand; although depreciation can improve the price competitiveness of products, it does not solve the structural competitiveness problems such as insufficient quality of products.

In order to limit those unfavourable effects, depreciation must be accompanied by programs of internal recovery of the economy which aim at reducing domestic demand, stopping the increase of nominal costs and stimulating exports.

Essentially, it must be underlined that deliberate national currency depreciation policy, which openly stated the aim of stimulating exports, and thus, rebalancing the balance of payments, can have temporarily unfavourable effects, and the efficiency of such a policy on a longer term is tightly connected to the determinant factor – economic competitiveness – in which productivity plays a crucial role.

As the depreciation of the currency does not stimulate the export increase and restricts and discourages imports that maintain or increase, the country finds itself in a “*vicious circle*”. Structural imbalances in the economy and consumptions larger than resources contribute to forming the vicious circle between depreciation and the lack of equilibrium in the balance of payments which extends through inflation.

Professor Anghel Rugină (Anghel Rugină 1992:67) considered that the depreciation of a currency cuts both ways. “On the one side, it appears that it would actually help increase exports and bring in foreign currency which would improve the international balance of payments. But in fact, shortly after, the situation turns around, and a new inflation wave stops the export increase and encourages imports, thus eliminating every advantage and, moreover, it generates budget deficiencies and unemployment”.

4. Currency appreciation and its impact on international economic exchange

The appreciation of a currency is the process of increasing the national currency’s value in comparison with other currencies. The cause of currency appreciation resides in the persistence of surplus in the balance of payments. This leads to the diminishing (cheapening) of prices on imported foreign commodities in the national market and the simultaneous increase of prices for internal commodities intended for export. Thus, the effects of the appreciation are the opposite of those of depreciation, and are in fact the stimulation of imports and discouragement of exports, which lead to a decrease in payment surplus in current operations.

Under the provisions of the IMF statute, the supervision of exchange rate formation and movement as well as reference currencies or the reference according to which the states establish their national currencies still fall under the competences of the International Monetary Fund.

In case of a repreciation of the national currency, a state’s monetary authority principally accepts it for two reasons, and those are:

an underrated currency generates inflationist pressures, on the one side due to the imbalance between the offer and the internal demand which induce an increase in exports (stimulated by the underrating of the national currency), and, on the other side, due to the increase of the internal monetary mass generated by capital inputs.

the country with a price competitiveness which seems too big for the trade partners is subject to international pressures for the repreciation of its national currency.

Contrary to the depreciation of the national currency, *the repreciation of the national currency impedes imports* (foreign products seem cheaper in the national market). The decrease of prices for imported products helps fight inflation.

On the short term, a considerable repreciation of the national currency deteriorates price competitiveness of national products, because these are expensive in the external markets. Thus, national companies are being forced to comply with a structural competitiveness (outside the price), through (Jacques, Généreux 1997:59):

improving the quality of products in order to attract customers less aware of the price;

a new specialisation concerning products for which the demand on the external market is less sensible to the selling price;

technical innovation or innovation in work management and production so that productivity would increase and the production costs would decrease; these will allow, in turn, to increase the profit without increasing prices or to maintain the profit when prices fall.

All three of the aspects mentioned above aim at consolidating the structural competitiveness of national products which would allow an increase of exports and, therefore, even up the external balance of payments or obtaining a surplus for the latter.

As far as the *appreciation of the national currency* is concerned, it limits exports because exporters cash a smaller amount in the national currency, and stimulates imports because importers spend a smaller amount in view of paying for the commodities purchased on the external market. The appreciation of the currency is a disadvantage for the debtors, because they pay their debts in a stronger currency, and an advantage for the lenders.

If the appreciation of the currency determines a moderate restriction of exports and a maintaining or an increase of imports within controllable limits, the balance of payments is kept in equilibrium and the country thus enters into a “*virtuous circle*”.

The increased interdependence of international markets, the rush for resources and the increasing complexity of financial markets determined the emergence of new models and practices in international trade. In this context, Romania’s place and role in the new global economical order has been determined by a series of events (primarily political) with a major impact on economic policies, especially on those related to international trade.

Romania’s accession to the European Union on the 1st of January 2007 involved a succession of economical and political changes, having a direct impact on the foreign trade. This way, Romania had to withdraw itself from any kind of agreement outside the EU from which it was part, and from the application of the common legal framework of the EU for external trade relations, including for the common import trade scheme, this causing changes in the structure of the trade balance for each country (i.e. before 2007, the Republic of Moldova used to export products in Romania without customs duties; starting from 2007, the same customs duties that apply for a third country also apply for the Moldavian goods). Romania must also withdraw its list of commitments agreed with the World Trade Organisation, following the renegotiation, together with all the members of the enlarged EU (27 countries – including Romania and Bulgaria), of new agreements regarding economic and trade cooperation.

Romania’s accession to the EU coincided with a period of economic growth without precedent (in 2008 the GDP grew by 7,1 %), the statistic data for 2008 showing that the share of trade in GDP was higher by 23,3% than that of industrial production (22,9%).

The global financial crisis progressively affected Romania beginning with the fourth trimester of 2008 (when there was a decrease in GDP), causing gloomy predictions concerning economic growth, taking into account a decrease of the real GDP in the second trimester of 2009 by 8,7% over the same period in 2008, according to the data published by the National Institute of Statistic (Press Release no. 168 of 01.09.2009). Data from 2010 reveal a shy growth in the second trimester, but no optimistic outlook regarding the official exit out of the recession.

Finally, in a regional and international context, redefining the trade relations with former important trade partners (the Russian Federation) should be mentioned, as statistic data show a constant worsening of Romania’s trade deficit in relation to Russia, mainly because of energy imports. However, Russia remained a significant trade partner for Romania, being the second in place in 2007 in Romania’s external trade (with countries outside the EU), and the main non-EU exporter in the Romanian market (also due to energy imports).

According to the data published by the Directorate for external trade, the year 2009 marked a very sudden decrease of trade exchanges with countries from the former soviet area, with over 45% in the first seven months, as opposed to the same period in 2008. Among the products exported to the Russian market, a significant amount is represented by automobile components, electrical devices, chemical industry products, glass and glass items.

Romania’s external trade will increase by 15% in 2011 to 91 billion EUR, reaching 105 billion EUR in 2012, with an export rate maintained at 54%. Romania followed the pattern of

Central and Eastern Europe states as far as exports and imports are concerned, a phenomenon which also applies to its trade relationships, concentrated in the area of ten important partners, among which we find Germany, Italy, Poland and Russia.

The value of Romania's external trade has risen to 79 billion EUR in 2010, below the level registered in 2008 of 85 billion EUR, but with a 20% increase from 2009, when it had a total of 65 billion EUR.

The Romanian external trade will continue its positive development, reaching 91 billion EUR in 2011 and 105 billion EUR in 2012. Exports will cover 54% and imports 46%. The main countries in which Romania exported last year were Germany, Italy and France, and these partners are the same for imports.

The driving force of the Romanian external trade was the automobile industry, which covered 29% of the imports and 27% of the exports. The transportation and textile segments also had a positive development, while the chemical products sector registered the greatest deficit, covering 17% of the imports and 10% of the exports.

At a regional level, Romania is on the second place regarding the average annual growth of the external trade between 1999 and 2009, although the market share in Central and Eastern Europe was of 4%.

Conclusions:

Therefore, establishing an optimal level for the foreign exchange which would support exports, but also discourage imports, and allow maintaining equilibrium for the balance of payments is a very difficult undertaking. The choice between the policy of the strong currency as opposed to the weak one depends on a country's economic and social structures and on the degree of technical ability. Unless the production structures are adequate and the capacity of entering new markets consolidated, a strong currency policy cannot be achieved. This will lead to a loss of traditional markets, because business competitiveness will decrease, making companies less adaptable and less profitable.

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LIQUIDITY MANAGEMENT AND CORPORATE RISK

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The consequence of the economic crisis, the access of the external financing resources was narrowed significantly and lenders had become more cautious. This meant that the external source providers analyze more thoroughly the source claimants, and they also need to be more aware of their situation, to submit well founded loan applications to financial institutions. However, analysts should be aware of which are the ratios which should be paid a special attention and which ones are essential to assess a given situation, knowing them they can properly inform the leaders as well as to give an appropriate help to the decision makers. Liquidity measures are designed to provide information about the solvency and financial flexibility of the business enterprise. The traditional liquidity measures has been criticized because it mixes assets and liabilities that are quite different in terms of their maturity time. The problem with the traditional current ratio is that it treats all assets and liabilities as being of equal degree of liquidity. Similar problems were experienced in relation to the cash conversion cycle, which is also an important measure of the company's payment capability. This paper describes how should be modified these indicators in order to the decision makers able to draw correct conclusions.

Keywords liquidity management, liquidity ratios, modified liquidity ratio, modified cash conversion cycle

JEL code: G30, G32

1. Corporate liquidity risk

Volatile global markets, changing regulatory environments, and the improvement of new financial products have made the management of liabilities and of assets in the balance sheet a critical task. Today tools such as simulation, experimentation, and real-time financial reporting help in fulfilling this responsibility, but the whole assets and liabilities management strategy is changing under the weight of a fast-growing amount of debt. (Charafas, 2002)

The problems of last period caused in global finance markets have yielded new evidence for the importance of liquidity risk management as a sound business practice. A phenomenon that started as a narrow-minded financial market innovation regarding to increased riskiness in the subprime segment of real estate mortgage lending has since widened its effects to result in a worldwide liquidity crisis. As the Financial Stability Forum puts it, "The turmoil has brought to light interactions between credit, market liquidity, and funding liquidity risks that many regulated financial institutions did not anticipate." (Preliminary Report to the G7 Finance Ministers and Central Bank Governors, 15 October 2007)

The consequence of the economic crisis, the access of the external financing resources was narrowed significantly and lenders had become more cautious. The aspect is why the ratios presented in the study, the firms should be addressed much more thoroughly than ever before to have a much better understanding their situation, to recognize the sources of internal funding opportunities, and to use more efficiently the available internal resources. However, analysts should be aware of which are the ratios which should be paid a special attention and which ones

are essential to assess a given situation, knowing them they can properly inform the leaders as well as to give an appropriate help to the decision makers.

Liquidity is a complex concept defined by multiple factors, which are used by different ways. *Andrew Crockett (2009)* wrote in his study: „Liquidity is easier to recognize than to define.” Basically, the terms of liquidity means how easy we can generate cash from assets. Cash may be generated either by using creditworthiness to obtain external funds, or by the sale of owned assets in the market. Liquidity is not depending on simply on objective, exogenous factors, but it is crucially influenced by endogenous ones, especially the reactions in contrast to uncertainty and asset value changes.

However, analysts need to know the relationships which are among the ratios to provide accurate information for the leaders of the firm. In each case the information communication must be such as to enhance the company's knowledge of firms' leaders and to contribute to the increasing of organizational knowledge. (*Palepu et al., 2004*)

Liquidity risk management is addressed through strategic and operational considerations. The strategic framework must create the corporate target for liquidity risk. This includes the extent how the corporation wishes to protect from a liquidity crisis. The operational consideration means that certain constraints could be imposed on short-term borrowings or asset mix to ensure the company is adequately protected. The asset/liability management must work closely with the cash management to define the short- and medium-term cash needs, the possible impacts of various liquidity scenarios, and determine actions required to address these issues.

The liquidity ratios, net working capital, cash flow analysis and the cash conversion cycle are the basis for liquidity risk measurement.

2. Working capital management

Many companies still underestimate the importance of working capital management. To ensure the appropriate level of internal resources the company's activity is continuous financing closely related to the working capital management. The other reason is why the working capital management coming into view - which is linked to the previous one - that longer and longer payment periods have emerged in the corporate sales, in point of fact there is a significant increase in commercial lending period, the companies must be able to finance this period. The working capital is essential for companies to determine their short-term financial positions. (*Preve-Sarria-Allende, 2010*). A significant change in working capital provides important information to the company's various stakeholders, and this is especially true for the net working capital. The working capital analysis is one way the company's creditability evaluation, and helps also to better understand the company's normal business cycle.

The term **working capital** (gross working capital) refers to a firm's short-term assets, ie current assets. Managing the firm's working capital is a day-to-day activity that ensures that the firm has sufficient resources to continue its operations. This involves a number of activities related to the firm's receipt and disbursement of cash. (*Ross et al., 2007*)

Net working capital is equal current assets less current liabilities. Thus, net working capital compares the amount of current assets (assets that should convert into cash within the next 12 months) to the current liabilities (debt that will be due within 12 months). (*Keown et al., 2005*)

Working capital management involves the relationship between a firm's short-term assets and its short-term liabilities. The goal of working capital management is to ensure that a firm is able to continue its operations and that it has sufficient ability to satisfy both maturing short-term debt and upcoming operational expenses.

Implementing an effective working capital management system is an excellent way for many companies to improve their earnings. The two main aspects of working capital management are ratio analysis and management of individual components of working capital.

3. Modified liquidity ratios (comprehensive liquidity index)

In finance, this term is used in respect to several assets that can be converted into cash at fair market price without loss. A good liquidity depends on the ability to instantly and easily trade assets. (Chofaras, 2002)

Liquidity analysis is the process of measuring a company's ability to meet its maturing obligations. Sometimes, a firm having difficulty paying off its current obligations is unlikely to be able to convert its accounts receivable or inventory quickly into cash without loss of value. Liquidity measurements are designed to provide information about the paying ability and financial flexibility of the firms. In particular, the firm's creditors are interested in the ability of the company to pay off its short-term obligations until their maturity. Also, these traditional measures fail to consider the cash flow generating ability of the firm's operations.

The traditional liquidity ratios do not sufficiently take into account that how long the assets or liabilities are hold in firm's operations. However, the length of holding or turnover period has a significant impact on how quickly the company can meet the payment obligations, or changes the value of liquidity ratios. To solve this problem will be adjusted certain components of the current assets and current liabilities, and we determine the liquidity ratios using these adjusted values. The balance sheet items used to the liquidity calculation are adjusted to take account, in the case of current assets and current liabilities how much time spend the given assets in the company's operating cycle, what is ignored by traditional liquidity ratios. (Gangadhar, 2003) In case of each adjusted assets and liabilities we have to calculate the correction factors:

$$\text{correction factor} = 1 - \frac{1}{\text{turnover ratio of assets or liabilities}} \quad (1)$$

The appropriate balance sheet item must be multiplied by the calculated factors, and so we get the adjusted liquidity values. The inventories and receivables will be only adjusted amongst the current assets. The bill (trade acceptance) obligations and the long-term debt part reclassified for the current year should not be adjusted amongst the short-term liabilities. After completing the corrections, the adjusted liquidity ratios are calculated using the adjusted values of current assets and current liabilities:

$$\text{adjusted current ratio} = \frac{\text{adjusted current assets}}{\text{adjusted current liabilities}} \quad (2)$$

The company can increase the value of its liquidity ratio to achieve a growth in receivables and inventories, and to reduce the turnover ratio of its current liabilities, ie to improve an efficiency of its asset and resource management. The value of adjusted current ratio can be higher or lower than the traditional current ratio. However, if the company effectively manages its current assets and current liabilities, then the adjusted current ratio value will be higher than the traditional current ratio. (Gangadhar, 2003)

Using the adjusted current assets and current liabilities we can calculate the other liquidity ratios such as quick ratio and cash ratio. However, it should also be noted that these ratios are statics and they do not measure the company's cash flow generating capability.

The calculations were performed for a number of companies, but we present only two extreme examples in details. The most of the cases examined the direction of changes is very different, there are years with an increasing values and there are years with decreasing ones.

We present the changes of an agricultural enterprise's liquidity ratios in Table 1. The Table 1 shows that the values of liquidity ratios have improved in case of this agricultural company every year. There is a significant improvement in the level of cash ratio which is similar for all

companies with relatively high levels of cash and/or short-term securities, because they are not adjusted.

In Table 2 the liquidity ratios were calculated using data of an industrial manufacturing company. In this case, the values of liquidity ratios were decreased in all cases except the value of cash ratio. The value of cash ratios was improved by non-adjusted cash and near-cash assets in this case, but it was to a lesser extent due their lower rate.

3. Modified cash conversion cycle

The liquidity ratios are very closely related to the cash conversion cycle, since its main components are the inventory turnover period (inventory days), the receivable turnover period (receivable days) and the payable turnover period (payable days):

| Title | 2007 | 2008 | 2009 |
|---------------------------------------|------------------|------------------|------------------|
| Inventory turnover ratio | 2,34 | 2,36 | 2,91 |
| Adjusting factor | 0,5732 | 0,5763 | 0,6564 |
| Receivables turnover ratio | 6,95 | 8,39 | 3,97 |
| Adjusting factor | 0,8561 | 0,8809 | 0,7479 |
| Turnover ratio of current liabilities | 2,93 | 1,87 | 2,17 |
| Adjusting factor | 0,6584 | 0,4665 | 0,5393 |
| Current assets | 1 101 777 | 1 328 662 | 1 150 028 |
| <i>Adjusted current assets</i> | <i>749 084</i> | <i>963 321</i> | <i>843 551</i> |
| Current liabilities | 593 861 | 1 005 973 | 777 497 |
| <i>Adjusted current liabilities</i> | <i>391 020</i> | <i>469 308</i> | <i>419 267</i> |
| | | | |
| Current ratio | 1,8553 | 1,3208 | 1,4791 |
| Adjusted current ratio | 1,9157 | 2,0526 | 2,0120 |
| Quick ratio | 0,6058 | 0,5265 | 0,7333 |
| Adjusted quick ratio | 0,8279 | 1,0715 | 1,1042 |
| Cash ratio | 0,1844 | 0,3032 | 0,1863 |
| Adjusted cash ratio | 1,1821 | 1,4283 | 1,0764 |

Table 1.: Changing of liquidity ratios due the adjusting in case of an agricultural enterprise

| Title | 2005 | 2006 | 2007 | 2008 | 2009 |
|---------------------------------------|------------------|------------------|------------------|------------------|------------------|
| Inventory turnover ratio | 131,78 | 69,72 | 70,65 | 32,52 | 9,03 |
| Adjusting factor | 0,9924 | 0,9857 | 0,9858 | 0,9692 | 0,8892 |
| Receivables turnover ratio | 3,57 | 5,09 | 4,61 | 5,83 | 2,99 |
| Adjusting factor | 0,7197 | 0,8037 | 0,7832 | 0,8285 | 0,6660 |
| Turnover ratio of current liabilities | 3,64 | 7,09 | 4,04 | 4,43 | 1,48 |
| Adjusting factor | 0,7255 | 0,8590 | 0,7522 | 0,7745 | 0,3244 |
| Current assets | 1 438 871 | 1 130 508 | 1 295 583 | 1 313 677 | 979 278 |
| <i>Adjusted current assets</i> | <i>1 046 781</i> | <i>923 978</i> | <i>1 038 178</i> | <i>1 125 999</i> | <i>732 959</i> |
| Current liabilities | 1 368 439 | 751 736 | 1 350 702 | 1 394 371 | 1 343 994 |
| <i>Adjusted current liabilities</i> | <i>998 115</i> | <i>653 932</i> | <i>1 026 578</i> | <i>1 089 531</i> | <i>466 294</i> |
| | | | | | |
| Current ratio | 1,0515 | 1,5039 | 0,9592 | 0,9421 | 0,7286 |
| Adjusted current ratio | 0,7649 | 1,2291 | 0,7686 | 0,8075 | 0,5454 |
| Quick ratio | 1,0238 | 1,4021 | 0,9021 | 0,8058 | 0,5646 |
| Adjusted quick ratio | 0,7375 | 1,1288 | 0,7123 | 0,6754 | 0,3995 |
| Cash ratio | 0,0025 | 0,0098 | 0,0269 | 0,0454 | 0,0703 |
| Adjusted cash ratio | 0,2890 | 0,2845 | 0,2175 | 0,1800 | 0,2536 |

Table 2.: Changing of liquidity ratios due the adjusting in case of an industrial manufacturing company

$$\text{cash cycle} = \text{operating cycle} - \text{payable turnover period} \quad (3)$$

$$\text{operating cycle} = \text{inventory turnover period} + \text{receivable turnover period} \quad (4)$$

Based on the above relationships [(3)-(4)] it is also determinable that an increase in adjusted current ratio will reduce the cash conversion cycle to lead to more efficient cash management.

The cash conversion cycle is the number of days negotiated financing is needed to support the operating cycle of a business. The cash conversion cycle then is a measure of how efficiently a company operates. But more importantly, it's a measure of cash creation efficiency in the business. Calculating the cash conversion cycle, sometimes called the asset conversion cycle, tells you a lot more about ability to pay than the current or quick ratio. The cash conversion cycle, while a relatively new metric, is widely used in corporate finance.

It is the weakness of the traditional cash conversion cycle not to be adequately express the conversion period days in the net working capital requirement given in cash. In addition, it does not adequately distinguish between cash and credit sales, which can cause problems, ie. if two companies have the same receivable period, but they have different proportions of credit sales. In the traditional model, both companies will have the same cash conversion cycle, while the company with higher cash sales will be a better placed to fulfill its obligations on time. This is so, because it will have able quickly and safely to collect a greater portion of sales. The traditional cash conversion cycle model does not deal the profitability impact on the liquidity. Because the profit is a surplus resource what covers the liabilities therefore the profitability takes actually as a support factor of corporate liquidity. To determine the net working capital given in cash to be build in the „gross return on sales” and the "credit sales/total sales" ratios in the cash conversion cycle model. The net working capital what was determined in this way is necessary to the firm's operation.

The determination of the modified ratios

$$\text{modified inventory turnover period} = \text{inventory turnover period} * (1 - \text{gross return on sales}) \quad (5)$$

$$\text{modified receivable turnover period} = \text{receivable turnover period} * \text{proportion of credit sales} \quad (6)$$

As the gross return on sales is increasing, so is decreasing the operating working capital requirement. The cash flow difference between the beginning and end of the cash conversion cycle is the direct link to the profitability. This means that the more profitable business creates more cash flow from its operations.

We can see in Table 3 that both operating and cash cycle are decreased, for example there was a more than 20% decreasing in 2008. A high scale of change has already altered the position of the company's judgement. The cash conversion cycle was negative in 2008, which means that the firm's payable turnover period is greater than its operating cycle, ie the firm has its suppliers and creditors to finance himself. Whereas the company's short-term loans make up 40 % of current liabilities, therefore the firm was financed by its suppliers.

| Title | 2007 | 2008 | 2009 |
|-------------------------------------|------------|------------|------------|
| Inventory turnover period | 156 | 155 | 125 |
| Receivable turnover period | 53 | 43 | 92 |
| Operating cycle | 209 | 198 | 217 |
| Payable turnover period | 125 | 195 | 168 |
| Cash cycle | 84 | 3 | 49 |
| Gross return on sales | 2,63% | 8,63% | 2,53% |
| Modified inventory turnover period | 152 | 141 | 122 |
| Credit sales ratio | 85% | 78% | 83% |
| Modified receivable turnover period | 45 | 34 | 76 |
| Modified operating cycle | 196 | 175 | 199 |
| Modified cash cycle | 71 | -20 | 31 |

Table 3.: Modified cash conversion cycle of an agricultural company

We can see in Table 4 that the changes are to a lesser extents, however, the table also shows that the cash conversion cycle contains a fairly high negative values in 2009. The negative value of 2009 year can not be sure to derive from the fact that the firm is well able to enforce its interests, but rather it is an indicator of firm's payment problems. In this case the high negative value of the cash conversion cycle shows an increase in debt financing. The credit ratio inside the current liabilities is around 40% in the first year what started to increase in the next years and it was exceed more than 90% in 2009.

| Title | 2005 | 2006 | 2007 | 2008 | 2009 |
|-------------------------------------|--------------|-------------|-------------|-------------|--------------|
| Inventory turnover period | 2,8 | 5,2 | 5,2 | 11,2 | 40,4 |
| Receivable turnover period | 102,3 | 71,6 | 79,1 | 62,6 | 121,9 |
| Operating cycle | 105,1 | 76,9 | 84,3 | 73,8 | 162,3 |
| Payable turnover period | 100,2 | 51,5 | 90,4 | 82,3 | 246,6 |
| Cash cycle | 4,9 | 25,4 | -6,1 | -8,5 | -84,2 |
| Gross return on sales | 6,10% | 5,14% | 4,40% | 8,94% | -0,88% |
| Modified inventory turnover period | 2,6 | 5,0 | 4,9 | 10,2 | 40,8 |
| Credit sales ratio | 100% | 99% | 100% | 100% | 100% |
| Modified receivable turnover period | 102,3 | 70,9 | 79,1 | 62,6 | 121,9 |
| Modified operating cycle | 104,9 | 75,9 | 84,1 | 72,8 | 162,7 |
| Modified cash cycle | 4,7 | 24,4 | -6,4 | -9,5 | -83,9 |

Table 4.: Modified cash conversion cycle of an industrial manufacturing company

4. Conclusions

Working capital management almost always determines the ability of a firm to earn profit. Efficiency with which a firm handles working capital ensures prosperity while neglect would spell danger for the survival of the firm. The managerial decision-making is needed to accurate ratios what describe the current situation of the firm, and they are also suitable for forecasting.

The traditional liquidity ratios, if we do not take into account the turnover periods, under- or overestimate the actual payment capability of the company. Incorrect liquidity values may lead to inappropriate management decisions. A similar situation exists in relation to the cash conversion cycle as well. The cash conversion cycle is the net time interval between the expenditure of cash in paying the liabilities and the receipt of cash from collection of receivables. It is often a more accurate measure of overall liquidity than current ratio. The modified cash conversion cycle also shows that more resources will be used for enterprises non-operational purposes as if we make the calculation with the traditional cash conversion cycle. It is also shown that the increase in "credit sales proportion ratio" results an additional increase in net working capital demand, which is clearly follows from the fact that the ratio represents an increasing debt and sales levels. With the application of the presented ratios we get more opportunity to explore and analyze the financial situation.

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SUB-SECTION: ACCOUNTING

CHALLENGES OF ENVIRONMENTAL ACCOUNTING AND TAXATION IN ROMANIA

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Environmental problems that have arisen all over the world are concerning many controversial aspects that were created due to the advance of industrialization in tandem with scientific and technological development. For solving these problems, in the past 40 years many international and national organizations have adopted a substantial and diverse range of environmental measures aimed to improving the quality of the environment. Our research aims to highlight how Romanian authorities face the problems regarding environment. To accomplish our objective we trace two main directions of the study, firstly we conduct an analytical investigation of green accounting regulations and secondly we describe the environmental fiscal policy at national level and their impact on Romanian companies.

Keywords: environment, green accounting, fiscal policy, regulations

JEL code: M41

1 Introduction

The correlation between accounting regulations and the taxation system is well known and a matter of common knowledge: accounting must reflect tax obligations and, conversely, tax regulations refer to book profit when defining the taxable portion of a company's income and to report the financial statements. Always for accounting there was a problem regarding its conciliation with taxation. The tax principles aim to stimulate or inhibit certain activities. Directive IV of the Economic European Community (EEC) established interaction between the accounting and the fiscal right. This is achieved through fiscal management of the company (Stoian, 2001).

In this context of interdependence, a more profound study of new accounting practices and tax incentives beneficial to the environment is required, and this analysis forms the basis of this article.

2 Brief framework and literature review

Many internal and external users present an increased interest from the environmental performance of organizations, particularly companies in the private sector (e.g. employees). The types and intensity of pressures on the environment varies from country to country and between different economic sectors. Pressures on the environment concerned organizations seeking new ways, creative and efficient in terms of cost, to manage and minimize environmental impact.

Environmental accounting is a concept often used in different contexts:

- evaluation and presentation of financial information about the environment in the context of financial accounting and financial reporting;
- evaluation and use of monetary and physical information about the environment in the context of Environmental Management Accounting;
- estimating the costs and impact of the external environment when reference is made to Full Cost Accounting;

-accounting for stock and flow of natural resources in the context of Natural Resource Accounting;
-aggregation and reporting of accounting information from the organizations in order to draw up national accounts;
-monetary and physical information on the environmental context in diversity of accounting.
Environmental values are beginning to be reflected in business accounting. A lot of papers developed the environmental accounting, as a real challenge of each country regulations (Jao, 2000, Yonkova, 2008, Caraiani et al. 2001, Blidisel et al. 2009). The Romanian literature points out the new tool in environmental management – the Environmental Managerial Accounting, defined as the identification, collection, estimation, analysis, internal reporting, and use of materials and energy flow information, environmental cost information for both conventional and environmental decision-making within an organization (Sendroiu, Roman and Chitu, 2006). Also, another literature emphasizes the integration of the environment in national accounts (Dachin et al., 2005).

4 Research development and methodology

The research is based on the environmental accounting and economic environmental protection methods debated on the European Union regulations.

4.1 Environmental accounting

Environmental accounting is already becoming part of the business strategy of companies with advanced environmental policies, with the objective of promoting transparency and providing the investor with a greater quantity of relevant information. The international literature conducted in European Community stays that it is not yet obligatory to disclose this sort of accounting information in all fields, binding agreements existing only in certain sectors, such as the electrical industry, where all parties are obliged to make provision for environmental risks and the impact of investments relevant to the protection of the environment are recorded in the annual report.

The European Union recommend to encourage business to publish environmental information, many countries making a step forward to approve regulations for recognizing, assessing and making public elements relevant to the environment in annual accounts (e.g. Spain).

4.2 Economic environmental protection measures

Public initiatives on the environment have been created in many different areas across the diverse world of finance, as: environmental taxation, emission permits and green certificates. Apart from their environmental objectives, they are all economic measures.

Starting from the international approach regarding the environmental accounting and economic environmental protection measures, we want to research the implementation of the Romanian environmental regulations both in accounting and in tax field. Therefore, we want to stay the impact and the most important measures taken by Romanian companies in order to divulge the environmental indicators.

The research methodology is based on a qualitative approach, pointing out the most important Romanian regulations and the impact upon companies that are active in the oil gas, pharmacy and minerals industry, as well as ecological education starts made by Romanian companies.

The main research directions are:

1. The relationship between accounting and environmental protection economic measures;
2. The influence of environmental accounting on the amount of corporation tax paid by companies;
3. The importance of environmental taxation in accounting practices and environmental accounting;
4. The importance of other economic measures in accounting;

5. Corporate change brought about by new accounting and tax-based measures of environmental protection;

5. Research findings and discussions

In Romania, the incorporation of an environmental protection policy was a fact of the discussions for Romania's integration in the European Union. The policy of environmental protection was forecast in Chapter 22- Environmental Protection; this document was approved by the Romanian Government on 18.10.2001. Through The Treaty of Romania's Adherence to the European Union there was planned the implementation of a communitarian acquis in the field of environmental protection until the de date of adherence with some exceptions for which there was requested a transition period.

The Environmental Protection Law, modified and completed in 2002, states the way on how the assessment of the environment must be made, the regime of chemical substances and dangerous chemical compounds; the toxic wastes; the pesticides; nuclear activity; etc.

Romania joined the common objective of the European Union on sustainable development, purposing in this respect to achieve goals that will lead to pollution limiting and the effects of climate change on environment, such as a reduction of 8% of greenhouse gas until 2012, compared with 1989, and achieving a progressive reduction of emissions of sulfur dioxide, nitrogen dioxide and volatile compounds.

In the sectors of activity that generates pollution, the transport sector is the most evident. The auto park age (which, as is known in Romania is an average of 13 years) influence the emissions. Therefore, there are adopted the most effective instruments to stimulate the renewal. Considered appropriate to the other Member States (Netherlands, Greece, Hungary, Denmark, Finland, Portugal, etc.), Romania has established a system of charging vehicles during the first registration of its territory, in order to encourage purchases of machines with its latest manufacturing and less polluting.

5.1 The relationship between accounting and environmental protection economic measures

The correlation between accounting regulations and tax rules is well known: the accounts of businesses must reflect tax obligations, and fiscal regulations refer to companies' book profit - with certain modifications - in calculating the amount of corporation tax to be paid. New accounting techniques also respect this parallel relationship.

Environmental accounting is still barely represented in accounting regulations, but International Accounting Standards have already laid down some indirect guidelines which "will have an effect on the payable amount of corporation tax". In Romania, the National Accounting Regulations, adopted through the Ministry of Public Finance Order no. 1752/2005 for the approval of accounting rules in accordance with European directives does not contain any information regarding the reporting of the environmental protection costs. According to the GO no. 25/2008, the ordinance amending and supplementing Government Emergency Ordinance no. 196/2005 on the environmental fund, starting from 1 January 2009 every trade company that distributes plastic bags will have to pay an amount for each distribute bag, even for the free bags. New bag tax that applies only to bags made of non-biodegradable material, will be shown separately on the sale documents and should be declared and paid monthly by traders to the Environment Fund. Moreover, the Ministry of Environment will check how the commercials display in visible places the amount of tax.

The objective of introducing new eco-tax is mainly to discourage the free distribution of bags, which usually leads to waste and environmental pollution, excessive consumers using this type of packaging. Also, several problems related to the assets, the liabilities and the environmental costs are treated in IAS/IFRS and by analogy, could be implemented by Romanian companies.

5.2 The influence of environmental accounting on the amount of corporation tax paid by companies

As in the case in many of European countries, like Romania, the corporation tax calculates the taxable portion of corporation tax by referring to the book profit (as a difference between total income and total expenses, subject to certain alterations arising from temporary and permanent differences. In Romanian regulations the accounting profit is decreased by the non-taxable income and is supplemented by non-deductible expenses (according to the Tax Law no. 571/2003).

The influence on the amount paid by companies in corporation tax permits in Romania, according to the current regulations (Fiscal Code from 2003) the deduction of expenses incurred for the purpose of taxable income, including those regulated by normative acts in force. Through the expenses incurred for the purpose of income are also the expenses for environmental protection and conservation. Also, according to Fiscal Code "Tax payers authorized to conduct business exploitation of natural deposits are required to record in the accounts and deduct provisions for the affected land restoration and to reintegrate them into the economic, forestry or agriculture, to a rate of 1% applied on the difference between income and operating expenses, throughout the duration of the exploitation of natural deposits. For holders of petroleum agreements, conducting oil transactions in perimeters which include marine areas with water depth greater than 100 m, the rate established for the provision of decommissioning probe, demobilization installations of annexes, and to rehabilitate the environment, is of 10% applied on the difference between revenues and expenditures recorded for the petroleum exploitation period."

Furthermore, the development of environmental accounting will enable the genuine useful lifespan of initiatives intended to protect the environment and so that its amortisation can be realised in a manner appropriate to the current conditions, which often do not correspond with the criteria quoted in the "amortisation index chart" that appears in the Romanian tax regulations.

5.3 The importance of environmental taxation in accounting practices and environmental accounting

The importance of environmental taxation in accounting is limited, an example of this is to be found in article 4.6 (g) of the EC Recommendation of 30 May 2001, "the following disclosures should be provided in the notes: [...] government incentives related to environmental protection received or entitled to by the company. The accounting treatment adopted should also be disclosed."

It seems clear that the payment of environmental taxes reveals information of great importance in awareness of the situation in which business finds itself regarding environmental questions (and the further economic implications of this situation). Moreover, in some cases the payment of environmental taxes may be related to the existence of public services whose use reduces environmental damage (circumstances which may be considered on calculation of certain provisions for environmental risks).

At the end of December 2008 in Romania a new legislation applied regarding the environment (GO 1607/December 2008 amending and supplementing the Order of the Minister of Environment and Water Management no. 578/2006 approving the methodology for calculating contributions and taxes due to the environment fund).

5.4 The importance of other economic measures in accounting

Both greenhouse gas emission permits and green certificates that are bought and sold by businesses will be reflected in accounting. On this point it is important to note that these

certificates have a bipolar economic nature. On one side they represent productive contributions in that in both cases they endorse raw materials used in the production processes; in the case of greenhouse gas emission certificates, they endorse the combustion of fossil fuels; in the case of green certificates, they endorse use of energy in such processes, regardless of its source, for the value authorised by the certificate. And what is more, both are commodities negotiable on the secondary market or, what effectively amounts to the same thing, financial assets which can be used to underwrite investments. All in all, both aspects must to be taken into consideration when calculating their effect on business accounting.

The accounting implications of such certificates, when bought by companies with regard to the environmental impact of their actions, is discussed in the aforementioned EC Recommendation of 30, consideration 18, which states, if "they have been acquired for valuable consideration and, in addition, they meet the criteria for recognition as an asset laid down in paragraphs 12 and 13, they must be capitalised and amortised systematically over their expected useful economic lives. If not, they should be charged to the profit and loss account as occurred".

5.5 Corporate change brought about by new accounting and tax-based measures of environmental protection

Environmental accounting is beginning to be used as a key instrument in managing corporate resources as it gives businesses more complete information on the genuine cost of their activities, including as it does in its estimate models of sustainability. A short term ignorance of the environmental consequences of cost cutting measures can get to a longer term faced with the obligation of paying considerable sums of money to repair the resulting environmental damage. Furthermore, would result more responsible management of environmental issues not only in avoiding environmental damage, but also in more efficient management, optimising use of resources, with the resultant savings in costs.

6 Conclusions

Environmental values are starting to be reflected in corporate accounting, creating a new network of relationships developed between environmental accounting and economic measures of environmental protection. Putting together these relationships and external consequences, starting with discussion of the correlation between green accounting and environmental taxation permits to analyse the influence of new economic environmental protection measures - namely emission permits and green certificates - on corporate accounting.

Environmental responsibility, whether required by law, contracts, or self-imposed, should appear on the balance sheet, as recommended by the corresponding regulations. Environmental expenditure should be, according to circumstance, capitalised and amortised within the period of their useful life when certain criteria are met (essentially if they form a permanent part of the company's activities, if they are concerned with the gaining of future profits or reduce environmental damage within their useful life) or written off directly in the profit and loss account. Conversely, according to IAS 41, "biological assets" should be entered into the account at their "fair value", except when this cannot be reliably measured. Profits and losses derived from variations in the fair value of biological assets should be recorded in the corresponding year's results. It is possible that this regulation will affect taxation once if it is adopted into Romanian accounting regulations.

Despite the fact that the corporate environmental expenses increase not only in importance but also in monetary units, several enterprises continue to underestimate and enter environmental costs in accounts as general expenses. However, some companies try to connect environmental costs with products or services but the methods of allocation cost used are inappropriate. When no proper allocation method, is used, the manager of an enterprise do not receive reliable

information with regard to the real costs and profits in order to maintain or change the products and/or processes. But, green accounting still faces a number of problems, such as, the lack of support of information, specialised personnel as well as the absence of proportional international accounting models.

Environmental issues are still very challenging for Romanian regulators and practitioners, also. As we have mentioned above only a few domestic companies have disclosed environmental items through their annual reports and/or on their own websites. The mentioned practices concerning green accounting in our opinion are asking for certain regulations in order to support the sustainable development of domestic companies and allow certain cost-benefit analysis.

The identification and interpretation of environmental problems and risk will continue to challenge the accounting profession. Accounting standard setters are actively evaluating approaches that may improve the reporting of the problems. However, realistically, we can hope that, in the course of time, general principles may be agreed upon and agreements arrived at with regard to cooperation in financial reporting for external users. An international agreement on general principles may facilitate the efficiency of international cooperation, boosting this effective cooperation. The added value of the paper and the authors' contribution is the presentation and the conciliation of the environmental aspects both from accounting and taxation point of view at the European and national level. This aspect it was not studied yet in national and international literature.

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HOW ROMANIAN FINANCIAL AND INTERNAL AUDITORS ACQUIRE ACCOUNTING INFORMATION SYSTEMS KNOWLEDGE AND COMPETENCES?

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Research theme – in this article we investigate how Romanian financial and internal auditors acquire accounting information systems knowledge and competences and how they use this knowledge to improve their activity in order to fulfill their mission as required by the professional standards.

Objectives – our main purpose is to establish through what type of courses Romanian financial and internal auditors acquiring accounting information systems knowledge and competences and how useful these courses are perceived by the auditors.

Prior work – audit professional organizations prescribed that auditors must acquire, maintain and develop their knowledge and competences. Information technology and information systems are considered to be a main knowledge component of professional development programs. The scientific literature indicates that auditors have to enhance their information systems knowledge in order to cope with the increasing complexity of the client's entities accounting information systems. We consider that our article embraces Curtis et al. (2009) call for research on how auditors obtain information systems knowledge.

Methodology – an electronic questionnaire was created and sent to Romanian financial and internal auditors, which were required to indicate the number of accounting information systems course they attended and how the knowledge gained improved their activity.

Results – We concluded that financial auditors acquire accounting information systems knowledge mainly by attending the courses organized by the Chamber of Financial Auditors of Romanian, while internal auditors by attending the course organized by the companies they are working with.

Implications - The results of this study might be used by Romanian professional audit organizations in reconsidering their priorities regarding the accounting information systems knowledge and competence needs of their constituents.

Originality/Contribution – Our study is the first one to investigate how financial and internal auditors acquire accounting information systems knowledge.

Keywords: accounting information systems, auditors, knowledge

JEL Classification: M42

Introduction

Auditors, both financial and internal, have to acquire and develop their skills and competences in order to be able to fulfill their mission in a professional manner as required by their professional organizations. One of the major, and growing, domains of the skill and competence requirements consists of information technology [IT].

In this respect, The International Federation of Accountants (IFAC) issued the International Education Standard (IES) 8 *Competence Requirements for Audit Professionals* which indicates that the knowledge content of the education and development programs should include information technology (IES8, 2010: par.32). Further, the International Education Practice Statement (IEPS) 2 *Information Technology for Professional Accountants* indicates the IT

knowledge and competence requirements in the pre- and post-qualification stages of candidates and of audit professional. The Institute of Internal Auditors (IIA) issued the *Internal Auditor Competency Framework*, a work-in-progress document which indicates the minimum level of knowledge and skills needed by internal auditors in accordance to their position and experience in the audit function. The framework consists of four so called “buckets”, one of which is entitled “Knowledge Areas” and prescribes the level of IT knowledge internal auditors should possess.

Literature review

The issue of what IT skills and competences should an auditor possess have long been debated in the scientific and professional literature. Cutting *et al.* (1971: 76-77) considers that auditors should: understand and analyze the concentration of controls in an electronic environment; understand information systems and understand the use of computer auditing software. The authors also stressed the idea that the knowledge acquired should be differentiated depending on the job requirements and the complexity of tasks. Further, Jancura (1975: 59) extended the knowledge requirements of auditors by considering that they should: have sufficient knowledge of information systems to develop the audit plan. Borthick *et al.* (2006) indicated that “accelerating the acquisition of expertise in auditor’s careers is desirable because of increasing demands for audit efficiency and effectiveness, growing sophistication of accounting systems” Borthick *et al.* (2006: 338). The main result of this article is that there is a correlation between structured training and the competences of auditors.

Brazel (2004) suggest that accounting information systems [AIS] expertise is a separate competence domain from that of general audit experience. Such knowledge may affect audit planning judgments and audit quality (Brazel and Agoglia, 2004). The authors indicated that “auditors with higher AIS expertise assessed inherent and control risk as higher than auditors with lower AIS expertise” (Brazel and Agoglia, 2004: 16).

In complex accounting information systems such as Enterprise Resource Planning [ERP] systems, auditors are faced with a greater challenge than in less complex one. Hunton *et al.* (2004) found that auditors are highly confident in their ability to assess risks in ERP systems and less complex systems and they don’t indicate a greater need to consult IT specialists or computer assurance specialists in complex environment.

For the internal audit profession and function, Kim *et al.* (2009) indicated several intra-organizational and extra-organizational factors which influence technology acceptance and use. Among these factors the authors identified internal and external training is more influential on technology acceptance for internal auditors as they consider that such knowledge would have a beneficial effect on their job (Kim *et al.* 2009, citing Braun and Davis, 2003).

Curtis *et al.* (2009: 79) presents a review of the existing literature examining auditor’s knowledge and training in information systems. The authors covered aspects such as: the environment of information systems in financial reporting and assurance; how financial statements auditors acquire and use information systems knowledge and finally, the interaction between financial statements auditors and information systems auditors. We consider that our article embraces Curtis *et al.* (2009) call for research on how auditors obtain information systems knowledge.

Research questions and methodology

Based on the requirements of the professional standards and the supporting scientific literature, we identified that internal and financial auditors must acquire and develop their information technology and information systems knowledge and competences. Professional organizations require that such knowledge to be acquired by candidate auditors and professional ones to, during development programs. Further, professional auditors are required by their organizations or by the complexity of their client’s information systems to expand their competence and knowledge.

For the purpose of this article we intend to investigate how Romanian financial and internal auditors acquire accounting information systems knowledge by attending courses: held by the professional organizations they adhered to, held by the organizations they work with; or from their own initiative. We consider that these forms of training are the most suitable way in which auditors can acquire accounting information systems knowledge and competences. Based on the aim of this article, stated above, we formulated the following research questions.

RQ1: Through what type of courses are Romanian financial and internal auditors acquiring accounting information systems knowledge and competences?

RQ2: How useful these courses are perceived by Romanian financial and internal auditors?

To answer these questions an electronic questionnaire was created and sent to financial auditors, members of the Chamber of Financial Auditors of Romania, and internal auditors, members of the Association of Internal Auditors of Romania. The questionnaire was sent to 1.288 valid e-mail addresses of financial auditors, receiving 97 valid answers (answer rate: 7,53%). To contact the internal auditors, the representative of the Association of Internal Auditors of Romania sent the questionnaire to 567 members and we received 38 valid answers (answer rate: 6,70%) (Cardoş, 2010). Although the answer rate are relatively low, they still allow us to draw our conclusions regarding the way in which auditors attended accounting information courses and the perceived improvement of their activity after attending these courses.

The questionnaire covered several aspects, amongst which we mention: the educational profile and background of auditors, the perceived importance of the accounting information systems impact on their mission and audit opinion, the perceived importance of several IT-related activities an auditor should perform during an audit mission, the perceived influence of ERP systems on the audit opinion.

For the purpose of this article we present the questions inserted in the questionnaire, based on which we try to answer the stated research questions.

How many courses in auditing information systems have you attended in the last three years?

- (1) Held by the professional organization of which you are a member of;*
- (2) Held by the organization/company you are working with;*
- (3) On your own initiative;*

To what extent do you consider that these courses concurred to the improvement of your activity in the audit mission you were participated in?

- (1) to a very little extent;*
- (2) to a little extent;*
- (3) to some extent;*
- (4) to a great extent*
- (5) to a very great extent*

Results

Because between the aspects covered by these questions there is a strong correlation we will analyze them in correlation and will focus only on the answers regarding the perceived influence of the accounting information systems courses of those respondents who indicated they participated in at least one course.

We begin our analysis by focusing on the answers provided by financial auditors. We present below (Table 1) a cross-tabulation between the extent to which attending accounting information

systems courses improved the auditors' activity. By this we filter the respondents which answered both questions indicated above.

Table 1: Cross-tabulation (attended courses x improved activity) – financial auditors

| Financial auditors | | Valid | | Missing | | Total | |
|--------------------|---|-----------|-------|---------|-------|-------|--------|
| | | No. | % | No. | % | No. | % |
| (1) | Improved activity X courses organized by professional organizations | 61 | 62,9% | 36 | 37,1% | 97 | 100,0% |
| (2) | Improved activity X courses organized by organizations auditors work with | 24 | 24,7% | 73 | 75,3% | 97 | 100,0% |
| (3) | Improved activity X courses attended on own initiative | 19 | 19,6% | 78 | 80,4% | 97 | 100,0% |

(Source: Cardoso, 2010: 184)

From the Table 1 we can conclude that of the 97 respondents only 61 of them (62,9%) attended professional development courses in accounting information systems organized by the Chamber of Financial Auditors of Romanian, 24 respondents (24,7%) attended accounting information systems courses organized by the organizations they are working with and only 19 of them (19,6%) attended such courses on their own initiative. A first conclusion we can draw is that Romanian financial auditors acquire AIS knowledge and competence primarily from the courses organized by the professional organizations they adhered to. This is not surprising as to fulfill their continuous development program requirements they have to attend several courses at their choice. As many auditors chose to attend AIS courses it's a sign that they are aware of the importance of such knowledge in their work.

In Table 2, presented below, we can observe the extent to which the courses attended by financial auditors improved their activity.

Table 2: The extent to which attending AIS courses improved the financial auditors' activity

| Type of courses \ Level of improv. | (1) | | (2) | | (3) | |
|------------------------------------|-----------|---------------|-----------|---------------|-----------|---------------|
| | No. | % | No. | % | No. | % |
| to a very little extent | 1 | 1,64 | 0 | 0,00 | 0 | 0,00 |
| to a little extent | 5 | 8,20 | 0 | 0,00 | 1 | 5,26 |
| to some extent | 19 | 31,15 | 3 | 12,50 | 2 | 10,53 |
| to a great extent | 25 | 40,98 | 14 | 58,33 | 9 | 47,37 |
| to a very great extent | 11 | 18,03 | 7 | 29,17 | 7 | 36,84 |
| TOTAL | 61 | 100,00 | 24 | 100,00 | 19 | 100,00 |

(Source: Cardoso, 2010: 184)

Even though most of the financial auditors attended AIS course organized by the Camber of Financial Auditors of Romania we can observe from Table 2 that they considered the course organized by their organizations or attended on their own initiative to improve to a great or even very great extend their activity during the audit mission they were engaged in. This situation reveals that financial organizations employing financial auditors or financial auditors themselves are more aware of the AIS knowledge needs then the Camber of Financial Auditors of Romania.

We continue our analysis by focusing on the answers provided by internal auditors. We present below (Table 3) a cross-tabulation between the extent to which attending accounting information systems courses improved the auditors' activity. By this we filter the respondents which answered both questions indicated above.

Table 3: Cross-tabulation (attended courses x improved activity) – internal auditors

| Internal Auditors | Valid | | Valid | | Valid | |
|---|-----------|-------|-------|-------|-------|--------|
| | No. | No. | No. | No. | No. | No. |
| (Improved activity X courses organized by professional organizations) | 14 | 36,8% | 24 | 63,2% | 38 | 100,0% |
| (Improved activity X courses organized by organizations auditors work with) | 17 | 44,7% | 21 | 55,3% | 38 | 100,0% |
| (Improved activity X courses attended on own initiative) | 21 | 55,3% | 17 | 44,7% | 38 | 100,0% |

(Source: Cardoso, 2010: 186)

Based on Table 3 we can conclude that Romanian internal auditors acquire their AIS knowledge mainly from courses attended on their own initiative (55,3%). This might be a consequence of the fact that the Association of Internal Auditors of Romania is a relatively new professional organization in the Romanian audit environment and internal auditors had to rely on the course offered by the organization they were working with or on their own initiative.

Further, in Table 4, we present the extent to which the courses attended by internal auditors contributed to the improvement of their activity.

Table 4: The extent to which attending AIS courses improved the internal auditors' activity

| Type of courses Level of improv. | (1) | | (2) | | (3) | |
|-------------------------------------|-----------|--------|-----------|--------|-----------|--------|
| | No. | % | No. | % | No. | % |
| to a very little extent | 0 | 0,00 | 0 | 0,00 | 0 | 0,00 |
| to a little extent | 1 | 7,14 | 0 | 0,00 | 1 | 4,76 |
| to some extent | 2 | 14,29 | 6 | 35,29 | 7 | 33,33 |
| to a great extent | 7 | 50,00 | 7 | 41,18 | 6 | 28,57 |
| to a very great extent | 4 | 28,57 | 4 | 23,53 | 7 | 33,33 |
| TOTAL | 14 | 100,00 | 17 | 100,00 | 21 | 100,00 |

(Source: Cardoso, 2010: 186)

In the case of internal auditors we can observe that they consider the AIS courses organized by their professional organization as improving their activity to a great and even very great extent. This suggests that the Association of Internal Auditors of Romania gives a greater importance to AIS knowledge and competences that an internal auditor should possess. Still, the AIS courses offered by organizations employing internal auditors or the internal auditors themselves influenced to at least some extent the improvement of the auditors' activity during their mission.

Conclusions

Regarding the first research question stated, we conclude that Romanian financial and internal auditors are acquiring AIS knowledge and competences needed to perform their mission in a professional manner in a differentiated way. Financial auditors gain such knowledge by attending AIS courses organized by their professional organizations, while internal auditors by attending such courses on their own initiative.

As for the second research question we have to differentiate again between financial and internal auditors. The first group of audit professionals indicated that the courses organized by the organizations they work with contributed to a great or very great extent to the improvement of their activity, followed by the courses attended on their own initiative. In the case of internal auditors, the courses organized by the professional organizations they are members of, proved to influence to a great or even very great extent the improvement of their activity followed by the courses organized by the organizations they are working with.

A limitation to this study might be posed by the fact that the answer rate to the questionnaire was relatively low and that we included in our study only the internal auditors members of the Association of Internal Auditors of Romania, neglecting the internal auditors adhered to the Central Harmonization Unit for Public Internal Audit.

We consider that the results of this study might be used by Romanian professional audit organizations in reconsidering their priorities regarding the accounting information systems knowledge and competence needs of their constituents.

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Our paper is about the history of accountancy in Romania, in Transylvania. We develop this subject because we consider that is very important to know about the history of your own country, and from our point of view about the history of accounting, which is a very important component of nowadays life. This work paper presents the history of the accountancy through the study of biography. So by describing the work of professor I.N. Evian, who was an important personality for the accounting history in Romania, we want to find historical elements that are not so able to see otherwise. The article wants to highlight the impact that the work of professor Evian had in the history of accounting in Romania. Also, by presenting the work of professor I.N. Evian in the context of the Academy of High Commercial and Industrial Studies from Cluj, we want to prove that this institution was the first form of higher education in Transylvania in the accountancy field.

Key Words: accountancy, personalities, accounting theories

Cod JEL: M41, B10

I. Introduction

The history of accounting is largely the history of civilization (Woolf, 1986). Professor Nicolas Feleaga supports this assertion, stating that, "It is easy to understand that one's negligence to study the past, to know one's history, amputates one's means of developing the country economically, socially or in a field less enviable as accounting". Accounting is a human construct. In the present context, accounting cannot be understood without reference to the key personalities who have contributed to its development. (Parker, 1993) That is why this article aims to present the scientific work of one of the professors of the Academy of High Commercial and Industrial Studies in Cluj-Napoca, considered the first form of higher economic education in Transylvania.

The importance of Professor I.N. Evian's activity in the field of accounting, at the Academy of High Commercial and Industrial Studies in Cluj, supports the affirmation that this institution was the first form of higher education in the field of accounting, and that the work of the Professors of the Accounting Academy (and beyond) are the landmarks for today's accounting. The focusing of attention on the Academy of High Commercial and Industrial Studies in Cluj is due to the historical particularities that this area of Romania experienced thanks to the Habsburg rule, which left its mark on accounting reasoning. The organization of higher education in Romanian, in Transylvania, more specifically in Cluj-Napoca, had innumerable trials and obstacles, but eventually succeeded in establishing a form of higher economic education, which is today the precursor of the largest Faculty of Economic Sciences in Romania.

Early accounting literature in Romania has its origins in the second half of the nineteenth century, in Transylvania. The first book in Romanian was written and published here, and here Professor Evian, from the Academy of High Commercial and Industrial Studies would publish a book considered the root of the accounting literature in Romania. The works written in the nineteenth century and then, in the time of the Academy of High Commercial Studies, in the field of accounting can be regarded as landmarks in the Romanian accounting of today. This paper is a description and a qualitative analysis of Professor Evian's activity. It aims to identify the Professor's concerns at the Academy, in the field of accounting and journalism.

This article is a part of and supports the paper that will discuss the beginning of the Accounting School of Cluj. The article is structured in three parts. The first part presents the methodology used in the approach and writing this paper. The second part is the content of the article, which presents Professor Evian's work, and a brief presentation of his work "Theory of accounts". Finally, we present the conclusions on the theme discussed.

II. Literature review

This work paper it can be placed together with the ones written in the history of accounting. Writings on this subject were written by few other authors from our country: C.G. Demetrescu (1930), Daniela Artemisa Calu (2005), Dana Pop (2005), Adriana Tiron Tudor și Dumitru Mătiș (2010). C.G. Demetrescu (1930) wrote „*The History of the Accountancy*”, a book in which the author presents the development of the accountancy in the world from the very first beginnings till the second half of the 20th century. In his book he included a little part about the development of the accountancy in Romania, too.

Daniela Artemisa Calu and Dana Pop, are two authors that concentrated their work on the history of accounting in Romania. The first author wrote the book „The history and development in the accountancy field in Romania”. In this book she developed the evolution of the Romanian accountancy, referring also to the international context. In her book, the author, presents few elements about the work and the theory developed by professor Evian. Dana Pop, with her PhD thesis, brings new elements in the literature about the Academy of High commercial and Industrial Studies from Cluj and about the activity of the professors that activated here. From the title of the book we notice that it is especially a work in the field of economic history, but we discover that there is a lot of accounting history, too.

Adriana Tiron Tudor and Dumitru Mătiș were interested in the accounting history in Transylvania. For this reason some of the elements presented in their article, could be useful for the writing of this paper. So, the literature which supported the writing of this article was, mostly Romanian, but there were... international authors, like: A. Munslow (2001), MacDonald (1984) or Chua and Poullaos (1993), for the writing of the methodology.

III. Methodology

This paper falls into the category of those that choose to explain the history of accounting in terms of biographical investigations. Such studies propose various decisive factors as determiners accounting personification - social class (MacDonald, 1984), gender (Kirkham and Loft, 1993), political adherence (Willmott, 1986), the relationship with the state (Chua and Poullaos, 1993) and the relation with other professions. (MacDonald, 1984)

In this paper, we have developed a qualitative study of Professor Evian's activity, describing the events as they happened, in order to obtain a better picture of the past. The methodology used is the historiography and study of literature in terms of quality. The qualitative study, as stated by John W. Creswell, quoted by Septimiu Chelcea (2007), "is an approach based on distinct methodological tradition, which analyzes a social or human problem". The aim of our historical work is to

- tell the story of something of the past (Munslow, 2001)
- become aware, assess and judge, and analyze the perspective of others who wrote about the same subject.

In our study, we consulted the latest books and but also older ones, related to the activity of the Professor and that of the Academy of High Commercial and Industrial Studies of Cluj. In these works, we have found paragraphs about the Professor's work. Our contribution is to give more details about the work of Professor I.N. Evian in a single work and to show the connection between this character and the importance of the Accounting School of Cluj.

IV. PROFESSOR EVIAN'S SCIENTIFIC ACTIVITY

IV.1. The contemporaries and the subjects approached by them

As we have already mentioned, the accounting is the result of human actions. Man created it to satisfy various needs; therefore, the human factor is very important for the study of accounting history. Accounting reasoning cannot be otherwise identified, but by studying the works and activities of those who took an interest in this area.

The accounting department was founded at the Academy of High Commercial and Industrial Studies of Cluj. I. Evian was a member of this department, among other professors.

Table 1: The accounting professors from the Academy of High Commercial and Industrial Studies of Cluj

| | |
|---------------------|----------------------|
| Ion Evian | Accounting |
| Dumitru Voina | General accounting |
| Iosif Ioan Gârbacea | General accounting |
| Ioan Tarța | Financial accounting |
| Dumitru Hașiegan | Statistics |
| Octavian Lungu | Accounting |

Personal raport

These professors had a rich activity, analyzing various accounting issues, analyzing various studies of foreign authors or were preoccupied with developing theories, such as Professor Evian. The work of these professors was published in the journal of the Academy, „Observatorul social-economic” [*The Social – Economic Observer*].

A contemporary of Professor Evian and a leading figure, was Professor Dumitru Voina. In 1932, he published the book “Stages in the evolution of accountancy”. This book is very important historically because, based on this book; the author structures the accounting for the first time at an international level, over time. However, this Professor also developed the legal - economic theory. I. Tarta was a contemporary with Evian, and also his student. He prepared his doctoral thesis in 1940, "Industrial Costs and their calculation", under the guidance of Professor Evian, who considered this work as being “*the first Romanian scientific work on industrial costs*”.

Iosif Gârbacea was concerned with the study of foreign influences in the field of accounting, so that he wrote two papers that reflect the Italian influence, and one related to the accounting regulations in Germany ("Italian Influence in Accounting", "German accounting rules") and Dumitru Hașiegan and Octavian Lungu were concerned with the study of double entries and trial balance. Along with these professors from the Academy of High Commercial and Industrial Studies, C.G. Demetrescu, Spiridon Iacobescu și Alexandru Sorescu, I.C. Panțu, V.M. Ioachim, professors at the Academy of Bucharest and Iasi, were contemporaries with Ion Evian. (Pop, D, 2005)

IV. 2. Scientific work and activity

The specialty literature considers Ioan Evian a Luca Paciolo for the Romanian accounting history. He developed a theory that finds its sustainability even today, that is why we considered that it the most representative model of personality of the Academy of High Commercial and Industrial Studies of Cluj. Professor Evian was born in Bucharest, where he attended middle school, high school and college. After graduation, he took his doctorate in Leipzig and became a Ph.D. in economic and financial sciences.

Besides with his duties as Professor, Evian had various executive positions. Thus, before the establishment of the Academy of High Commercial and Industrial Studies in Cluj, he had the following positions (Pop, D., 2005):

Director of the State Fisheries (1914-1920)

General Secretary for Transylvania, at the Industrial Affairs Department at the Ruling Council (1919-1920)

Manager of the General Bank, of Tara Romaneasca, Cluj branch

President of the Chamber of Commerce of Cluj (1920-1921)

As of 1922 to 1943, he was a professor of the Academy of High Commercial and Industrial Studies in Cluj, but continued to have other positions, too:

Member of the Supreme Council of National Economy (1922-1928)

Director of the summer courses of "N. Iorga" People's University in Valenii Mountain

Chairman of the Body of authorized and expert accountants in Romania (1942-1947)

Founder and Chairman of the Accounting Research and Business Economy Institute (1943-1947)

Ion Evian published numerous studies and articles in various periodicals, he wrote courses and published books. Of the courses he wrote for Academy students, we mention:

„Comerț exterior și legislație vamală”, [External commerce and customs legislation] 1924

„Studiul practic al întreprinderilor comerciale și industriale” [Practical study of the commercial and industrial enterprises], 1927

„Economia întreprinderilor” [Economy of enterprises], 1939

Among the books published by John Evian, "Theory of accounts" is his masterpiece. Besides this book, he also wrote, "Double Accounting", Bucharest 1946, "Industrial Accounting", Bucharest, 1947. These books are not his only books, but they are the most representative ones.

"Theory of accounts", was published in Cluj in 1940. Based on this book, I.N. Evian draws a line between the accounting theories and the theories of accounts. According to the author's theories, the accounts represent "the attempt to explain and demonstrate the double formalism, meaning the registration of any accounting transactions twice on opposite sides of the accounts" (Evian, IN, 1940:7), while accounting theories "aim at systematic and main treatment of the entire area of accounting" (Evian, IN, 1940:8). Contemporary with Evian's theory, the patrimony theory was developed by the Sp. Iacobescu and Al. Sorescu. So, Evian's work represents the competing theory to the patrimony theory. Ch Cristea, quoted by D. Calu (2005), believes that, "if we take into consideration the keen spirit and the logic of explaining the economic phenomena, shown in Evian's work on most issues, the denial of accounting as independent science can be made only by the fact that in our country, the main exponent of the economic theory related to *double entry* was blinded by the passion of the controversy with the representatives of the patrimony school".

In his study, Ion Evian started from the German accounting literature, and then he told his own opinion. His theory is purely economic and categorically rejects the scientific nature of accounting, which he thinks to be just a technique for completing the enterprise economy.

In the preparation of his theory, the author starts from the static theory on the balance. Thus, the company's asset is represented by the estate, which, in his view, is made of all elements that help the company to achieve its goals, and that can be measured in money. Evian explains the *debtors* account, represented by receivable rights, not by tangible assets, as "an element of the assets that takes only a temporary form of impalpable wealth". (Calu, DA, 2005:110).

Professor Evian explains the *liability* as "the adjective *liability* describes the capacity of a person or a thing to be non-active, so it means to stay still. In this static situation, we may find the first explanation, adequate to characterize the total capital of the company by classifying it as *liability*." (Calu, DA, 2005:110)

Evian presents the equality of the assets with liabilities by the following formula

Total Assets = Total capital.

The theory developed by Professor Evian was proved wrong (C.G. Demetrescu, Gr. Trâncu), but also supported (D. Voina).

V. Conclusions

The approach of accounting history from the point of view of personalities who distinguished themselves over time in this area is something increasingly common in the literature. Biographical references often help us to capture certain aspects of accounting history that would otherwise be unnoticed. So, to capture that Professor Evian is a leading figure in the accounting history of Romania, and that he represents the School of Accounting of Cluj, we tried to present his scientific work.

Evian's theory is one of the most representative and current theories of Romanian accounting, so that this professor may be considered Luca Paciolo for the accounting history in Romania. Ion Evian is considered a historical personality in accounting. Besides being a professor, he was a practitioner and a representative of the accounting profession in Cluj-Napoca. Besides the presentation Professor Evian's work and activity, our study may continue with the activity of the other professors of the Academy of High Commercial and Industrial Studies in Cluj.

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THE IMPACT OF IFRS ON REPORTING FOR BUSINESS COMBINATIONS: AN IN-DEPTH ANALYSIS USING THE TELECOMMUNICATIONS INDUSTRY

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The mandatory use of IFRS by all publicly listed companies in the European Union created challenges for accounting and reporting of business combinations, goodwill impairment and disclosures for these items. Major issues are allocation of amounts to goodwill and specific intangible assets arising from acquisition. This study presents an in-depth exploration of compliance with IFRS 3 and IAS 36 using content analysis methodology of annual reports of eight European telecommunications that were chose because the industry is well known for significant acquisitions involving intangibles. The results show only partial compliance with little change over the four year period since mandatory IFRS adoption. While results cannot be generalized outside this group, the in-depth analysis yielded important insights for continued research using broader research methods.

Key words: IFRS, business combinations, goodwill, content analysis, annual reports, listed companies

JEL codes: M41, M21, G34

Since the beginning of the corporate form of business organization, companies have found it beneficial to combine operations for several economic and business advantages. A major feature of globalization in recent years has been cross-border expansion and acquisition of subsidiaries in different countries. As such combinations become more complex, financial reporting issues become more complex and become more important for the global macro-economy (e.g. see Márquez-Ramos 2008). As a result, policy makers and standard setters have been active in developing reporting mandates, standards and guidance. One of the most significant events of recent years is the requirement of the European Union (EU) in 2002 to mandate that all companies listed on a public exchange in Europe must follow International Financial Reporting Standards (IFRS) for public financial reporting beginning in 2005. While this mandate is much broader than business combinations, virtually all publicly held companies are consolidated groups that result from business combinations and the mandate applies only for the consolidated group level reports. The European Commission was clearly motivated by a desire for consistency in financial reporting, comparability, and transparency. Article 1 of its Regulation 1606/2002 states: This Regulation has as its objective...to harmonising the financial information presented...in order to ensure a high degree of transparency and comparability of financial statements.

Approximately coinciding with the EU mandate, the IASB adopted IFRS 3 and amended IAS 36 in 2004. IFRS 3 addresses, among other things, the allocation of purchase price on acquisitions especially allocation to previously unrecorded intangible assets and residual amounts to unallocated goodwill. IAS 36 as amended focused on asset impairments, including impairment of unallocated goodwill. IFRS 3 and IAS 36 address many of the inconsistent and contentious issues of financial reporting for business combinations, attempting to provide standardization, accountability and transparency throughout all countries adopting IFRS, including the EU. Business combinations are one of the primary areas addressed by the International Accounting Standards Board (IASB) in IFRS 3 and IAS 36 in which the board seeks to provide significant and reliable information, especially for unallocated goodwill, for which there has been considerable creativity in the past (Forbes, 2007). Surveys of investors indicate the investors believe IFRS 3, especially, has a real impact on how they perceive companies and make their investment decisions because complying with IFRS 3 provides more transparency about companies (PricewaterhouseCoopers, 2006).

Despite discussions both extolling and questioning the virtues of mandatory adoption of IFRS, specifically with respect to business combinations, only recently there have begun to be research studies about whether the mandatory use of IFRS has achieved its purported objectives. The only study with which we are familiar that directly addresses issues of business combinations in Europe is Paananen (2008) who examined information provided about initial recognition of goodwill under IFRS3, although there have been other studies, discussed and cited below, about IFRS adoption in general. This study explores the extent to which European companies are complying with the mandate to report using IFRS with respect to business combinations and how the level of compliance may have changed in the years following the mandate. Thus, this study adds to this small but growing body of research literature with an in-depth examination of financial reporting of business combinations by European companies in the telecommunications industry for four years after mandatory adoption.

Telecommunication companies are used for the study because there have been several significant acquisitions in the industry and telecommunications companies have significant intangible assets that must be considered in allocation of purchase prices. The research method is content analysis in which there is an in depth review and analysis of financial reports for the companies chosen before 2005 and for the period 2005 through 2008. Remaining sections next discuss issues related to financial reporting of business combinations and subsequent impairment testing and present two research questions. Then we present prior research on the issues. Then we present the research methodology. Finally, results are presented followed with a concluding discussion.

1.0. Financial accounting and reporting for business combinations

Accounting and financial reporting issues for business combinations can be categorized in two broad general topic areas, although there are overlaps and any categorization has the risk of being over simplified: First are issues related to measurement and disclosures of items related to the combination itself. These include measurement of identifiable intangibles assets arising from the combination, i.e. intangible assets not previously recorded and unallocated goodwill arising from the acquisition. Second are issues related to measurement and disclosures of asset impairments. While impairment is not limited to business combinations, a major portion of the accounting and reporting issues are related to goodwill.

As a result, we have formulated two research questions to guide this study:

Q1. To what extent has the mandatory adoption of IFRS been followed by telecommunications companies' compliance with measurement and disclosure standards for items directly related with business combinations.

Q2. To what extent has the mandatory adoption of IFRS been followed by telecommunications companies' compliance with measurement and disclosure standards for goodwill impairments. Prior research on these topics has been limited. There have been several studies of IFRS adoption in general, many prior to the mandatory adoption requirement of the EU (e.g. Street, Bryant and Gray 1999; Street and Bryant 2000; Street and Gray 2001 and 2002, Glaum and Street 2003; and Hodgdon et al. 2009) which all indicated a low level of compliance despite statements of the companies and their auditors that statements were in accordance with IFRS. The only study of business combinations in a European setting was that of Paananen (2008) who measured the volume of information of goodwill under IAS 36 for companies in France, Germany, and the United Kingdom and found a low level of compliance. Sevin et al. (2007) and Shalev (2009) examined goodwill disclosures for U.S. companies under U.S. GAAP, finding sporadic and limited compliance with standards. All of these studies were broad-based examining large groups of companies and thus, though, did not examine in depth the issues of individual companies. Despite the interest in individual companies expressed above, there have been no substantial in-depth studies of companies. Therefore, this study takes a first step in the study of individual companies.

1.1. Measurement and reporting issues from business combinations

When businesses combine, many complex accounting and reporting issues arise. Prior to the mandatory adoption of IFRS in 2005, European companies were subject to local country accounting standards which varied widely. One of the primary motivations for the 2002 mandate was to eliminate the inconsistencies of the many different standards that were being used in Europe before 2005. IFRS standards are generally more stringent and in particular require substantially more disclosures than many if not most local European countries' accounting standards (Jermakowicz and Gornik-Tomaszewski 2006). The accounting standards of most individual European countries, especially on the continent of Europe, are based on the interests of many stakeholders while IFRS are motivated primarily by interests of investors. This difference in focus has major impacts on valuation methods as well as a major increase in disclosures (Jermakowicz and Gorkin-Tomaszewski 2006, Ernst & Young 2006). Some European companies voluntarily adopted accounting standards of other countries, notably U.S. GAAP, primarily because they were listed, or sought listing on stock exchanges in the U.S. Street and Bryant (2000) observed when examining IFRS compliance in general, before mandatory adoption that a listing in the U.S. did not seem to affect compliance with IFRS. In our in-depth analysis, we also examine the extent of multiple listings and the impact on compliance with IAS 36 and IFRS 3.

1.1.1. Allocating the cost of a business combination

As business combinations and the environment in which they occur have become more complex, the issue of how to allocate the acquisition cost to various items has taken on greater importance and thereby the interest of standards setters, companies and their auditors. Prior to mandatory adoption of IFRS and issuance of IFRS 3, most if not all accounting standards used by European companies involved some type of an allocation of the acquisition cost to specifically identifiable assets and liabilities of the acquired company; the remainder remained as unallocated goodwill. Assets and liabilities of acquired companies were typically measured at fair value. In some situations, though, the full fair value of acquired assets was not recognized, but instead only the percentage of ownership was applied to the excess of fair value over book value. In some countries, the write-down of assets is viewed as conservative and goodwill along with other assets were written down to lower amounts or written-off. Accounting standards of some countries required reporting of contingent liabilities while others did not. Goodwill has been a major issue in accounting and reporting of business combinations for many years in many

countries (e.g. see Ma and Hopkins, 1988; Johnson and Petrone, 1998; Fontanot, 2003; Gaughan, 2005). There is general recognition that value of a business as a whole is greater than the aggregation of individual assets less liabilities, and this difference is called goodwill in general terminology, although the term “goodwill” was not found in financial reports themselves. Two major issues are the subsequent treatment of unallocated goodwill in following years, discussed shortly, and to what extent other intangible assets must be separately identified in order to leave unallocated goodwill as truly a residual that cannot otherwise be attributed to an asset. Traditionally, little effort was made to separate unallocated goodwill from other intangibles arising from the acquisition that were not previously reported on an acquired company’s financial statements, e.g. brands, customer lists, self-developed patents and the like. Because traditionally all intangible assets including unallocated goodwill were amortized or written off, there was little perceived need to make such a separation. With the adoption of IFRS 3, and a similar standard in the U.S., goodwill would no longer be amortized but instead subject to impairment testing as discussed below.

IFRS 3, paragraph 45, states that intangible assets must be recognized separately from goodwill in business combinations when they meet the definition of intangibles in IAS 38 and their fair values can be measured reliably. This requirement, contrary to much of traditional practice, provides a clear instruction for companies to reduce amounts of unallocated goodwill and increase amounts allocated to previously unrecognized intangible assets. Caldwell (2006) indicates that such increased allocation to specific intangible assets is occurring, although at a glacial pace. Not only is such allocation difficult and tedious, companies have little incentive to make such allocations because, among other reasons, increased amounts allocated to other intangibles lead to lower reported income because such intangibles must be amortized while goodwill is no longer amortized with the adoption of IFRS. (For more discussion see, for example, Jetuah , 2007; Deloitte Touche Thomatsu, 2004; PricewaterhouseCoopers, 2004, and similar professional sources). Traditionally, European companies following local accounting standards had a wide variety of approaches for accounting for unallocated goodwill after a business combination, and in some cases could choose among alternatives. Such provisions are too numerous to present here. (For a comprehensive discussion see Carrara, 2007, pg. 94.) Briefly, the most common treatment was amortization over periods not to exceed five years or 20 years. Write-off of unallocated goodwill against reserves or current year’s income is permitted in some situations and various choices of impairment testing were permitted. IFRS 3 eliminated amortization of goodwill, instead requiring impairment testing (discussed shortly). Thus, IFRS 3 establishes a motivation that might be viewed as contradicting the board’s desired end result to allocate amounts to specifically identifiable intangible assets arising from the acquisition. A requirement to identify as many intangible assets as can be reliably measured would lead to lower future net income as the intangible assets are amortized thus motivates companies to “err” on the side of continuing recognition of as much of the acquisition cost as unallocated goodwill which will no longer be amortized. Therefore, a major element of this study is to examine the portions of acquisition costs allocated to goodwill before and after mandatory adoption of IFRS, and over the subsequent four year period.

1.1.2. Disclosures related to business combinations

Traditionally, European companies were subject to few disclosure requirements and disclosure requirements are not consistent among countries (Jermakowicz and Gornik-Tomaszewski 2006, Ernst & Young 2006). IFRS 3 sought to achieve greater transparency and accountability by imposing extensive disclosure requirements. These are too numerous to list here, but are presented in Appendix 1 along with results of the study. Briefly, they include details about the nature of the transaction, amounts of acquired assets before and after acquisition, description of

determination of goodwill and intangible assets included or recorded separately, profit impacts, and reconciliation of unallocated goodwill to evaluate changes during the year. One of the objectives of this study is an in-depth assessment of the extent of compliance of each company with respect to these disclosure requirements since 2005 and changes over time.

1.1.3. Other issues

Other issues are apparent from the mandatory adoption of IFRS and issue of IFRS 3 that cannot be addressed by this study. For example, the choice of accounting method, purchase or pooling of interests (also called uniting of interests) is now largely irrelevant because IFRS prescribe that all business combinations shall be reported using the purchase method. Identifying whether an activity is indeed a business combination for financial reporting purposes and identifying the acquiring entity also present challenges. We must assume that these issues are adequately resolved, apart from disclosures, because we do not have access to the internal documentation of the company and its auditors. Similarly, measuring the cost of a business combination also presents challenges that we cannot address apart from disclosures because of lack of access. (For more discussion of these issues see, for example, Epstein and Mirza, 2005; Deloitte Touche Tohmatsu, 2004, and similar educational and professional items published by various sources.)

1.2. Impairment testing of goodwill

The requirement for impairment testing has been a part of accounting tradition in most countries for many years, although not always formalized and traditionally often a term other than “impairment” was used. For example, a notion has existed in many countries for some time that assets should not appear on a balance sheet at greater than a recoverable amount, “recoverable amount” defined in various ways. With respect to unallocated goodwill, impairment testing could be triggered by a specific event, or be required annually. Traditionally unallocated goodwill has often been subject to impairment testing even if it was being amortized so that impairment testing and amortization are not alternatives. After considerable discussion and debate, the IASB in IFRS 3 specified impairment testing exclusively, referring to IAS 36 which was amended. IAS 36 applies to assets in addition to goodwill, but the focus of most discussion is on the impact of IAS 36 on impairment testing of unallocated goodwill. (For more discussion of impairment testing see, for example, Carrara, 2008; Carlin, Finch, and Guy, 2007; Wines, Dagwell, and Windsor, 2007; Ernst and Young, 2007; International Accounting Standards Board, 2004; and similar sources.)

1.2.1. Impairment testing based on Cash Generating Units

Traditionally, impairment testing of goodwill was based on the aggregate amount of unallocated goodwill on the balance sheet. One of the most significant elements of IAS 36 is the requirement that companies now must define cash Generating Units (CGUs) within themselves, the smallest identifiable group of assets that generate cash inflows that are largely independent of other groups of assets that generate cash inflows. Unallocated goodwill must be assigned to each CGU and impairments tests conducted for each CGU. While there are guidelines for defining CGUs, management discretion remains. In order to assess goodwill impairment, the companies must determine recoverable amounts from each CGU and compare the recoverable amount with the carrying value of the net assets of the CGU. If the recoverable amount of the CGU is less than the carrying value, any deficiency first reduce unallocated goodwill. Any remaining deficiency reduces other assets. IAS 36 specifies two approaches to determine the recoverable amount of CGUs: First, the fair value less cost to sell is based on a sale of the CGU in an existing market. Second, the value in use reflects the present value of future cash flows. IAS 36 provides specific guidance for both approaches, especially determining cash flows and appropriate discount

factors. (Carrara, 2008; Carlin, Finch, and Guy, 2007; Wines, Dagwell, and Windsor, 2007; Ernst and Young, 2007; International Accounting Standards Board, 2004; and similar sources). The assignment of unallocated goodwill to CGUs and use of CGUs to assess impairment represents a significant departure from almost all accounting traditions and can be expected to represent a significant challenge for first time adopters of IAS 36 beginning in 2005. Therefore we do an in-depth analysis of annual reports to explore companies' identification of CGUs and impairment testing.

1.2.2 Disclosures related to impairment tests

Traditionally, disclosure requirements for asset impairments varied substantially among countries and in general were not extensive (Jermakowicz and Gornik-Tomaszewski 2006, Ernst & Young 2006). The IASB sought to increase transparency and accountability and allow users of financial reports to make independent reflections on the impairment process by requiring a wide range of information be disclosed for each CGU that has a substantial amount of unallocated goodwill. Disclosure requirements of IAS 36 vary depending on which approach is used to measure the recoverable amount; disclosures are more extensive for the value in use approach than for the fair value approach.

As above for disclosures of business combinations, the disclosure requirements are too extensive to list here and are presented in Appendix 1 along with results of the study. In general, the requirements require disclosure of assumptions and approaches used to determine fair values and costs to sell if the fair value approach is used; and assumptions about the amount and duration of cash flows, growth rates, and discount rates if the value in use approach rate is used. As with disclosures about measurements for business combinations, another objective of this study is to assess compliance with disclosure requirements of goodwill impairment tests for each company.

1.3 Compliance and enforcement

It is meaningless to speak about high quality financial reporting and transparency as envisioned by the IASB and the European Commission unless effective and consistent application of IASs and IFRSs is ensured (Whittington 2005, Daske et al. 2008). Positive economic consequences of IFRS adoption can occur only in countries with strict enforcement regimes (Daske et al. 2008). The level of compliance is as important as the standards themselves (Hogdon et al. 2009). Such compliance is viewed as narrowing the information gap between informed and uninformed investors and consequently increasing capital market efficiency (Healy and Pelapau 2001, Ball 2006). IFRS implementation is viewed as the "Achilles heel" of IFRS (Ball 2006) because partial compliance with IFRS may lead to uncertainty about the real economic situation of an entity. In this study we explore enforcement, or lack thereof.

2.0 Method and company selection

This study uses a pattern model of explanation that does not contain general theories in explanations but seeks to observe specific occurrences in the context of the systems in which they occur in order to provide explanations for the occurrences (Ryan, Scapens, and Theobald, 2002). Content analysis methodology is well suited for this type of pattern study because it allows in-depth examination and analysis of specific occurrences in the context of the systems in which they occur, i.e. the extent of proper application of IFRS 3 and IAS 36 in preparation of published annual reports of the eight companies studied.

2.1 Content Analysis

Content analysis involves objective and systematic analysis of communication media, in this study published annual reports, in order to extract data, count observations for further analysis including statistical analyses, and form qualitative assessments. (For more discussion of the content analysis research method see, for example, Carney 1972, Krippendorff 1980, and Steenkamp, 2007.) Content analysis is especially useful for this study because if applied properly it is:

-Systematic and covers all aspects of the issue uniformly throughout the text analyzed.

-Objective because all content is considered alike and impartially collected.

-Manifest because all content is taken at face value without interpretation.

-Informative because it reveals trends and characteristics not otherwise observable

Because of the mass, complexity, and sometimes chaotic nature of the content. Content analysis allows deeper analysis of situations than other methods. In this study we read thoroughly the content of all annual reports of the eight companies for the years 2005 through 2008, 32 annual reports total, in order first to assess for each company, to the extent possible, the compliance with measurement aspects of IFRS 3 and IAS 36. In addition we examined all disclosures in order to determine whether the companies had adequately disclosed all mandatory items required by IFRS 3 and IAS 36. Content analysis allows quantitative analysis of data extracted from the analysis. In this study we examine the level of compliance with IFRS disclosure requirements for both IFRS 3 and IAS 36 using a comprehensive disclosure index. This index includes all disclosure requirements of each standard. This index enables the quantification of the level of compliance with a compliance ratio that takes values from 0 (no compliance) to 1 (full compliance). Specifically, in order to score companies, the so called dichotomous approach is used (Cooke, 1989; Street and Bryant, 2000; Glaum and Street, 2003; Jahangir, Kamran, and Darren 2004; Akhtaruddin, 2005; Hassan et al, 2009) in which if a required item is disclosed, it is scored as 1 and if not disclosed it is scored 0; if an item is not applicable for a company, it is marked as "NA". Then, the level of compliance for each company is calculated as the ratio of the total items disclosed to the total number of applicable disclosure items as follows:

$$LC_{i,t} = \frac{D_{i,t} = \sum_{j=1}^n d_j}{A_{i,t} = \sum_{j=1}^m a_j}$$

Where,

LC_{i,t} = The total Level of Compliance score for firm i in year t $0 \leq L.C. \leq 1$

Di,t = The total number n (0, m) of disclosed items d for firm i in year t

Ai,t = The total number m (3, 58) of applicable disclosure items a for firm i in year t

Following Glaum and Street (2003), the disclosure index is based on a checklist developed by the audit firm Deloitte (2008). In order to ensure the completeness of the index, items are compared with similar checklists of the other three major audit firms and with Ntzanatos (2008). During the period under examination (2005-2008) no amendments to the two standards occurred and no company adopted optionally the amendments of IFRS 3 and IAS 36 before their mandatory adoption on 1 January 2009.

2.2 Company selection

For this study, we selected eight European telecommunications companies. The telecommunications industry was chosen because companies have been active in business

combinations in recent years. In addition, telecommunications companies tend to have relatively large unrecorded intangible assets related to brand, customer lists, licenses, etc. As a result they have been reputed in the media to have paid large amounts to acquire companies in the same industry so that examining goodwill and intangible assets from the combinations allows a focus on the research objective. This group of eight companies is admittedly a convenience sample and generalizations cannot be made outside of this group. Nonetheless, the small sample permits an in-depth analysis that would not be possible otherwise. Moreover, the companies are large enough to be significant on European stock exchanges and thus provide insight into the behaviour of large European companies with respect to IFRS adoption. The companies and some descriptive data are presented in Table 1. The data as of the end of 2005, the first full year of this study is designed to give a view of the size and significance of the company with respect to total assets, equity, revenues, net income, cash flow from operations, and number of employees. The exchanges on which the shares are listed also give some indication of the significance. [Table 1 about here]

3.0 Results of content analysis

In order to assess the two research questions, we first explored annual reports to first examine accounting and reporting treatment for combinations before 2005 and then in each of the subsequent years. After examining the materiality of goodwill, we explored the measurement issues of allocation of purchase prices to goodwill and other intangibles and then explored measurement issues related to goodwill impairments. Afterwards, we examined the disclosures about measurement issues related to both topics to determine if they comply with the requirements of IFRS 3 and IAS 6. As will become apparent, it is not possible to make a clear distinction between measurement and disclosure issues, but we have done so to the extent possible as a means to organize our findings. Finally, we explore issues about stock exchange listings and auditor choice.

3.1 Goodwill as a percentage of total assets: materiality and trends

One of the first issues to be considered in an in-depth analysis is whether the carrying amount of unallocated goodwill on companies' balance sheets is material enough to warrant concern and further in-depth analysis. Among other things, the materiality of goodwill is closely related to the volume of disclosures mandated by IFRS 3 and IAS 36. The issue of materiality is particularly broad and uncertain because there is no objective method of measuring it (Hoogendoorn, 2006). As a consequence, in many cases both Assistant Lecturers and users of financial statements use "rules of thumb" in order to determine whether an item or an event is material or not (Shalev, 2009).

In this study, we first base the materiality of goodwill on IAS 1, Paragraph 29, which specifies that an entity shall present separately items of a dissimilar nature or function unless they are immaterial. Consequently we initially assume that if companies recognize goodwill as a separate line item on their balance sheets or elsewhere in the explanations of financial report items, the amount is material and subject to the disclosure requirements of IFRS 3 and IAS 36. As a further examination of materiality we have considered reported unallocated goodwill as a percentage of total assets for each company for each of the years examined as shown in Table 2. This table shows that goodwill is material by virtually any "rule of thumb", ranging from lows of 12 percent and 14 percent to highs of 51 percent and 58 percent of total assets. For some companies, goodwill is the largest single asset. Moreover, of primary interest for this study, unallocated goodwill as a percentage of total assets is not decreasing, contrary to the objectives of the IFRS 3 that unallocated goodwill should decrease as increasing amounts are allocated to specifically identifiable intangible assets arising from acquisitions. All companies showed an increase in

goodwill as a percentage of total assets from 2005 to 2008 except Vodafone which showed a decrease from 59 percent to 40 percent. Some companies showed very small year-to-year decreases, but an overall increase for the four-year period.

[Table 2 about here]

3.2 Accounting and reporting issues directly related to acquisitions

Research question 1 states:

Q1. To what extent has the mandatory adoption of IFRS been followed by telecommunications companies' compliance with measurement and disclosure standards for items directly related with business combinations.

It relates specifically to amounts allocated to specific intangible assets arising from acquisitions and the remaining unallocated goodwill. IFRS 3 clearly took a position that amounts reported as unallocated goodwill should be limited to items that cannot be identified or measured reliably while items such as brands, trademarks, customer base, etc. should be identified and reported separately. The clear expectation of IFRS 3 is that amounts reported as unallocated goodwill would decrease while amounts allocated to specifically identifiable intangible assets would increase. Therefore, our primary criterion for assessing the compliance with measurement and reporting requirements of IFRS 3 is the relative amounts allocated to specific intangible assets, amounts that remain as unallocated goodwill, and the trend over time.

3.2.1 Business combinations before 2005

Examining the annual reports of the eight companies for various different years before 2005 shows, as expected, a wide variety of practices all of which are generally sketchy and inadequate from which to make assessments and lacked transparency. In general, information presented is limited to the purchase price, the percentage of equity shares acquired, and amount of goodwill. On average 75 percent of the purchase price was remained unallocated goodwill. Only Telenor and France Telecom provided information about purchase price allocation and allocated small amounts to intangible assets that were not previously reported by the acquired company. Vodafone indicated that many of its acquisitions were driven by the aim to acquire trademarks and customer bases of other companies, but the financial statements do not show amounts allocated to such intangible assets. (For more details and illustrations see Carrara 2008.)

3.2.2 Accounting and reporting for business combinations in years beginning in 2005

The examination of annual reports for 2005 onward showed the eight companies began to present more comprehensive information about business combinations than in previous years, yet several significant failures to comply with the intentions and requirements of IFRS 3 are evident. Notably the IASB in IFRS 3 clearly expects companies to allocate more of the amounts of purchase prices to identifiable intangible assets not present on financial statements before combination and thereby reduce amounts allocated to goodwill.

3.2.3 Accounting and reporting for business combinations in 2005

As shown in Figure 1 for acquisitions in 2005, based on aggregated information for all companies there would seem to be some progress in the direction desired by the IASB: on average the amounts of unallocated goodwill at acquisition declined from the average before 2005 of 75 percent, but still remain relatively high at 60 percent. Amounts allocated to specifically intangible assets not previously reported on financial statements are 45 percent of the amounts allocated. Other amounts were allocated to assets existing before acquisition and to liabilities.

[Figure 1 about here]

As shown in Table 3, though, examining each major acquisition in 2005 individually indicates wide variation among companies in amounts allocated to goodwill. A few acquisitions with very low and negative goodwill distort the aggregate average. Amounts of unallocated goodwill by other companies remain high, often almost the entire purchase price. Percentages allocated to specifically identifiable assets remain low with two anomalies of 98 percent and 354 percent of the purchase price, the latter because large amounts were allocated to both liabilities and reduction of other assets, distorting the aggregate average. Some of the companies indicate substantial increases in customers, new market entry, etc., but do not allocate amounts to customer lists, brands, trademarks and the like. Relatively large amounts are identified merely as other intangible assets with no description. Companies give only vague comments such as future profits, synergies and growth to describe what constitutes unallocated goodwill. It is apparent that the reporting of business combinations in 2005, while providing more information than in years before mandatory adoption of IFRS, is not achieving the expectation of the IASB to increase accountability and especially increase transparency.

[Table 3 about here]

3.2.3 Accounting and reporting for business combinations in 2006

Examination of annual reports for 2006 shows, as presented in Figure 2, on average the aggregate amount of purchase prices reported as unallocated goodwill has increased to 63 percent compared to 60 percent in 2005, while the percentage allocated to specifically identifiable intangibles has decreased to 29 percent from 45 percent, the opposite direction expected by the IASB.

[Figure 2 about here]

Looking at individual companies' reporting of acquisitions in 2006, as shown in Table 4, provides additional perspective. One significant anomaly, Telefonica's acquisition of Colombia de Telecomunicaciones with percentages in hundreds of percentage points, is distorting aggregate amounts and Telefonica did not provide explanation for the anomaly. Even among other acquisitions by other companies, there are wide variations in amounts allocated to goodwill from as low as three percent to over 100 percent. Most companies seemed to report percentages of unallocated goodwill consistent with patterns in years before 2005. Amounts allocated to previously unreported intangible assets varied from a low of two percent to a high of 93 percent. Most of the allocations to previously unreported intangible assets, though, were relatively low and did not appear to reflect the objective of IFRS 3 for companies to allocate more of acquisition costs to specific previously unreported intangible assets and less to unallocated goodwill. Elisa, Telenor, and TeliaSonera notably allocated amounts to specific previously unreported intangible assets as required by IFRS 3. France Telecom allocated amounts to trademarks, licenses, and customer base for one acquisition. France Telecom, however, did not show all the allocations of purchase price and did not provide reconciliation of amounts allocated as it had in the previous year; it was not possible to analyze all of the allocations of France Telecom. Deutsche Telekom did not provide full details about its acquisition of Polska Telefonia and we were required to make educated assumptions to complete our analysis. Companies continued to give vague comments to explain unallocated goodwill, i.e. future synergies and profits. In general, there was no apparent increased compliance with measurement aspects of IFRS 3 for these eight companies from 2005 to 2006. A notable step towards accountability and

transparency, though, is Telenor's aggregation of acquisitions that the company states are individually immaterial showing detailed information about the acquisitions in the aggregate.

3.2.4 Accounting and reporting for business combinations in 2007

Examining aggregate amounts for 2007 as shown in Figure 3 shows a continuing pattern of relatively large amounts on average, 68 percent, continuing to be reported as unallocated goodwill. A substantially increasing percentage being allocated to previously unreported identifiable intangible assets, increased to 44 percent in 2007 compared to 29 percent in 2006, suggesting that companies are increasing amounts allocated to other intangibles as expected by IFRS 3.

[Figure 3 about here]

When looking at details about specific acquisitions in 2007 as shown in Table 5, there was a notable absence of very large amounts allocated to specific items compared to the previous two years. It is not possible to know whether this absence of large anomalies results from a difference in the nature of the transactions or from improved financial reporting of the companies. Companies notably show more information about amounts allocated to specific intangibles with a notable decrease in amounts identified as "other intangible assets". In general, percentages allocated to intangible assets show an increase from the previous two years. With the exception of France Telecom, percentages reported as unallocated goodwill show decreases from the previous years. These two findings suggest the companies are reporting amounts in the direction expected by IFRS 3. France Telecom notably did not provide details about allocations and amounts that were provided did not reconcile mathematically. Likewise information about one of the acquisitions of Telecom Italia did not reconcile mathematically and was sketchy. Telenor continued to report an aggregate of acquisitions that are individually immaterial. Descriptions of amounts reported as unallocated goodwill remain vague with comments about future profits and synergies. In general, we noticed a suggestion of a small trend towards compliance with measurement expectations of IFRS 3 with a continued long ways to go.

[Table 5 about here]

3.2.5 Accounting and reporting for business combinations in 2008

Looking at Figure 4 for acquisitions in 2008 shows that the aggregate of amounts reported as unallocated goodwill remains in the same percentage range as the previous years, in the 60 percent range. The percentage of amounts allocated to identifiable previously unreported intangible assets, though, has reverted to the mid 20 percent range of 2006.

[Figure 4 about here]

Looking at the details of each acquisition in 2008 suggests that some patterns may be emerging. More of the eight companies are identifying specific previously unreported items of intangibles, rather than "other intangible assets", as receiving allocations of acquisition costs. The percentage amounts allocated to intangible assets emerging from acquisitions remain low, though. France Telecom has made remarkable progress in reporting amounts allocated to specific previously unreported intangible assets as well as other details about its acquisitions. Elisa has joined Telenor in reporting aggregate information in detail for acquisitions that are individually immaterial. Amounts reported as unallocated goodwill remain relatively high with vague descriptions about future profits and synergies. In general it appears there is slow continued

progress towards meeting the measurement requirements of IFRS 3 with respect to greater amounts allocated to identifiable intangible assets and lower amounts allocated to goodwill.

3.3 Accounting and reporting issues directly related to impairment testing

As discussed in detail above, the IASB made substantial changes in requirements for impairment testing of goodwill compared to its previous standards and those of almost all local countries' accounting standards. Two major elements are defining cash generating units (CGUs) and specifying methods by which the impairment of a CGU is assessed, and then any impairment of goodwill.

3.3.1 Specifying CGUs

The clear intent of the IASB in requiring impairment testing by CGU was to expose more amounts of unallocated goodwill to potential impairment by minimizing the impact of aggregation on impairment. Previously, when unreported goodwill as a whole was subject to impairment tests, the impairment of goodwill related to specific operating units could be avoided because the goodwill in the aggregate was not materially impaired. In providing guidelines on how companies should define CGUs, the clear implication was that CGUs should be small enough to represent realistic units in order to limit aggregation as a means to avoid impairment testing and write-down of unallocated goodwill with resulting negative impact on reported income. In this study, we examine annual reports to discover how companies have defined CGUs and draw inferences about the appropriateness of the definitions.

Table 7 shows CGUs by company as determined from information in 2005 and 2006 annual reports. Only Telenor and France Telecom described that the combinations of CGUs for which impairment tests were made is based on independence of cash flow generating activity. Vodafone had only four CGUs despite having nine segments, and TeliaSonera has four CGU despite having 10 segments. The standard specifies that the highest level for a CGU is business segment; therefore, Vodafone and TeliaSonera must have combined segments to determine CGUs. Telefonica did not provide information about CGUs. These results suggest at best a half-hearted attempt to comply with IAS 36 and based goodwill impairment testing to different levels from those expected by the IASB.

3.4 Compliance with disclosure requirement for business combinations and goodwill

As discussed in more detail above, one of the most important elements of IFRS 3 and IAS 36 was imposition of a substantial number of disclosure requirements. In order to examine the extent to which companies complied with disclosure requirements of each standard, we tabulated the number of companies complying with each standard as shown in Appendix 1. This analysis shows that all or nearly all companies either complied with a specific requirement or failed to comply with a requirement; there was little variation in the number of companies complying with each standard. This analysis indicates that all of the companies were having the same difficulty complying or choosing to ignore the same requirements. It is important to note that the disclosures that require merely reporting basic data that are readily available, e.g. name of acquired company and basic information about the acquisition, are those with which all companies comply. Disclosure requirements that require extensive analysis and description are those with which there is substantial non-compliance. It is important to note that we did not detect any substantial increase in the number of companies complying with specific disclosure requirements over the four year period.

As discussed in detail above, we also computed disclosure indexes and compliance ratios for each company for each year. Figures 5 through 12 show compliance ratios by company by year and by standard with line graphs for each company. Analyses of each company show that some

companies have indeed improved over time, notably TeliaSonera and Telenor. Vodafone has consistently had high compliance ratios. Some companies, notably France Telecom and Telefonica show a decline in compliance and low levels of compliance. The overall picture, other than the three companies mentioned, is one of partial compliance and no indication of improvement.

3.5 Effect of stock exchange

As indicated above when we provided basic descriptive material for the companies involved in Table 1, we included stock exchange listings. Six of the eight companies have multiple listings. Only Elisa and TeliaSonera are not listed in the U.S. TeliaSonera does file Form 20 with the Securities and Exchange Commission, though, presumably because it has other securities in the U.S, a fact that we did not investigate. There is no apparent indicate effect of the multiple listings, and in particular listing in the U.S. on the type of information presented. The only detectable effect is the listing of Telenor on the Oslo Stock exchange which is noted for rigorous enforcement of accounting requirements [a source will be cited here]. Telenor throughout this analysis has shown a fairly high degree of compliance with both the requirements and expectations of the IASB in IFRS 3 and IAS 36.

4.0 Concluding discussion

This study has provided an in-depth analysis of compliance with IASB standards related to business combinations and goodwill impairment by exploring eight European telecommunications companies using content analysis methodology. While results cannot be generalized outside the eight companies, the insights obtained would not have been possible with broader-based research methods that did not explore as deeply. The findings indicate that at best there is only partial compliance with IASB standards and only limited improvement at best over the four year period. Among the most important findings is the fact that companies continue to report relatively large amounts of unallocated goodwill upon acquisition despite the clear expectation of the IASB that amounts allocated to goodwill will decline as larger amounts are allocated to specifically identifiable previously unreported intangible assets. There is a detectable increase in identification of amounts allocated to specific previously unreported intangible assets upon acquisition, e.g. customer bases, licenses, trademarks and brands, etc. But no detectable increase in the overall amount of such assets is apparent. Similarly there is little compliance with standards relating to goodwill impairment, notably assigning goodwill to appropriate CGUs. Moreover, there is at best only partial compliance with disclosure requirements of IFRS 3 and IAS 36.

The partial compliance with standards of the IASB has several implications, one of which is the future viability of the Board itself. Potentially of greater importance, though, is audit failure in which the audit reports indicate fair reporting and compliance with standards when there is obvious lack of compliance. Potentially of even greater importance, yet, is the lack of enforcement mechanism to assure compliance. The only detectable enforcement that was detected is that of the Oslo Stock Exchange as evidenced by Telenor's high level of compliance. All of these issues remain as issues for further research and the findings of this study provide bases for that research.

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Table 1. Companies Studied with Descriptive Information in 2005

| Company and country of Origin | Exchange listings | Number of Employees ² | Total Assets ¹ | Equity ¹ | Revenues ¹ | Net Income ¹ | Cash Flow from Operations ¹ |
|-------------------------------|---|----------------------------------|---------------------------|---------------------|-----------------------|-------------------------|--|
| Deutsche Telekom Germany | Frankfurt and other German exchanges, New York, Tokyo | 244,000 | 127,880 | 49,582 | 59,604 | 6,016 | 14,998 |
| Elisa Finland | Helsinki (now part of OMX) | 4,681 | 2,204 | 1,350 | 1,377 | 212 | 310 |
| France Telecom France | Paris, New York | 196,452 | 109,360 | 28,438 | 49,038 | 6,360 | 13,374 |
| Telecom Italia Italy | Milan, New York | 80,000 | 96,010 | 26,985 | 29,919 | 3,690 | 9,936 |
| Telefonica Spain | London, Frankfurt, Madrid, New York, Tokyo and other exchanges in Spain and South America | 207,641 | 73,174 | 16,158 | 37,882 | 4,827 | 11,139 |
| Telenor Norway | Oslo, NASDQ | 23,200 | 15,568 | 6,700 | 8,626 | 1,143 | 2,796 |
| TeliaSonera Finland Sweden | Stockholm, Helsinki (now p OMX) | 28,175 | 21,660 | 14,423 | 9,318 | 1,456 | 2,869 |
| Vodafone ³ UK | London, New York | 57,378 | 367,520 | 280,323 | 125,651 | (28,716) | 34,892 |

¹ End of 2005. In millions of Euros using exchange rates at December 31, 2005 for non-Eurozone companies. Data from 2005 Annual report

² Average number of employees during the year 2005 or number of employees at the end of the year 2005, depending on data reported in the annual report.

³ Vodafone reports on a fiscal year ending 31 March. Data are taken from the 31 March 2006 annual report.

Table 3. Telecom Companies reporting of acquisitions in 2005

| Company and acquisition | Percent acquired | Acquisition price ¹ | Percentage allocated to | | | | | Comments |
|--|-------------------------------------|--------------------------------|--|--|----------------------------------|------------------------------------|----------|--|
| | | | Pre-acquisition assets (adjusted to fair values) | Liabilities, minority interest and similar items | Pre-acquisition other net assets | Intangible assets from acquisition | Goodwill | |
| Deutsche Telekom subsidiary acquired Telekom Montenegro | 76.5% | 147 | 122% | -53% | 69% | 14% | 17% | Did not present adequate details to make allocation; required educated guesses. No explanation of amount allocated to “other intangibles” Report says that gives foothold into region, but no other details about individual intangibles to which acquisition costs allocated and what constitutes goodwill |
| Deutsche Telekom subsidiary acquired Alubra Telecomunicaciones | 100% | 36 | 278% | 167% | 111% | 0% | -11% | Very sketchy details; educated guesses required. Negative goodwill of €4 million not explained. Negative goodwill increased net income. |
| Elisa acquired Tikka Communications | 100% | 37.3 | 82% | -20% | 63% | 18% | 19% | The entire increase in intangibles from acquisition is allocated to the customer base. ??? Goodwill is attributed to synergies in the fixed network business. |
| Elisa acquired Saunalahti | 100% | 374 | 28% | -30% | 28% | 24% | 78% | Amounts allocated to customer base and brand exceed total increase in intangibles; apparently acquired intangibles were deceased Company emphasizes significance of brand and customers and intent to develop further but allocates only 25% to these items. Relatively large 78% allocated to goodwill described as being attributed to synergies in network capacity and mobile communications business. |
| France Telecom acquired parent of Amena | 79.4% of parent owning 98% of Amena | 6,687 | 75% | -89% | -14% | 46% | 67% | Allocated amounts to trademarks, licenses, and subscriber base; nothing to other intangible assets. Description says that customer base is major impetus but only 33% allocated. No details about two-thirds allocated to goodwill. |
| Telecom Italia acquired Liberty Surf Group | 100% | 268 | 49% | -47% | 2% | 5% | 93% | Liberty Surf is a major French provider; description emphasizes that number of customers increased substantially, but only 5% allocated to the customer base. No explanation for large percentage of 93% allocated to goodwill. |

| Company and acquisition | Percent acquired | Acquisition price ¹ | Percentage allocated to | | | | | Comments |
|---|------------------|--------------------------------|--|--|----------------------------------|------------------------------------|----------|---|
| | | | Pre-acquisition assets (adjusted to fair values) | Liabilities, minority interest and similar items | Pre-acquisition other net assets | Intangible assets from acquisition | Goodwill | |
| Telecom Italia acquired Elefante TV and Delta TV | 100% each | 128 | 2% | -33% | -31% | 98% | 32% | Description states that now cover 70% of Italian market thus large amount allocated to frequencies and broadcast rights. Also states the importance of the Elefante brand, but nothing allocated to brand. No explanation of goodwill. |
| Telefonica acquired Cesky Telecom | 69% | 3, 662 | 118% | -75% | 43% | 32% | 25% | Did not identify which “other intangibles” received allocations. Trademark and customer list are described as driving forces, but nothing allocated. No explanation for 25% goodwill |
| Telefónica acquired Radiocomunicaciones Móviles S.A. and Telefónica Móviles Chiles S.A. | 100% | 837 (total) | 84% | -85% | -2% | 10% | 92% | No explanation to the intangible assets recognized (reported as “Other intangible assets”). Nothing allocated to the customer base, despite these acquisitions provided the group with 20 mln new customers. No explanation to the allocation of 92% of the purchase price to “Goodwill”. |
| Telenor subsidiary acquired DATC and UCOM (Thailand) | 75% and 86.2% | 333.4 | 69% | -407% | -338% | 354% | 84% | Does not identify pre-acquisition values for intangibles arising from acquisition thus likely distorting extremely large percentage to intangibles from acquisition. Amounts identified for customer base, concession rights, trademarks, software and roaming agreements, |

¹ In millions of Euros. Approximate exchange rates on transaction dates for non-euro currencies.

Table 3(Continued). Telecom Companies reporting of acquisitions in 2005

| Company and acquisition | Percent acquired | Acquisition price ¹ | Percentage allocated to | | | | | Comments |
|---|------------------|--------------------------------|--|--|----------------------------|------------------------------------|----------|---|
| | | | Pre-acquisition assets (adjusted to fair values) | Liabilities, minority interest and similar items | Pre-acquisition net assets | Intangible assets from acquisition | Goodwill | |
| Telenor acquired Bredbandbolaget | 100% | 566 | 18% | -34% | -16% | 17% | 99% | Does not identify pre-acquisition values for intangibles arising from acquisition . Allocated amounts to customer base, trademarks, software and other intangibles The company emphasizes the benefit of a common Nordic platform but allocates only 17% to intangibles. Goodwill is explained as anticipated profits and synergies with no additional discussion to explain or justify large percentage. |
| Telenor acquired CyberCity | 100% | 166 | 21% | -33% | -12% | 32% | 81% | Does not identify pre-acquisition values for intangibles arising from acquisition. Allocated amounts to customer base, trademarks, and software. No explanation of amounts allocated to intangibles and goodwill |
| TeliaSonera acquired Volvik (now Chess) | 100% | 235 | 35% | -34% | 1% | 6% | 93% | The company strengthened it position in Norway and emphasized growth potential in home markets, but allocated only 6% to subscriber contacts. No justification of 93% allocated to goodwill. |
| Vodafone ² acquired Clear Stream | 100% | 2,795 | 36% | -48% | -12% | 40% | 72% | Reported amounts to license and spectrum fees and to other intangibles, but did not show beginning balances. Goodwill is explained Goodwill is explained as profits and synergies from acquired company. |
| Vodafone ² acquired VemFin | 99% | 2,126 | 23% | -24% | -1% | 41% | 60% | Reports amounts allocated to license and spectrum fees but does not show beginning amounts of each. Goodwill is attributed to synergies and profits of acquired company. |

¹ In millions of Euros. Approximate exchange rates on transaction dates for non-euro currencies.

² Vodafone reports on a fiscal year ending 31 March. Acquisitions are those reported in the annual report for year ended 31 March 2006

Table 4. Telecom Companies reporting of acquisitions in 2006

| Company and acquisition | Percent acquired | Acquisition price ¹ | Percentage allocated to | | | | Goodwill | Comments |
|--|---|--|--|--|----------------------------|------------------------------------|----------|--|
| | | | Pre-acquisition assets (adjusted to fair values) | Liabilities, minority interest and similar items | Pre-acquisition Net Assets | Intangible assets from acquisition | | |
| Deutsche Telekom subsidiary acquired Gedas group | 100% | 300 | 114% | -114% | 0% | 31% | 69% | Company emphasizes technical expertise and specialized customer base, but allocates little to intangibles. No explanation of amounts to intangibles from acquisition and no explanation of large amount allocated to Goodwill. |
| Deutsche Telekom subsidiary acquired Tele-ring | 100% | 1,300 | 43% | -11% | 32% | 18% | 50% | Company says assembled workforce value included in goodwill because intangible asset criteria not fulfilled; synergies included in goodwill because included in negotiated price. No additional explanation for amounts. |
| Deutsche Telekom subsidiary bought Polska Telefonia | 48% to bring total to 97%; now must consolidate | 1,600 in 2006; 1,800 previous, total 3,400 | 42% | -31% | 11% | 39% | 50% | Information inadequate to understand allocations; we used informed guesses. No explanation of benefits of combination, allocations to new intangible assets nor goodwill |
| Elisa acquired Lounet | 80% | 9.2 | 108% | -28% | 80% | 17% | 3% | Intangible assets from acquisition allocated entirely to customer base. No explanation for relatively large amounts allocated to pre-existing assets. |
| France Telecom acquired Diwan Group | 99.5% | 39 in two stages | n/a | n/a | n/a | n/a | 120% | No details about allocations in 2006 other than to goodwill and intangibles although required and provided details in 2005. No explanation of large percentage of goodwill |
| France Telecom acquired Jitco, holding company for Jordan Telecommunications (JTC) and share directly in (JTC) | 100% of Jitco and directly or indirectly 51% of JTC | ? | | | ? | ? | ? | Conflicting amounts of acquisition prices given in different parts of annual report. Reported amounts allocated to goodwill and to trademarks, license, and customer base; cannot determine percentages. Did not give amounts for other items other than deferred tax liability. Did not give information about other items allocated. No explanation for amounts allocated to goodwill. |
| Telefonica acquired O2 | 100% in two stages in 2005 and 2006 | 26,135 | 63% | -30% | 33% | 31% | 36% | Described how amounts measured for licenses, customer base, and trademark but did not give amounts allocated to each item. |

¹ In millions of Euros. Approximate exchange rates on transaction dates for non-euro currencies.

Table 4 (Continued). Telecom Companies reporting of acquisitions in 2006

| Company and acquisition | Percent acquired | Acquisition price ¹ | Percentage allocated to | | | | Goodwill | Comments |
|---|---|--------------------------------|--|--|----------------------------|------------------------------------|----------|---|
| | | | Pre-acquisition assets (adjusted to fair values) | Liabilities, minority interest and similar items | Pre-acquisition net assets | Intangible assets from acquisition | | |
| Telefonica acquired Colombia de Telecomunicaciones | 50% plus one share; committed to purchase remainder | 578 | 424% | -456% | -32% | 1% | 131% | Apparent non-compliance with IFRS on computing acquisition price did not include commitment to acquire minority interests. No explanations of large percentages allocated to assets and liabilities, and very small amounts to intangibles, as well as no explanation of relatively large goodwill. |
| Telenor acquired Vodafone Sweden to become Telenor Sweden | 100% | 946 | 106% | -42% | 64% | 33% | 3% | Allocated amounts to customer base, roaming agreements, and software; did not allocate anything to "other intangibles". Very small percentage to goodwill. |
| Telenor acquired Mobil63 Serbia to become Telenor Serbia | 100 | 1,482 | 31% | -2% | 29% | 12% | 59% | Allocated amounts to customer base and roaming agreements; did not allocate anything to "other intangibles". No explanation for large amount to goodwill |
| Telenor acquired various companies, individually immaterial | various | 290 | 36% | -33% | 3% | 24% | 73% | Allocated amounts to customer base, licenses, contracts, technology, trademarks, and software; did not allocate anything to "other intangibles. No explanation for large percentage of goodwill |
| TeliaSonera acquired Xfera | 100% | 152 | 350% | -328% | 22% | 0% | 78% | Some adjustment amounts to net assets not clear. No allocations to intangibles even though Xfera has existing 3G network. No explanation of goodwill. |
| TeliaSonera acquired NextGenTel | 100% | 250 | 51% | -39% | 12% | 9% | 79% | Allocated 10% to customer base even though second largest in Norway; nothing to "other intangibles. No explanation for large amount to goodwill. |
| Vodafone ² acquired Telsim | 100% | 3764 | 14% | -10% | 4% | 34% | 62% | Allocated amounts to licenses and spectrum and about 30% to "other intangibles" Goodwill is assigned to Eastern Europe, presumably a CGU. Goodwill is attributed to profits and synergies. Most of the goodwill will be tax deductible |

¹ In millions of Euros; approximate exchange rates on transaction dates for non-euro currencies.

² Vodafone reports on a fiscal year ending 31 March. Acquisitions are those reported in the annual report for year ended 31 March 2007

Table 5. Telecom Companies reporting of acquisitions in 2007

| Company and acquisition | Percent acquired | Acquisition price ¹ | Pre-acquisition assets (adjusted to fair values) | Percentage allocated to | | | | Comments |
|---|--------------------------|--------------------------------|--|--|----------------------------|------------------------------------|----------|---|
| | | | | Liabilities, minority interest and similar items | Pre-acquisition net assets | Intangible assets from acquisition | Goodwill | |
| Deutsche Telekom subsidiary acquired Orange Nederland | 100% | 1,200 | 72% | -18% | 54% | 12% | 33% | Goodwill described as reflecting positive future earnings and savings from synergies. No explanation of intangible assets from acquisition. |
| Deutsche Telekom subsidiary acquired Immobilien Scout | 99% in stages | 400 | 10% | -13% | -4% | 33% | 71% | Goodwill described as reflecting positive future earnings and savings from synergies. No explanation of intangible assets from acquisition. |
| Elisa individually insignificant acquisitions | various | 11 | 63% | -31% | 32% | 58% | 10% | Allocation to customer base and to technology acquired; nothing to "other intangibles". |
| France Telecom acquired ya.com | 100% | 150 | n/a | n/a | n/a | n/a | 83% | France Telecom provides information about acquisition price and goodwill amounts. Little information is given about other amounts. Numbers provided by company do not reconcile mathematically. Very limited information about amounts allocated to individual intangible assets from the acquisition. No explanation for goodwill. |
| France Telecom acquired Orange Moldova | Additional stake now 94% | 103 | n/a | n/a | n/a | n/a | 83% | |
| France Telecom indirectly acquired VOX Mobile | 100% | 80 | n/a | n/a | n/a | n/a | 89% | |
| France Telecom acquired Groupe Silicomp | 96% | 93 | n/a | n/a | n/a | n/a | 75% | |
| Telecom Italia acquired net assets of AOL Germany | All of net assets | 669 | 6% | -12% | -6.4% | 19% | 87% | Allocated amounts to customer relationships and audience agreements; nothing to "other intangibles". No explanation of large amount to goodwill |
| Telecom Italia acquired InterNLnet | 100% | 5.5 | | | 27% | 18% | 55% | Did not present details of amounts allocated to pre-acquisition assets or liabilities. Amounts provided by company do not reconcile mathematically. Did not describe intangible assets from the combination nor discuss factors attributed to goodwill |
| Telenor acquired Tele2 Denmark | 100% | 76.2 | 142% | -105% | 37% | 30% | 33% | Allocated to customer base, software, and trademarks; nothing to "other intangibles". |
| Telenor individually insignificant acquisitions | various | 104.5 | 37% | -24% | 13% | 31% | 56% | Allocated to customer base, licenses, and trademarks; nothing to "other intangibles" |

¹ In millions of Euros. Approximate exchange rates on transaction dates for non-euro currencies.

Table 5 (Continued). Telecom Companies reporting of acquisitions in 2007

| Company and acquisition | Percent acquired | Acquisition price ¹ | Pre-acquisition assets (adjusted to fair values) | Percentage allocated to | | | | Comments |
|--|------------------|--------------------------------|--|--|----------------------------|------------------------------------|----------|--|
| | | | | Liabilities, minority interest and similar items | Pre-acquisition net assets | Intangible assets from acquisition | Goodwill | |
| TeleisSoner acquired Cygate | 100% | 75.2 | 46% | -41% | 5% | 56% | 39% | Allocated amounts to trade names, customer relationships, and partner agreements with suppliers; nothing to “other intangibles”. |
| TeliaSonera acquired debitel Danmark | 100% | 110.2 | 67% | -48% | 19% | 14% | 67% | Allocated amount to customer relationships and a small amount to “other intangibles” |
| TeliaSonera acquired MCT | 100% | 192.7 | 54% | -76% | -23% | 39% | 83% | Allocated to customer relationships, licenses, and interconnect agreements., NO explanation for relatively large amount of goodwill. |
| TeliaSonera individually insignificant acquisitions | various | 17 | | | 27% | | 73% | Provided few details about composition of net assets and did not identify intangibles separately |
| Vodafone ² acquired Hutchison Essar | 100% | 8,072 | 32% | -59% | -28% | 56% | 72% | Allocated relatively almost all of intangible amount to licenses and spectrum; minor amounts to “other intangibles”. Goodwill attributed to profits and synergies. |
| Vodafone ² acquired Tele2 activities in southern Europe | 100% | 644 | 58% | 37% | 21% | 23% | 56% | The entire amount of the intangibles is allocated to “other intangibles” without explanation. Goodwill attributed to profits and synergies. |

¹ In millions of Euros. Approximate exchange rates on transaction dates for non-euro currencies.

² Vodafone reports on a fiscal year ending 31 March. Acquisitions are those reported in the annual report for year ended 31 March 2008

Table 6. Telecom Companies reporting of acquisitions in 2008

| Company and acquisition | Percent acquired | Acquisition price ¹ | Pre-acquisition assets (adjusted to fair values) | Percentage allocated to | | | | Comments |
|---|-------------------------------------|--------------------------------|--|--|--|------------------------------------|----------|--|
| | | | | Liabilities, minority interest and similar items | Pre-acquisition net assets (adjusted to fair values) | Intangible assets from acquisition | Goodwill | |
| Deutsche Telekom subsidiary acquired SunCom | 100% | 1,100 | 114% | -88.8% | 24% | 0% | 76% | Nothing allocated to intangibles from acquisition; pre-acquisition intangibles written down. Company describes goodwill as reflecting growth opportunities in the USA, customer base, synergies due to reduction of roaming costs and similar items but notably does not allocate acquisition price to customer base.. |
| Elisa individually insignificant acquisitions | various | 6.1 | 57% | -39% | 18% | 28% | 54% | Allocation to customer base and to immaterial rights; nothing to "other intangibles". |
| French Telecom consortium acquires Telecom Kenya | 51% | 273 | 122% | -131% | -9% | 30% | 79% | Allocated to customer base and software; nothing allocated to "other intangibles". Goodwill attributed to assembled workforce, anticipated profits, and deferred taxes related to excess. |
| Telefonica subsidiary acquired parent and operating company Telering Brazil | 91% of parent and 59% of subsidiary | 451 | 150% | -179% | -28% | 121% | 8% | Did not provide details of amounts allocated to each intangible asset but provides extensive details elsewhere about many different intangible assets. |
| Telenor acquired IS Partner | 100% | 160 | 64% | -48% | 16% | 12% | 71% | Allocated amounts to customer base, software, and trademarks; nothing to "other intangibles". |
| Telenor individually insignificant acquisitions | various | 54 | 126% | -56% | 22% | 8% | 70% | Allocated to customer base, software and trademarks; approximately 6% to "other intangibles" Goodwill is attributed to employees, anticipated profits and deferred taxes related to excess values. |
| TeliaSonera acquired TelenorSonera Asia | 51% | 348 | 68% | -49% | 20% | 0% | 80% | Did not allocate anything to other intangibles. Reduced pre-existing goodwill (approximately 543 million euro) of acquired company to zero, No explanation of goodwill amounts. |
| TeliaSonera individually insignificant acquisitions | various | 46 | | | -4% | 0% | 104% | Did not disclose details of allocations; no information about intangible assets |
| Vodafone ² acquired | 70% | 617 | 42% | 41% | 1% | 28% | 71% | Allocated amounts to license and spectrum fees and relatively |

| Company and acquisition | Percent acquired | Acquisition price ¹ | Pre-acquisition assets (adjusted to fair values) | Percentage allocated to | | | | Comments |
|--|------------------|--------------------------------|--|--|--|------------------------------------|----------|---|
| | | | | Liabilities, minority interest and similar items | Pre-acquisition net assets (adjusted to fair values) | Intangible assets from acquisition | Goodwill | |
| Ghana Telecommunications | | | | | | | | small amount to "other intangible assets". Goodwill is attributed to expected profits and synergies |
| Vodafone individually insignificant acquisitions | various | 575 | | | 30% | 0% | 70% | Did not disclose details of allocations; no information about intangible assets |

¹ In millions of Euros. Approximate exchange rates on transaction dates for non-euro currencies

² Vodafone reports on a fiscal year ending 31 March. Acquisitions are those reported in the annual report for year ended 31 March 2009.

Table 2. Goodwill as a percentage of total assets by company by year

| Company | 2005 | 2006 | 2007 | 2008 |
|-----------------------|-------------|-------------|-------------|-------------|
| Deutsche Telekom | 14.4% | 16.1% | 17.1% | 16.8% |
| Elisa | 35.0% | 36.9% | 35.6% | 38.3% |
| France Telecom | 30.8% | 30.5% | 31.0% | 32.3% |
| Telecom Italia | 45.8% | 48.9% | 50.8% | 51.3% |
| Telefonica | 12.2% | 19.9% | 18.7% | 18.3% |
| Telenor | 16.6% | 20.6% | 18.4% | 18.3% |
| TeliaSonera | 30.8% | 31.4% | 32.8% | 31.9% |
| Vodafone ¹ | 41.5% | 37.0% | 40.3% | 35.3% |

¹ Vodafone reports on a fiscal year ending 31 March. Data are taken from the annual reports of 31 March 2006, 2007, 2008, and 2009.

Table 7. CGUs for Impairment testing purposes

| Company | Number of CGUs to which goodwill has been allocated | Level of the CGUs to which goodwill has been allocated for impairment testing | | | Number of Segments | Number of Subsidiaries |
|------------------|---|---|---------------------------|---------------------------------------|--------------------|------------------------|
| | | | No. Of CGUs at each level | % of goodwill allocated to each level | | |
| Deutsche Telekom | 5 | Business unit level | 5 | 100% | 4 | 350 |
| Elisa | 3 | Primary segment level | 3 | 100% | 3 | 43 |
| France Telecom | 6 | Group of CGUs | 4 | 98% | 4 | 255 |
| | | Primary segment level | 2 | 2% | | |
| Telecom Italia | 5 | Single company level | 3 | n/a | 5 | 150 |

| | | | | | | |
|-------------|-----|-----------------------|-----|------|----|-----|
| | | Business unit level | 2 | n/a | | |
| Telefonica | n/a | n/a | n/a | n/a | 7 | 340 |
| Telenor | 8 | Single company level | 5 | 55% | 10 | 81 |
| | | Primary segment level | 3 | 45% | | |
| TeliaSonera | 4 | Single company level | 4 | 100% | 10 | 60 |
| Vodafone | 5 | Primary segment level | 4 | 100% | 9 | 25 |

Figure 1. Allocation of Acquisition Cost in 2005

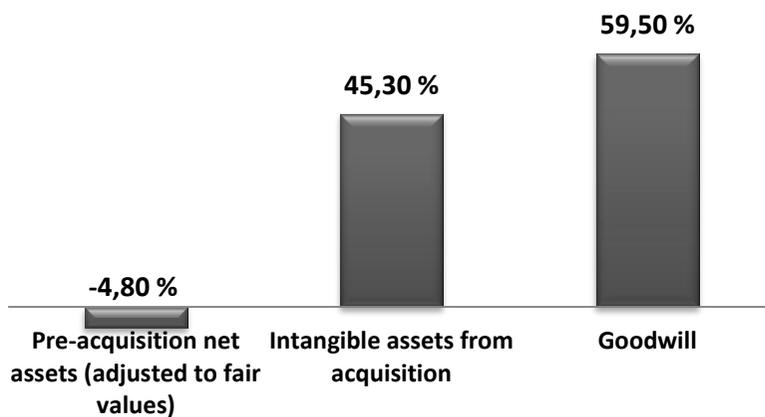


Figure 2. Allocation of Acquisition Cost in 2006

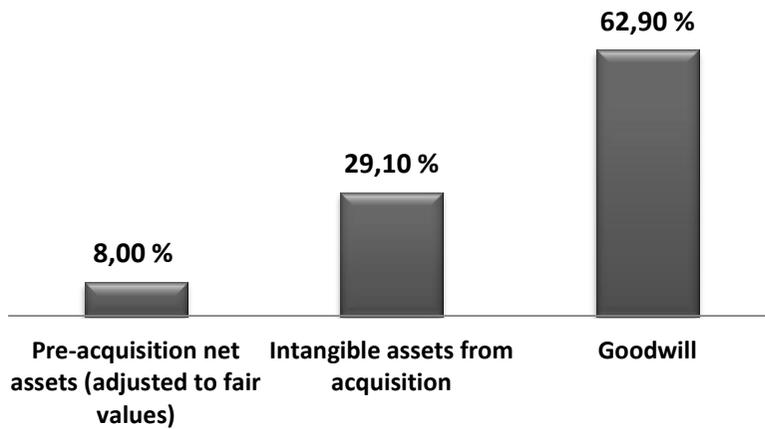


Figure 3. Allocation of Acquisition Cost in 2007

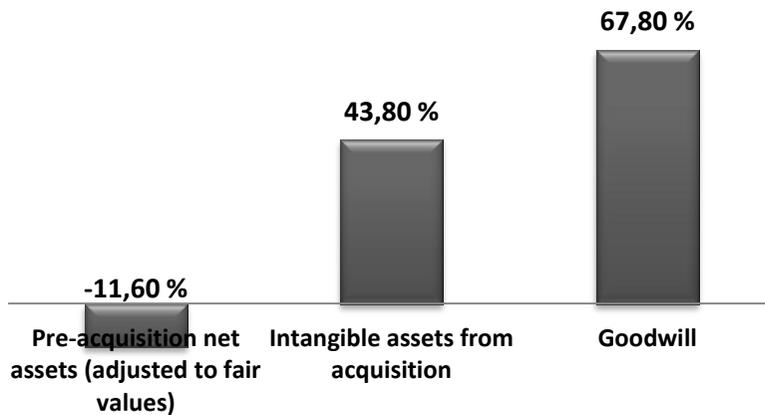


Figure 4. Allocation of Acquisition Cost in 2008

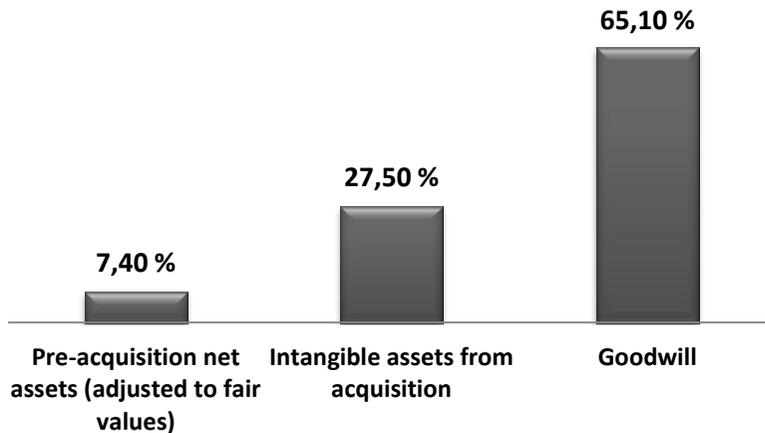
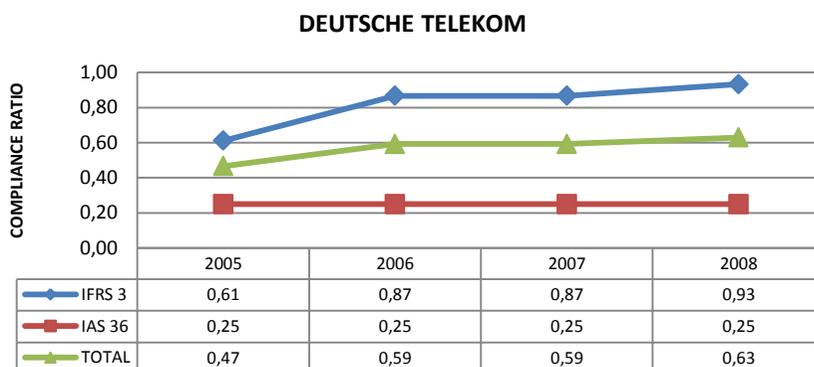
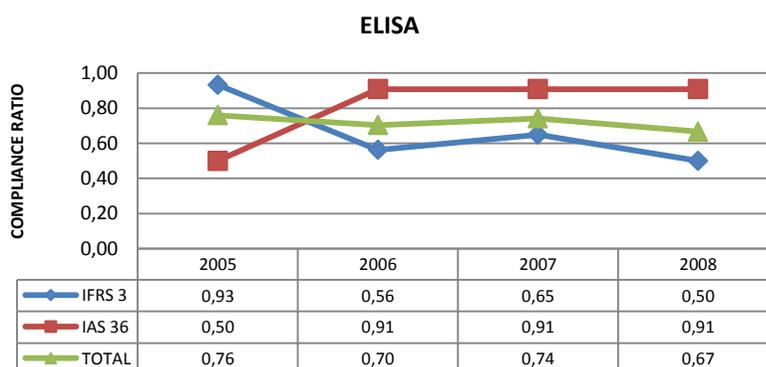


Figure 5. Level of Compliance by year and Standard of Deutsche Telekom



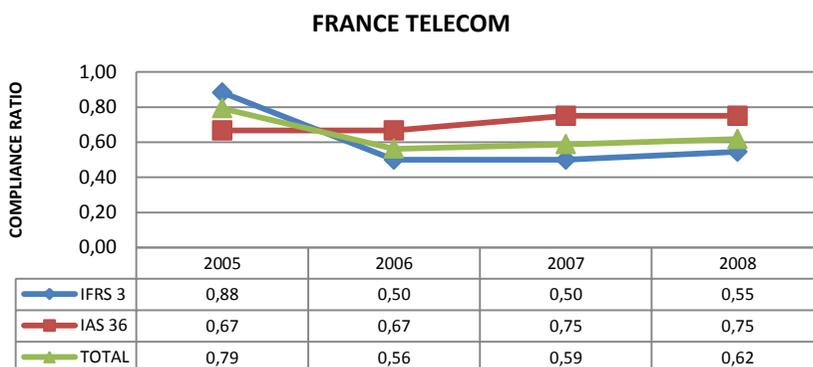
Deutsche Telekom presents a high level of compliance with IFRS 3 disclosure requirements and an extremely low ratio for IAS 36 disclosures. The IFRS 3 disclosure ratios are steadily improving throughout the four year period while the IAS 36 ratios are steady at 0.25. In all of the four years, the company discloses only some of the specified information about the bases on which its CGUs' recoverable amounts (value in use) are determined. Moreover it does not disclose any information about the sensitivity tests it should perform.

Figure 6. Level of Compliance by year and Standard of Elisa



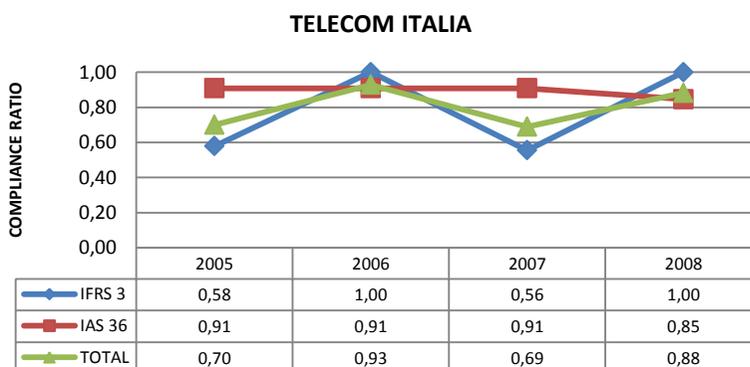
During the first four years of IFRS implementation, Elisa improves considerably its level of compliance with IAS 36 disclosure requirements (from 0.50 to 0.91) while it deteriorates its level of compliance with IFRS 3 requirements (from 0.93 to 0.50). The main reason that leads to the improvement of IAS 36 ratio is the improvement of disclosures about sensitivity tests. The main reasons that lead to the deterioration of IFRS 3 ratio are: 1) disclosures about profit or loss included in acquirer's results, 2) disclosures about the revenue and the profit or loss of the combined entity as though the acquisition date had been the beginning of the period, and 3) disclosures of the factors that contributed to a cost that results in goodwill recognition.

Figure 7. Level of Compliance by year and Standard of France Telecom



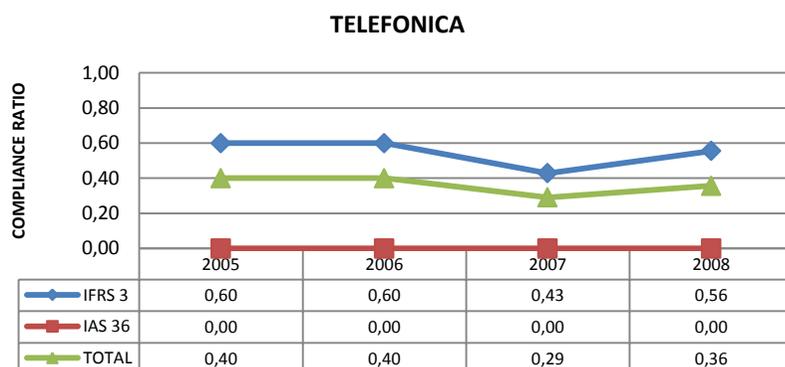
In 2005, France Telecom interestingly presents a better level of compliance with IFRS 3 disclosure requirements than in the three following years. The main reasons for the low level of compliance with IFRS 3 requirements are disclosure items about the revenue and the profit or loss of the combined entity as though the acquisition date had been the beginning of the period and the factors that contributed to a cost that results to goodwill recognition. By contrast, the company presents an improved ratio for IAS 36 disclosures throughout the four years. The main reason of the improvement is located in disclosures about the sensitivity analysis.

Figure 8. Level of Compliance by year and Standard of Telecom Italia



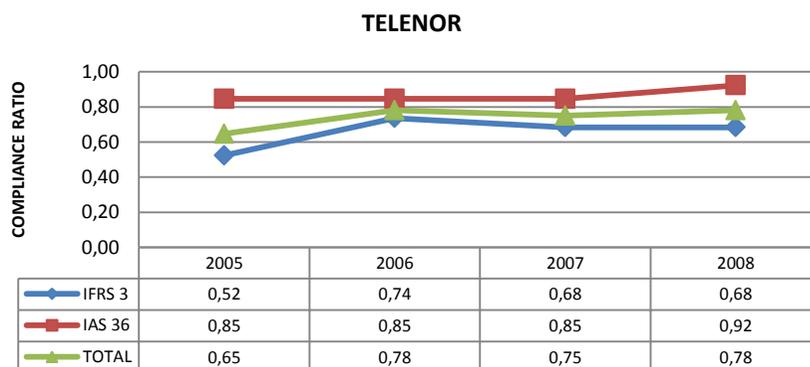
Telecom Italia presents substantial variations in IFRS 3 compliance ratios among years. On the one hand in two years it complies with all applicable disclosure items and on the other hand in two years it complies only with half of them. This variation can be attributed to the lack of acquisitions in these two years and hence it is subject only to the basic quantitative disclosure items IFRS 3 mandates. For IAS 36 disclosure items, the company shows a high level of compliance throughout the four year period.

Figure 9. Level of Compliance by year and Standard of Telefonica



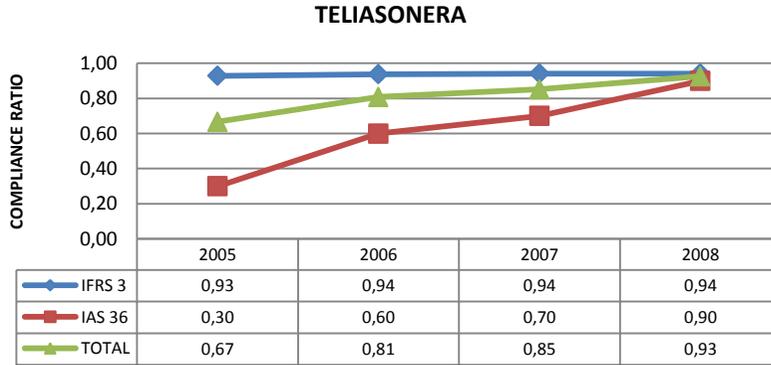
Telefonica does not disclose any information mandated by IAS 36. Moreover it also presents a relatively low level of compliance with IFRS 3 disclosure requirements. The main reasons for such low levels are lack of: 1) disclosure requirements about the profit or loss included in acquirer's results, 2) disclosures about the revenue and the profit or loss of the combined entity as though the acquisition date had been the beginning of the period, and 3) disclosures about the factors that contributed to a cost that results in goodwill recognition.

Figure 10. Level of Compliance by year and Standard of Telenor



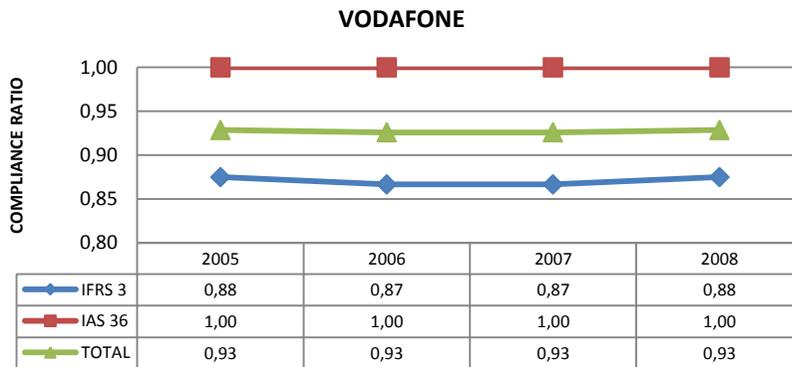
Telenor presents an improvement of its level of compliance during the first four years of IFRS mandatory implementation. Specifically it highly complies with IAS 36 disclosure requirements, while its ratio is lower for IFRS 3 requirements. The main reasons for the lower level of compliance with IFRS 3 requirements are related to disclosures items about the revenue and the profit or loss of the combined entity as though the acquisition date had been the beginning of the period and on the items, and the factors that contributed to a cost that results in goodwill recognition.

Figure 11. Level of Compliance by year and Standard of Teliasonera



Teliasonera presents the most substantial improvement over the four years. The overall level of compliance is 38% higher in 2008 than in 2005. This improvement is attributed to IAS 36 disclosures ratio which increased from 0.30 in 2005 to 0.90 in 2008.

Figure 12. Level of Compliance by year and Standard of Vodafone



Vodafone is the only of the eight companies that presents consistently strong positive compliance ratios. In all four years the company's level of compliance with IAS 36 disclosure requirements is 1. Also IFRS 3 compliance ratios are high. In general Vodafone has the highest total disclosure ratio among the eight companies (0.93).

Appendix 1. Number of companies that comply with specific disclosure requirements of IFRS 3 and IAS 36 by year

| | | 2005 | | | 2006 | | | 2007 | | | 2008 | | | N A |
|-----------------------|---|------|----|----|------|----|----|------|----|----|------|----|---|--------|
| | | C | NC | NA | C | NC | NA | C | NC | NA | C | NC | A | |
| IFRS 3 | Business combinations | | | | | | | | | | | | | |
| IFRS 3 Par. 62 | Acquirer has adjusted provisional values determined at time of initial accounting for business combination, in accordance with requirements of paragraph 62 of IFRS 3, comparative information presented for periods before initial accounting for the combination is complete (i.e. for periods before adjustments are made) shall be presented as if initial accounting had been completed from acquisition date. | 0 | 0 | 8 | 0 | 1 | 7 | 1 | 0 | 7 | 1 | 0 | 7 | |
| IFRS 3 Par. 67 | For each material business combination effected during the period, acquirer shall disclose: | | | | | | | | | | | | | |
| IFRS 3.67(a) | a) the names and descriptions of combining entities or businesses; | 8 | 0 | 0 | 7 | 0 | 1 | 8 | 0 | 0 | 7 | 0 | 1 | |
| IFRS 3.67(b) | b) the acquisition date; | 8 | 0 | 0 | 7 | 0 | 1 | 8 | 0 | 0 | 7 | 0 | 1 | |
| IFRS 3.67(c) | c) percentage of voting equity instruments acquired; | 8 | 0 | 0 | 7 | 0 | 1 | 7 | 1 | 0 | 7 | 0 | 1 | |
| IFRS 3.67(d) | d) cost of the combination, and a description of the components of that cost, including any costs directly attributable to the combination; | 8 | 0 | 0 | 7 | 0 | 1 | 8 | 0 | 0 | 6 | 1 | 1 | |
| IFRS 3.67(d) | e) where equity instruments are issued or issuable as part of cost of combination, the following information: | | | | | | | | | | | | | |
| | i) number of equity instruments issued or issuable; | 0 | 0 | 8 | 0 | 0 | 8 | 1 | 0 | 7 | 0 | 0 | 8 | |
| | ii) fair value of the equity instruments issued or issuable; and | 0 | 0 | 8 | 0 | 0 | 8 | 1 | 0 | 7 | 0 | 0 | 8 | |
| | iii) basis for determining that fair value; | 0 | 0 | 8 | 0 | 0 | 8 | 1 | 0 | 7 | 0 | 0 | 8 | |
| IFRS 3.67(d) | f) in disclosing basis for determining fair value of equity instruments issued or issuable as part of cost of the combination, if published price for the instruments did not exist | 0 | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 8 | |

| | | | | | | | | | | | | | | | | | |
|--------------|--|---|---|---|--|---|---|---|--|---|---|---|--|---|---|---|--|
| | at date of exchange, significant assumptions used to determine fair value; | | | | | | | | | | | | | | | | |
| IFRS 3.67(d) | g) in disclosing basis for determining fair value of equity instruments issued or issuable as part of cost of combination, if a published price for instruments existing at date of exchange, but was not used as basis for determining cost of combination: | | | | | | | | | | | | | | | | |
| | i) that fact; | 0 | 0 | 8 | | 0 | 0 | 8 | | 0 | 0 | 8 | | 0 | 0 | 8 | |
| | ii) reasons published price was not used; | 0 | 0 | 8 | | 0 | 0 | 8 | | 0 | 0 | 8 | | 0 | 0 | 8 | |
| | iii) method and significant assumptions used to attribute a value to the equity instruments; and | 0 | 0 | 8 | | 0 | 0 | 8 | | 0 | 0 | 8 | | 0 | 0 | 8 | |
| | iv) aggregate amount of difference between value attributed to, and published price of, equity instruments; | 0 | 0 | 8 | | 0 | 0 | 8 | | 0 | 0 | 8 | | 0 | 0 | 8 | |

Appendix 1 (Continued). Number of companies that comply with specific disclosure requirements of IFRS 3 and IAS 36 by year

2005

2006

2007

2008

| | | | | | | | | | | | | | |
|-----------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|
| IFRS 3.67(e) | h) details of any operations entity has decided to dispose of as a result of business combination; | 0 | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 8 |
| IFRS 3.67(f) | i) amounts recognised at acquisition date for each class of the acquiree's' assets, liabilities and contingent liabilities; | 8 | 0 | 0 | 6 | 1 | 1 | 6 | 2 | 0 | 6 | 1 | 1 |
| IFRS 3.67(f) | j) unless disclosure would be impracticable, carrying amounts of each class of acquiree's assets, liabilities and contingent liabilities, determined in accordance with IFRSs, immediately before combination; | 7 | 1 | 0 | 6 | 1 | 1 | 6 | 2 | 0 | 6 | 1 | 1 |
| IFRS 3.67(f) | k) if disclosure of IFRS carrying amounts immediately before combination is impracticable, that fact, together with an explanation of why. | 0 | 1 | 7 | 0 | 1 | 7 | 0 | 2 | 6 | 0 | 1 | 7 |
| IFRS 3.67(h) | l) a description of the factors that contributed to a cost that results in the recognition of goodwill: | | | | | | | | | | | | |
| | i) a description of each intangible asset that was not recognised separately from goodwill; and | 2 | 6 | 0 | 2 | 5 | 1 | 1 | 7 | 0 | 2 | 5 | 1 |
| | ii) an explanation of why intangible assets' fair value could not be measured reliably; | 0 | 8 | 0 | 0 | 7 | 1 | 0 | 8 | 0 | 0 | 7 | 1 |
| IFRS 3.67(g) | m) in respect of any excess of acquirer's interest in net fair value of acquiree's identifiable assets, liabilities and contingent liabilities over cost: | | | | | | | | | | | | |
| | i) the amount of any such excess recognised in profit or loss in accordance with paragraph 56 of IFRS 3; and | 0 | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 8 |
| | ii) line item in the statement of comprehensive income in which excess is recognised; | 0 | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 8 |
| IFRS 3.67(h) | n) a description of nature of any excess of acquirer's interest in net fair value of acquiree's identifiable assets, liabilities and contingent liabilities over cost, recognised in profit or loss in accordance with paragraph 56 of IFRS 3; | 0 | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 8 |
| IFRS 3.67(i) | o) unless impracticable, amount of the acquiree's profit or loss since the acquisition date included in the acquirer's profit or loss for the period; and | 4 | 4 | 0 | 4 | 3 | 1 | 4 | 4 | 0 | 4 | 3 | 1 |
| IFRS 3.67(i) | p) if impracticable to disclose amount of acquiree's profit or loss since acquisition date included in acquirer's profit or loss for period that fact; and an explanation of why . | 0 | 4 | 4 | 0 | 3 | 5 | 0 | 4 | 4 | 0 | 3 | 5 |
| IFRS 3 Par. 69 | If initial accounting for a business combination that was effected during period has been determined only provisionally as described in paragraph 62 of IFRS 3, entity shall disclose that fact and an explanation of why. | 0 | 3 | 5 | 0 | 1 | 7 | 0 | 4 | 4 | 1 | 2 | 5 |
| IFRS 3 Par. 70 | Unless impracticable, the following information shall be disclosed: | | | | | | | | | | | | |
| IFRS 3.70(a) | a) revenue of the combined entity for period as though acquisition date for all business combinations effected during period had been beginning of period; and | 4 | 4 | 0 | 3 | 4 | 1 | 3 | 5 | 0 | 3 | 4 | 1 |

| | | | | | | | | | | | | | | | | | |
|--------------|---|--|---|---|---|--|---|---|---|--|---|---|---|--|---|---|---|
| IFRS 3.70(b) | b) profit or loss of combined entity for period as though acquisition date for all business combinations effected during period had been beginning of period. | | 4 | 4 | 0 | | 3 | 4 | 1 | | 3 | 5 | 0 | | 3 | 4 | 1 |
| IFRS 3.70 | If disclosure of information required by paragraphs 70(a) and 70(b) of IFRS 3 would be impracticable, entity shall disclose that fact and explanation. | | 0 | 4 | 4 | | 0 | 4 | 4 | | 0 | 5 | 3 | | 0 | 4 | 4 |

A LONGITUDINAL ANALYSIS REGARDING THE EVOLUTION OF PROFIT TAX REGULATIONS IN ROMANIA – AN EMPIRICAL VIEW

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The study conducted a longitudinal analysis regarding Romanian profit tax regulations. Beginning with the first profit tax regulation implemented in 1991 and until now, we analyzed based on a empirical approach all changes that have occurred over time in the Romanian accounting environment. The motivation of the study conducted was based on the strong relationship between accounting and taxation in the Romanian accounting environment over time, the profit tax being one of the main items of this relation. This particular study is divided into five sections. After a short introduction and presenting the motivation of the study (section 1), in section 2 we conducted the literature review based on international and national studies regarding the profit tax regulations through the relationship between accounting and taxation. Section 3 presents a brief review of the main Romanian regulations that concerned the profit tax and the most important changes that have occurred over time. In section 4 we conducted the empirical analysis. In this section is realized a series of analysis, aiming the following: (1) the total number of regulations that have amend the main regulations presented in the previous section; (2) the type of amendments implemented over regulations (abolishment, text amendment, adding new articles or alignments); (3) the total number of amendments approved by law without modifications, respectively the total number of amendments approved on the Official Journal through Government Ordinance or Emergency Ordinance and unapproved by law. The empirical analysis conducted documented that the main shortcoming associated with the profit tax regulation is due by the multiple changes which have been subject of the 5 main profit tax regulations. The last section (section 5) consists in presenting the conclusions of the study. As main conclusion, the profit tax regulation is stable only in terms of the small number of main regulations, the large number of amendments creating difficulties in the understanding and application by practitioners.

Keywords: profit tax regulations, longitudinal analysis, Romania

JEL Classification: H25, H29, M40, M41

1. Introduction

The relationship between accounting and taxation is a much disputed subject in the literature and in practice. In the literature, the central point of this relationship is represented by the profit tax, in the next section being realized a brief overview of this aspect.

To may conduct a study regarding the relationship between accounting and taxation is important to know and understand the tax regulation and also the accounting regulation, and in particular the profit tax regulation.

The present study aims to be a starting point for further research regarding the relationship between accounting and taxation in Romania. In this respect, the study conducted a longitudinal analysis regarding the evolution of Romanian profit tax regulation, being conducted an empirical analysis regarding the amendments which have occurred over time. For this reason, a series of analysis was conducted for capture the evolution of the multiple amendments of profit tax regulations.

Section 2 is dedicated to the international and national literature review. This section captures that studies which were conducted in the literature in terms of relationship between accounting and taxation the central point being represented by profit tax. Section 3 presents a brief overview of the Romanian profit tax regulation and their main changes over time. In section 4 is conducted the empirical analysis in order to realize the main objective of the study: *the longitudinal analysis regarding the evolution of Romanian profit tax regulations*. Section 5 concludes the study.

2. Literature review

No study was conducted until now regarding the longitudinal analysis of profit tax regulations. As we mentioned above, the profit tax is one of the main item of the relationship between accounting and taxation. Thus, in the next paragraphs of this section we will analyze such paper which has captured this aspect based on international and national studies.

Hoogendoorn (1996) conducted a study which realized an overview of 13 EU Countries regarding the relationship between accounting and taxation, based on the distinction between those 2 Accounting Systems (Anglo-Saxon and Continental accounting systems), as well as, the connection and disconnection between accounting and taxation regarding deferred tax as part of profit tax. The conclusion of the study was that there are significant differences between countries from this point of view.

Lamb *et al.* (1998) identified 5 possible cases of the relationship between accounting and taxation. These cases were tested on 4 countries (Germany, France, UK and US), using 13 factors which had a different behavior depending by the type of accounting system of each country. These factors (such as: depreciation, adjustments, fixed assets recognition and evaluation, etc.) have different behavior in the determination of the tax base for profit tax. Based on this study, Nobes *et al.* (2004) realized a comparison between Spain and countries included in the study conducted by Lamb *et al.* (1998). Nobes and Schwencke (2006) conducted the same analysis on Norway case and Gee *et al.* (2010) conducted a comparative analysis between Germany and UK. In Romania, Fekete *et al.* (2009) and Cuzdriorean *et al.* (2010) have been realized an empirical analysis of the relationship between accounting and taxation. In their analysis they included the profit tax as tax factor that influence the turnover as accounting factor. Based on those studies, Fekete *et al.* (2010) tested the empirical model on SMEs cases using the same items (profit tax and turnover). These papers found a relationship between profit tax and turnover, but the model show that a lot of other factors influence the accounting. In this respect, we conclude that it would be necessary if we would find the individual factors which influence the tax base of profit tax (based on study conducted by Lamb *et al.* (1998), plus other specific factors for Romanian environment). Thus, as we mention in the previous section, this paper may be a step of other research regarding the relationship between accounting and taxation, as well as for the measuring the influence of taxation over accounting or accounting over taxation.

3. Brief review of the profit tax regulations in Romania

The starting point for the term of profit and also for profit tax in Romania was year 1990. Through The Government Decision no. 741/1990 was introduced the term of *tax benefit*. Thus, for the first time in Romania, after the communism era, based on article no. 2 from the present Decision:

“The tax benefit is due by economic entities, and also by centrals, big entities, trusts, small companies and other assimilated entities ...”

The same Decision, affirm that:

“The entities provided on article no. 2 from the present Decision not perform payments from their benefits to the State budget” (article no. 3)

The term of *tax benefit* was changed through the Law no. 12/1991, when appear for the first time the term *profit tax*. From 1991 until now, the main profit tax regulation was amended by other 3 times (**Figure 1**). These regulations were also amended by a lot of other regulations, the empirical analysis of this situation being realized in the next section.

Figure 1. The main profit tax regulations in Romania

| Regulation | Government Decision No. 704/1991 | Law no. 12/1991 | Government Ordinance no. 70/1994 | Law no. 414/2002 | Law no. 571/2003 |
|------------|----------------------------------|-----------------|----------------------------------|------------------|------------------|
| Period | 1990 | 1991-1994 | 1995-2002 | 2002-2003 | 2004-present |

Source: Authors projection

From 1991, the year of appearance of profit tax regulation, a lot of amendments have been produced over the regulations. **Table 1** illustrates a brief overview of the main important amendments that were produced over time.

Table 1. Evolution of the main profit tax regulations in Romania

| Period | Tax Regulation | Effective date | Main changes introduced |
|-----------|--|-----------------|--|
| 1991-1994 | Law No. 12 / 30.01.1991 on the profit tax | January 1, 1991 | Progressive tax was applied, with a total of 67 tax cuts Tax cuts were between 2.5% and 77%, with a profit of 25,000 lei, relieved from duty Taxable profit was calculated as the difference between revenue received and expenditure provided by law |
| | Government Decision No. 804 / 30.11.1991 on the profit tax | January 1, 1992 | Progressive rates were reduced to two rates, as follows: 30% for a taxable profit under 1 million lei 45% for a taxable profit over 1 million lei |
| 1995-2002 | Government Ordinance No. 70 / 29.08.1994 on the profit tax | January 1, 1995 | Profit tax rate was set at 38% Differential tax rates were applied for certain categories of taxable persons A distinction between small and large taxpayers is made; the tax base was established depending on the category of taxpayer Concepts of tax-free income and non-deductible expenses are introduced; unclear setting conditions were established for tax-free revenue For certain expenses partial deduction was applied (e.g. for gifts and subsidies granted were established tax-deductible limit set by law) |
| | Government Ordinance No. | January 1, | Elimination of the distinction between small and |

| | | | |
|----------------|---|-----------------|---|
| | 70 / 29.08.1994 on the profit tax, republished | 1997 | large taxpayers Elimination of the distinction between accounting depreciation and tax depreciation |
| | Government Emergency Ordinance No. 217 /29.12.1999 | January 1, 2000 | Profit tax rate was set at 25% Explanations were provided for the total deduction or partial deduction of expenditure included in the calculation of taxable income. The concept of taxable income is reintroduced; it may occur for property revaluation |
| 2002-2003 | Law No. 414 / 26.06.2002 on the profit tax, 1994 ⁽²⁾ | July 1, 2002 | Taxable profit = total revenue - total expenses – tax-free revenue + non-deductible expenses The categories of free-tax revenue were defined |
| 2004 - present | Law No. 571 / 22.12.2003 on the Fiscal Code | January 1, 2004 | Taxes and fees due to the state budget and local budgets are regulated, income taxes being regulated under Chapter II of this Law The categories of free-tax revenue, deductible expenses, partially deductible expenses, and fully non-deductible expenses are distinctly regulated Distinction between accounting depreciation and tax depreciation The amount of reserves that can be deducted in the determination of taxable income and tax deductible provisions is distinctly regulated The determination of the deductibility of interest expenses and the foreign exchange losses is distinctly regulated Tax credit concept is introduced; the most common tax credit is represented by the deduction of the gifts and subsidies expense from profit tax, granted in the amount according to law |
| | Government Emergency Ordinance No. 138 /29.12.2004 | January 1, 2005 | Profit tax rate was set at 16% |
| | Government Emergency Ordinance No. 34 / 11.04.2009 | May 1, 2009 | Introduction of the minimum tax which is applied on companies revenues obtained in the previous year, whether or not they obtain profit The deductibility of expenses for certain sectors, such as fuel expenditure, value added tax related to the purchase of cars, was eliminated The tax measures apply until 31.12.2010 |

Source: Authors projections based on Fekete *et al.* (2010)

4. Empirical analysis regarding the amendments of the profit tax regulations

The methodology that we used in the empirical analysis is based on the longitudinal view regarding the total number of amendments which were produced over time in terms of profit tax regulations.

The information's regarding the profit tax regulations were obtained from the Official Journal of Romania (www.moficial.ro), and from the official site of the Chamber of Deputies, (www.cdep.ro).

In this respect, to obtain the answer to this problem, we conducted an analysis that consisted in the counting of the regulations that have amended the main profit tax regulations. The answer of the main problem of our research, was obtain based on the following research questions:

Q1: Which is the total number of regulations that have amended the main profit tax regulations?

Table 2. The number of regulations which amended or proposed amendments of the main profit tax regulations

| | Total, that comprised | Government regulations approved by law without amendments | Government regulations approved by law with amendments | Laws which amended the Government regulations | Regulations that have a direct amendment* | Government regulations rejected by law | Government regulations which are not yet adopted |
|---|-----------------------|---|--|---|---|--|--|
| Law no. 12/1991 | 5 | 0 | 0 | 0 | 5 | 0 | 0 |
| Government Ordinance no. 70/1994 | 5 | 3 | 0 | 0 | 2 | 0 | 0 |
| Government Ordinance no. 70/1994, republished | 23 | 7 | 4 | 4 | 4 | 4 | 0 |
| Law no. 414/2002 | 3 | 1 | 1 | 1 | 0 | 0 | 0 |
| Law no. 571/2003 | 21 | 10 | 4 | 4 | 2 | 0 | 1 |
| TOTAL | 57 | 21 | 9 | 9 | 13 | 4 | 1 |

Source: Authors projections

Table 2 shows that a total number of 57 regulations amended or proposed amendments of the main profit tax regulations. The highest percentages are represented by the Government regulations (Government Ordinance or Emergency Ordinance) (21 regulations), respectively 13 regulations that have a direct amendment (* there are included those regulations which did not approve the amendments made by other regulations). There is also, an approval amendment of Law no. 571/2003 (Emergency Ordinance no. 117/2010) which is not net adopted.

Q2: Which is the type of amendments implemented over regulations (abolishment, text amendment, adding new articles or alignments)?

Table 3 illustrates that a number of 168 proposals of amendments were made over the 3 main regulations (over Law no.12/1991 no amendment proposal was made). A percentage of 50% (84 of 168 proposals) of the total proposals represents the articles amendments (change the existing text articles of the main regulations). The gray part of **Table 4** illustrates that a total number of 43 amendments approve without proposals (Regulations that have a direct amendment); in this case, 70% of amendments are represented by articles amendments (30 of 43 amendments).

Table 3. The total proposal of amendments

| Profit tax regulation | Total proposal of amendments, that comprised | Articles amendments | Abolishment | Completion |
|--|--|---------------------|-------------|------------|
| Law no. 12/1991 | 0 | 0 | 0 | 0 |
| Government Ordinance (GO) no. 70/1994 | 2 | 2 | 0 | 0 |
| Government Ordinance (GO) no. 70/1994, republished (r) | 53 | 13 | 14 | 10 |
| Law no. 414/2002 | 8 | 6 | 0 | 2 |
| Law no. 571/2003 | 105 | 63 | 16 | 26 |
| TOTAL | 168 | 84 | 30 | 38 |

Source: Authors projection

Q3: Which is the total number of amendments approved by law without modifications, respectively the total number of amendments approved on the Official Journal through Government Ordinance or Emergency Ordinance and unapproved by law?

The answer of this question is received from data collected in **Table 2**. Thus, a total number of 21 Government regulations approved by law without amendments which amended a total number of 133 through proposals, which represent 61,29% from the total proposals (based on **Table 4**). **Table 4** contains also the amendments to the proposals (23 amendments) and the completion to the proposals (10 regulations completion, 5 regulations amendments and 3 repelling (abolish). These were made by 9 Government regulations approved by law with amendments, plus 9 Laws which amended the Government regulations.

Table 4. The total approvals amended by regulations

| | Total approvals, that comprised | Amendments approves through proposals | Amendments to the proposals | Completions to the proposals | | | Amendments approve without proposals, that comprised | <i>Articles amendments</i> | <i>Abolishment</i> | <i>Completion</i> |
|-------------------|--|---------------------------------------|-----------------------------|------------------------------|------------------------|-------------|--|----------------------------|--------------------|-------------------|
| | | | | Regulations completion | Regulations amendments | Abolishment | | | | |
| Law no. 12/1991 | 10 | 0 | 0 | 0 | 0 | 0 | 10 | 9 | 1 | 0 |
| GO no. 70/1994 | 8 | 2 | 0 | 0 | 0 | 0 | 6 | 3 | 0 | 3 |
| GO no. 70/1994, r | 56 | 31 | 15 | 3 | 1 | 0 | 6 | 5 | 1 | 0 |
| Law no. 414/2002 | 9 | 4 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Law no. 571/2003 | 134 | 96 | 4 | 6 | 4 | 3 | 21 | 13 | 2 | 6 |
| TOTAL | 217 | 133 | 23 | 10 | 5 | 3 | 43 | 30 | 4 | 9 |

Source: Authors projection

5. Conclusions

As a result of the analysis conducted, we can conclude that the profit tax regulation is stable only in terms of the small number of main regulations (5 regulations over time), the large number of amendments creating difficulties in the understanding and application by practitioners. During the 20 years of the analysis, a total number of 217 approvals were amended the profit tax regulations, which were made by 57 regulations (56 which were adopted, and 1 which were not yet adopted). As a weight of the amendments, around 11 amendments were approved each year, this showing that the profit tax regulations are dominated by instability.

As further research, we will analysis the types of the amendments, based on 3 directions: (1) the direct influence analysis (amendments with effect over all type of taxpayers) and indirect influence; (2) the text analysis of amendments, in this respect being conducted other statistical analysis, based on the social impact produces by regulations (e.g. the effects of crisis in terms of regulations); (3) the type of amendments (e.g. the tax base, the tax rate, etc.).

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PRINCIPLES- AND RULES-BASED ACCOUNTING DEBATE. IMPLICATIONS FOR AN EMERGENT COUNTRY

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By a qualitative analysis, this research observes whether a principles-based system or a mixed version of it with the rules-based system, applied in Romania - an emergent country - is appropriate taking into account the mentalities, the traditions, and other cultural elements that were typical of a rules-based system. We support the statement that, even if certain contextual variables are common to other developed countries, their environments significantly differ. To be effective, financial reporting must reflect the firm's context in which it is functioning. The research has a deductive approach based on the analysis of the cultural factors and their influence in the last years. For Romania it is argue a lower accounting professionalism associated with a low level of ambiguity tolerance. For the stage analysed in this study (after the year 2005) the professional reasoning - a proxy for the accounting professional behaviour - took into consideration the fiscal and legal requirements rather than the accounting principles and judgments. The research suggest that the Romanian accounting practice and the professionals are not fully prepared for a principles-based system environment, associated with the ability to find undisclosed events, facing ambiguity, identifying inferred relationships and using intuition, respectively working with uncertainty. We therefore reach the conclusion that in Romania institutional amendments affecting the professional expertise would be needed. The accounting regulations must be chosen with great caution and they must answer and/ or be adjusted, even if the process would be delayed, to national values, behaviour of companies and individual expertise and beliefs. Secondly, the benefits of applying accounting reasoning in this country may be enhanced through a better understanding of their content and through practical exercise. Here regulatory bodies may intervene for organizing professional training programs and acting towards the improvement of the codes of conduct's effectiveness.

Keywords: emergent countries, rules or principles-based system, IFRS.

JEL: M41, M48

1. Introduction

The study investigates on the relevance of the principles-based/ rules-based debate for the current accounting period and for an emergent country. By a qualitative analysis, this research observes whether a principles-based system (hereafter PBS) or a mixed version of it with the rules-based system (hereafter RBS), applied in Romania - an emergent country – is appropriate taking into account the mentalities, the traditions, and the cultural elements that are typical of a RBS. Particularly, it investigate, comparing to the accounting regulations for which it argue that, in Romania, are currently a mix of principles and rules, the extent to which principles- characteristic of the International Financial Accounting Standards (IFRS) that influenced financial reporting in this country- are applied at the practice level, which has been traditionally rules-based.

It starts from the PBS system versus the RBS system debate. This is related to the accounting systems classification. A review of the extremely rich literature on accounting systems classification is beyond the aim of this study restricted to reminding some of these valuable studies: Nair and Frank 1980; Nobes 1983; Joos and Lang 1994; Nobes 1998; Alexander and Archer 2001; D'Arcy 2001; Nobes 2004; Sellhorn and Gornik-Tomaszewski 2006; Rossignol

and Walliser 2007. Historically speaking the established groups of accounting systems were: Anglo-Saxon or Anglo-American (AS)- Continental-European (CE); common law- code law; principles based system (PBS)- rules based system (RBS); shareholder-oriented - stakeholder-oriented; investor- creditor protection. Between the above criteria, this study focused on PBS, respectively RBS.

The remainder of the paper is organized as follows: Section 2 presents reference to the items important for this research in the literature, Section 3 develop the qualitative analysis, and the final section comments on the compliance between accounting rules and accounting environment and concludes on the accounting perspectives for an emergent economy.

2. Principles- and rules-based accounting debate – a literature review

Rating an accounting system as a principle- based or rules- based has become again topical after the financial scandals from the beginning of the 21st century, the most famous one being the Enron case, that have generated a crisis of confidence in financial reporting practice and regulation (McKernon and Kosmala 2007) mainly due to some companies that have followed the letter and not the spirit of the laws (Ball 2009). These scandals were the most impacting warning signals as to the need of changing the accounting environment from a rules - based one into a principles- based one in USA and from here in the entire world.

The PBS- RBS controversy features the Financial Accounting Standards Board (FASB), United States Security Exchange Commission (SEC) and the critics of standards or their actions. Being advocated the need to move towards a more principle-based financial reporting system, the FASB and the International Accounting Standard Board (IASB) signed the ‘Norwalk agreement’ (2004) aimed at the alignment of US GAAP and IFRS. It was agreed in this way that the American Standards are rather RBS, as opposed to IFRS that pertain to PBS. Therefore, the IASB conceptual framework is perceived as a guideline for both normalization and practice, whereas the FASB framework is just a guide for drawing up standards, the practice being dominated by rules (Feleagă 1999). However, there are opinions according to which the US GAAP are rules-based solely on the surface (due to their scope and treatment exceptions and detailed implementation guidance), de facto acting as a PBS (Schipper 2003; Ball 2009). Irrespective of these discussions regarding the American accounting system type, there certainly are difference between the US GAAP and IFRS and these should disappear with the purpose of converging the two sets of standards.

The descriptors of PBS are the fundamentals of accounting such as decision usefulness, true and fair view, going concern or substance over form. The system allows extensive opportunities for professional reasoning taking into consideration that specific requirements are kept to a minimum. This is also the talking point of the advocates of PBS which are scholars as well as standard setters from Anglo-Saxon countries. They also support the utility of this system which, having a deductive-normative approach, potentially gives more room for freedom of judgment to the practitioner (Feleagă 1999; Schipper 2003; McKernon and Kosmala 2007). Instead, a point is made on the laws and regulations (RBS) potentially affecting the degree of freedom and responsibility given to the accountant depriving the professional of bringing new interpretation and freshness of judgment to accounting decision-making. The Institute of Chartered Accountants of Scotland (ICAS 2006) argues that this system provides a comprehensive base and has flexibility to solve new test cases. The skeptics of PBS blame this flexibility that can be used to distort accounting information through earnings management (Nobes 2005). Finally, we note that the PBS, especially a genuine one (type A as per Alexander and Jermakowicz 2006) is supported by the concept of ‘true and fair view’ that in its turn raised an ongoing debate that will not be detailed in this study.

RBS is based on detailed provisions of solutions for most accounting cases, for which is unambiguously clear how and when it is to be applied. This system mentions and details what is or not is allowed. The main acknowledged advantage of RBS is that it increases financial information comparability facilitating auditors work in verifying the accounts (Schipper 2003). Even so, there are opinions that do not generalize the comparability advantage provided by RBS, suggesting that even such a system applied to various situations may lead to disclosure that causes confusions (Alexander and Jermakowicz 2006). Due to its stringency, in a RBS the professional have limited choices compared to PBS who give them latitude in accounting judgments (Feleagă 1999).

The main trend at this hour is the turn from rules to principles. His supporters argues for focusing attention on practice rather than on stipulated rules, that is what the companies are actually reporting (Ball 2009). It is asserted that this would enhance the professional, even moral judgment and as a consequence the truthfulness of financial reporting practices (McKernon and Kosmala 2007). The authors admit though that PBS is not infallible either, being prone, as well as its rival, to abuses. Pleading for recognizing the proper role of judgment in accounting practice, McKernan and Kosmala (2007) provides us with the solution of a gradual institutional change that includes a progressive relaxation of rules-dependency.

Within this frame of the current stage of the ongoing principles- and rules- based accounting debate, the present research singularizes the PBS- RBS typology to an emergent country, in the light of the IFRS tendency to spread worldwide (over 100 countries at this date, with plans for adoption by a number of others including United States by 2014). In order to analyze the Romanian accounting's evolution it is useful to mention that in literature, PBS is associated with a normalization based on conceptual framework, whereas RBS is associated with a normalization based on the chart of accounts. Also, generally speaking, PBS is superposed on the AS type accounting system and RBS is assimilated to an EC type.

3. Accounting in an economic emergent context – a qualitative analysis

Aiming to discover whether a principles-based system or a mixed version of it with the rules-based system is appropriate to the accounting environment specific to the current stage in Romania, we investigated the potential to integrate the views in the literature on financial reporting differentiation, specifically on the PBS-RBS debate with the economic context of the emergent countries and the orientation of this countries over the IFRS. The research has a deductive approach based on the analysis of the cultural factors and their influence in the last years.

If we refer to developing and emergent countries, out of which many adopted the IFRS, we support the statement that, even if certain contextual variables are common to other developed countries, their environments significantly differ (Hoarau 1995; Mir and Rahaman 2005). To be effective, financial reporting must reflect the firm's context in which it is functioning. Moreover, choosing a set of accounting rules under the influence of the political factors, either external or internal, might prove to be inappropriate to the market's development level, the firms' incentives, or the evolution of the accounting profession, all of these being the drivers of the economic, legal and cultural factors. A significant discrepancy between rules and the environment which persists in time or a significant fluctuation of the accounting rules diminishes the role of financial reporting.

The research looks at the tendency towards PBS showed worldwide and assumes that the tendency is not suitable to any context. Particularly, it is preoccupied by IFRS spread across the world. It sets forth the question of whether this single set of high-quality global accounting standards, IFRS- supported as rules based on demonstrations that compare them to US GAAP or UK GAAP- bring real economical and social benefits due to the accountancy of developing and

emergent countries with traditionally rules- based accounting systems. Is it not that ‘creative compliance’ with IFRS, observable in some countries as a result of enforcing international standards, especially in developing and emergent countries, covers up a diminishing role of an accounting not harmonized with environmental factors? The present study sets out proof for this assertion first of all through the example offered by Eastern European countries today members of the European Community like Romania. During communism these countries had accounting systems that represented adjustments of the Soviet accounting system (RBS type) (Bailey 1995; Richard 1995); afterwards, in the post-communism pre-adherence to the European Union (EU) period they adopted the accounting systems of the EU members from Continental Europe with which they had cultural affinities and/ or that had economical influences on these countries (European-Continental accounting system type- thus RBS, as the case of Romania and its connections to the French system as elaborated in studies like Matiş 2001; Feleagă and Ionaşcu 1993; Ionaşcu et al. 2007). In some cases IFRS were adopted by obtaining endorsed-IFRS (the case of Hungary brought into discussion in Fekete’s 2009 study). The same countries adopted IFRS for the consolidated accounts of the listed entities and they harmonized their national regulations with the Fourth European Directive, in the post-communism EU post- adherence period, resulting in- if we would like to quote Romania again- a mix of European recommendations, respectively of concepts and treatments extracted from IFRS. Along with the Eastern European countries, other studies offer examples of transition from RBS to IFRS (PBS), studies containing historiographies of some developing countries- e.g. Ong et al. (2004) for Taiwan- China that assert the difficulty of using the IFRS in the Far East’s practice, this one being anchored on rules; Mir and Rahaman (2005) for Bangladesh, country for which a very low compliance with IFRS is observed due to the pressure exerted by international lending institution considered an undemocratic process of adoption; Hassan (2008), who taking Egypt as a case study shows that new financial accounting rules need to be implemented after a deep investigation of the complexity of the social, political and economic context, especially for less developed country in transition; his findings suggest that Egyptian regulations harmonized with IFRS are not entirely to meet user’s needs. As similarities of these studies we may notice the caution even the suspicions with which either accounting professionals or users of financial reporting regard national regulations change over the IFRS.

Bringing the discussion on the Romanian context, it is firstly important to define the actual accounting system. In the current period, that can be localized after the year 2006, OMFP no.1752/2005 for approving Accounting Rules Harmonized with the European Directives is adopted, which requires all entities to apply accounting rules aligned with the European rules, starting with January 1st, 2006. This act was replaced in 2009 by OMFP no. 3055 on January 1st, 2010, which brings some updating in compliance with IFRS. The action of the Ministry of Public Finances is justified by Romania’s imminent integration with full rights in the EU, integration that materialized at the beginning of the following year. The entities formerly considered ‘large’ applying in the previous stage rules complying with IFRS (PBS type), had to adopt in the current stage the new rules of RBS essence. In this stage IFRS are mandatory for the credit institutions and optional for the other entities considered publicly accountable. The movement in circle (from a RBS system to a PBS system and back) continues for some entities – namely listed entities – together with the compulsory adoption of IFRS for their consolidated accounts on January 1st, 2007.

With respect to the appropriateness of the current accounting system for the Romanian environment, critics regarding the adaptation of IFRS are based on the insufficient education in Romania, from a cultural point of view (the mentality), technical (needed knowledge, practical experience of Romanian professionals), and legal (accounting was strongly anchored in fiscal rules). Ionaşcu et al. (2007) quotes Roberts (2000) when he states, regarding the East European

countries, that the mixture of accounting philosophies through superposing of an Anglo-Saxon accounting system on a legalistic one is a cultural intrusion. In the same manner, Nobes (1998) shows that the introduction of a system of class A (AS type) in former communist countries might be inappropriate; except for the case in which a development of the capital market associated with the AS system is observed, like in the case of large or listed entities. Certain studies (Bailey 1995; Ionaşcu et al. 2007) show that cost-effectiveness of the respective changes was insignificant for the developing and emergent countries, at least during the implementation period. The difficult adjustment to the new accounting rules of emergent countries (mainly to IFRS) is confirmed by other studies as well, for example Bailey (1995), Ong et al. (2004), Ionaşcu et al. (2007), Fekete (2009).

Discussion and conclusions

At this time the views of most specialists on the prevalence of principles on the rules or, at most, a mix up of rules and principles. Rules should reinforce a principle rather than pre-empting or rendering it meaningless. For example, ICAS proposes a high level principle with a minimum of guidance. This should be associated with institutional and legal changes for reducing the number of rules and establishing guides, respectively with the development of accounting professional as expertise and ethics (ICAS 2006). It is also pointed out that RBS-PBS debate was based rather on political and polemical concerns than on conceptual ones (Alexander and Jermakowicz 2006). The same authors assert that the human behaviour is decisive for quality assurance of the financial reporting and for reflecting a fair image of the economic sphere. This viewpoint is also shared by Quinn (2003) who emphasizes that the most important aspect is honesty without which any system is vulnerable, including a PBS type. Good ethics and a good governance system would be needed. We notice the focus on people, on the personal behaviour, on the expertise and expert. These ideas are linked to the findings of studies focusing on the social character of the accounting that depict the movement towards a society increasingly populated by experts (Lowe 2004).

Based on these assertions, as concern the accounting Romanian future, it is to ask if the environmental factors, which we titled accounting environment, can support a PBS system. Therefore, we will discuss on the Romanian environmental factors, stopping on the cultural ones. The cultural factors are implicit in the choice for accounting rules and within the accounting environment. Thus, we assert that choosing a RBS or a PBS accounting system (rules level) bears the print of cultural domination and cultural affinities of the country, together with the political choices. If we refer to this first dimension of the problem, as being the choice of accounting system – more rules or more principles based – we note the use of IFRS for a limited number of companies, respectively interferences of IFRS – PBS system on the rules applicable to other companies. That means that the European Directive, on which was ensured compliance of Romanian regulations, is influenced as well by IFRS and the PBS model.

Concerns the influence of the cultural factors on the accounting environment, we consider Hofstede's (1983) values discussed by Littrell and Lapadus (2005) for Romania, namely low individualism, uncertainty avoidance and high power distance. Gray (1988), while converting Hofstede's cultural values in accounting values, defines accounting professionalism in relation to the extent of individual professional reasoning in uncertainty accounting tasks. For Romania this means a lower accounting professionalism associated with a low level of ambiguity tolerance, argued also by Harding and Ming-Chuan's (2007) for China as a developing country, focusing on the cultural and social influential factors. If we also look to the accounting practice, we conclude that (also) in this stage, the professional reasoning - a proxy for the accounting professional behaviour - took into consideration the fiscal and legal requirements rather than the accounting

principles and judgments, assessment confirmed by the empirical study conducted by Buiga et al. (2010).

Finally, this synthetic qualitative analysis suggest that, related to a mix RBS-PBS accounting system, the Romanian accounting practice and the professionals are not fully prepared for a principles-based system environment. As Stevenson and Berger (2009) suggest, this kind of environment is associated with the ability to find undisclosed events, facing ambiguity, identifying inferred relationships and using intuition, respectively working with uncertainty, all these being closely related to the enforcement of the ethical behaviour. We therefore reach the conclusion that in Romania institutional amendments affecting the professional expertise would be needed. The accounting regulations must be chosen with great caution and they must answer and/ or be adjusted, even if the process would be delayed, to national values, behaviour of companies and individual expertise and beliefs. Secondly, the benefits of applying accounting reasoning in this country may be enhanced through a better understanding of their content and through practical exercise. Here regulatory bodies may intervene for organizing professional training programs and acting towards the improvement of the codes of conduct's effectiveness. The limits of the study are related to a certain themes which were not investigated enough in this space. Therefore, a future research can develop a description of the current Romanian accounting context, both in terms of rules, as well as practical level. Also, judging that the cultural dimension of the Romanian accounting presented above may not be completely verifiable at this date, it is recommended to extend this short study to the evolution of the profession in Romania, and to retesting of the cultural factors dimension.

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THE TRANSPARENCY IN THE REPORTING OF INTELLECTUAL CAPITAL: BETWEEN THE MANAGEMENT RESPONSIBILITY AND THE STAKEHOLDERS' REQUIREMENTS

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The increasingly ample orientation of the companies towards the intellectual capital is based on the rediscovery of this resource with (almost) unlimited potential, generating economic benefits for a company. Given its importance, the information needs of stakeholders on this line have increased. Thus, in this context, it was put the issue of reporting information related to intellectual capital and the transparency of information published by companies, given that its reporting is not currently regulated. The objective of this paper is to establish an answer to a question: Up to what limit should be made public information related to this capital, given that stakeholders want as much information, and managers only publish information that favors the company's image? In addressing this issue, the point of departure is the intellectual capital structure, most commonly found in the literature, namely human capital, structural capital and relational capital. With this structure, the paper establishes, as a first step, a series of relevant indicators relating to the three components from three different perspectives: resources, management achievements and future expectations. At first observation, the indicators are divided into two categories: financial and non-financial, the first ones targeting the company's performance in relation to the components of intellectual capital, and the latter ones having a pronounced social touch. Based on these indicators, the paper analyses whether a company is willing to publish information, particularly those with social influence, especially in the current conditions of intensely requested social responsibility. In addition to documentary research, we also consider the most important findings based on existing reporting arrangements of the companies, especially from the reports published by them, depending on different criteria, such as social engagement, financial and accounting criteria etc. Given the lack of clear regulations in this respect, it is up to the companies the amount of information publicly provided about this topic, although the benefits of social responsibility have an important impact on the intellectual capital and its components. In this context, accounting helps stakeholders by proposing a valuation model of intellectual capital, based on accounting figures. This financial assessment of intellectual capital, although very useful, is limited and not sufficient in reflecting the image of a company in public reports. This paper aims to present intellectual capital reporting valences, its two sides, financial (which includes the performance of the intellectual capital) and non-financial, including scoring the issues that underline the importance of such reports, from the perspective of the stakeholders and the accountability of the managers in relation to them.

Keywords: intellectual capital, transparency, stakeholders, human capital, intangible assets

JEL Codes: M11, M14, M41

I. The intellectual capital – the 21st century's resource

Bringing in front the intellectual capital in the 21st century companies was a direct consequence of the attitude towards the resources. The theory of resource-based company specifies that company is a collection of material, financial and intellectual resources, the development and the performance of a business being ensured by their use (Neagu 2007: 164). Judging in terms of traditional accounting and directly related to the problem, intellectual capital is generally treated

as intellectual property, plus those unspecified resources, grouped under the specific designation of intangible assets. A composition of intellectual capital is presented as follows:

One is people or *human capital*. We can define human capital as the amount of skills, abilities, talent, knowledge and expertise of employees (Arsene 2010: 158). Another component is what is surrounding people in an organization and that is *structural capital* – all those intangibles left behind, when people go home, internal processes and structures, patents, databases, all documents certifying the know-how of a company. As third part, there are external processes and relations, customer relationships and company's image, called *social (relational) capital*.

A closer analysis reveals though the necessity to include in the definition above any type or transformation of any intangible assets which are under some control of an organization and contribute to the general process of creating added value for that organization. So, from this point of view, intellectual capital must be more than pure intellect, but include intellectual action. It is the move from “having” knowledge and skills to “using” them (Swart 2005: 3). The “using” of knowledge implies that relationships (social capital) and intangible assets and processes (structural capital) are needed to transform knowledge, abilities, skills and expertise (which are owned by the employees – human capital) into a product or service that is of value to the firm and its stockholders.

Analyzing the intellectual capital through *the input-process-output relationship, we may consider that the input is the knowledge, expertise and skills of the employees. This input is transformed by the processes reflected in the structural and social capital (the know-how of a company combined with its image and relationships with the economic and social environment). The output is the added value for the stakeholders and the company itself.*

Related to this matter, there are two different discourses of transparency, namely one discourse based on generic reporting versus a second discourse based on management driven information. In other words, one discourse highlights as much information to stakeholders as possible, but seems to be in the process of being substituted by another, which emphasizes reporting what is seen from the perspective of management, namely the “right” information. The value of the product provided by a company for its stakeholders – the information – should be the result of demand and supply. But that does not happen just so, sometimes the offer of information appears to be a response to stakeholders' demand, but it turns out to be a handled one.

II. The need for transparency in companies' reporting

Transparency considers two categories of information: one related to financial aspects of a company's life and one which takes into account the non-financial life of a company, in terms of relations with stakeholders, environment and society as a whole.

Starting from this general view on transparency of public information of a company, we consider some aspects related to the transparency of the information related to the intellectual capital.

In practice, there can be two different opinions: the application of non-financial indicators provides interesting new angles and are of great value to investors, while identifying important performance indicators aims at informing both managers and investors. In the 21st century, we may affirm is a general consensus that by applying many new non-financial measures, e.g. sustainability measures and social responsibilities (Global Reporting Initiative), companies can strengthen their external communications, thereby achieving greater transparency. *The term transparency becomes equivalent to disclosing non-financial information and information relating to the company's value creation.*

A characteristic of all information, not just those related to intellectual capital, the manipulation at the limit of legality actually allows changing the image to promote the enterprise on the market, being considered, to one point, as “creative”. But as in any other case, the demarcation between opportunity and opportunism is sensitive, and the creativity can become fraud.

Development of creative side of the information publicly provided by the companies, driven by gaps in laws and regulations, makes it difficult or even impossible to assessing the actual situation of the company and causes serious degradation in the truth, putting into question both the responsibility of information producers and their level of transparency. The reporting of intellectual capital, not being regulated, imposes questions about the limits of information publicly offered to the stakeholders, in relation to the transparency required by the responsibility of the information producers.

From these specifications, two partial conclusions can be drawn. First, transparency in terms of providing sufficient information for stakeholders in order for them to be able to evaluate the activities of corporations must be directed towards society as a whole. Second, transparency is mobilized as a means and not a goal in itself, because in this case, it is seen as a characteristic of the information publicly offered to the stakeholders. The more complete information is, the better informed are the decisions makers.

Additional, it has been discussed that a dilemma exists between minimizing information asymmetry and the costs of disclosure, both from a cost/benefit perspective, but more importantly also with regard to the sensitivity of the information disclosed (Nielsen and Madsen 2009: 849-851).

III. The relationship between the intellectual capital and the social responsibility: from internal reporting to accountability and transparency

Production and dissemination of information by a firm is nothing but simply the result of human will and consciousness and it is in fact a social phenomenon. For these reasons, it must be characterized by accountability and transparency. Interests of users of information are different, which causes some, such as managers, to intervene in the application of companies’ policies and methods so as to be benefited. Then, position occupied by some users is that they have a privileged status in terms of information (the investors or the banks).

Before trying to find a financial value of the intellectual capital, first we propose an internal representation of the three main components, each considered briefly from three different, but connected, points of view: as company’s resources – these can be measured and reported (“what there is”), as a representation of how the intellectual capital management system works (“what is done”), and whether the use of intellectual capital is leading to efficient products and services requested by customers (“what should happen”) (Brennan and Connell 2000: 206-240). Are the components of intellectual capital increasing the flow of benefits for the company?

Table no 1 Indicators for reporting the three components of intellectual capital

| Category | What there is | What is done | What should happen |
|---------------------------|--|--|---|
| <i>Human capital</i> | Seniority | Share of employees with development plan | Employee satisfaction and fidelity |
| | Education | Number of training days per employee | Human resource turnover and other financial ratios |
| | Value-added per employee | Report between the profit plus pay and the number of employees | Employee competency and abilities; increase of the expertise |
| | Education costs | Education/training costs | Value per employee |
| <i>Relational capital</i> | Distribution of turnover on markets/products | Customers per employee | Customer satisfaction; customers’ rating Annual sales per customer |
| | Market share | Company’s policy related to customers; Share of | Lost customers, new customers |

| Category | What there is | What is done | What should happen |
|---------------------------|--------------------------------------|--|--|
| | | turnover related to existing customers | |
| | Marketing expenses | Marketing expenses over net turnover Administration costs per marketing | Medium size of customers; medium time of the company-customers relationship; customers database; brand image |
| <i>Structural capital</i> | Investments in R&D IT investments | Product development time – intellectual assets generation; brands, know-how, licenses; PCs per employees; IT expenses per employee | Quality Low error rate IT literacy |
| | Organizational culture | Quality improvements Management philosophy | Reputation inside the company and on the market |
| | Risk management | Corporate governance | Increased level of transparency |
| | Knowledge-based infrastructure | Laboratories; databases; distribution channels | |

Source: Adapted from Brennan and Connell 2000.

As we can see, the columns for what there is and what is done can be publicly presented, in our opinion. But the third column is usually related to internal issues, and the probability for a company to unconditionally present this information is very low. The third column has a strong social component, so we may consider it is a part of corporate social responsibility and all the indicators should be presented in a social report, as part of the non-financial reporting of a company.

Starting from the indicators presented above, we can find connections between the benefits of corporate social responsibility and the main components of the intellectual capital, pointing out the impact on the latter. Thus, the social responsibility can contribute to the increase of company's intangibles and intellectual capital (especially, of human and relational capital) even if in some cases the effects are embedded in the nature of social responsibility and appear not so evident (Table no 2). The disclosure is essential because it signals the value of investment in intangibles, otherwise unrealized by stakeholders. Therefore stakeholders become aware about social responsibility and this enhances the visibility, legitimacy and reputation of the company itself. In this perspective, corporate social activity is a resource that can be leveraged also by an informative disclosure that reinforces the company capabilities to gain a competitive advantage (Emilio Pasetti et al. 2009: 5). In the last few years, the attitude of the companies is opened to transparency in presenting the information about their social attitude and preoccupations.

Table no 2 Corporate Social Responsibility and intellectual capital

| Corporate Social Responsibility Benefits | Impact on intellectual capital |
|--|---------------------------------------|
| Human capital | |
| Increasing motivation; improvement of skills and competences through training activities | Employee training |
| Increasing loyalty, employee safety and health, employee benefits; attract qualified personnel | Employee wellness |
| Structural capital | |
| Improvement of voluntary disclosure, of quality of processes, and of internal communication system | Management Process |
| Proactive risk management; increasing the level of company transparency | Corporate governance |
| Repositioning of brand name; rethinking competitive strategies; management of stakeholders' relationships | Strategy |
| Changing in corporate culture; improving commitment | Culture |
| Improvement of environmental R&D activities | R&D |
| Relational capital | |
| Improve company reputation (social, financial, etc.) | Brand image |
| Acquire new clients, increase client loyalty | Customers |
| Strengthen co-operation, improvement of supplier ethical and social profile and performance | Suppliers |
| Increasing investors attention, and financial analysts attention, better market trust, access to ethical indices | Financial relationships |

Source: Emilio Pasetti et al. 2009.

IV. An accounting model for the financial assessment of intellectual capital

The financial overview of intellectual capital imposes a review of the most common financial reporting, which is represented by the differences, sometimes substantial, between company book values and market values, and of the transparency of the accounting information related to that. Together, these indicate the presence of assets not recognized and measured in company balance-sheets. Usually, the intellectual capital accounts for a substantial proportion of this discrepancy.

At present, companies are not required to report on intellectual capital assets, which leave the traditional accounting system ineffective for measuring the true impact of such intangibles.

If the report of intellectual capital would become mandatory in the explanatory notes to the financial statements, the form of the financial overview of intellectual capital is as follows (Hoogendoorn et.al 1999: 4):

Fair value of the company (A) - The fair value of the tangible and monetary assets, after deduction of debts and provisions (B) - The fair value of the identifiable and separable intangible assets (C) = The fair value of the remaining intellectual capital (D)

This overview is drawn up on the basis of the idea that the value of the intellectual capital equals the difference between the fair value of the company (or the shareholders' value) and the book value of the tangible and financial assets less debts and provisions. In order to realize an accurate valuation of the intellectual capital, which equals the sum of C and D, we take the view that the fair value of the company should be deducted from the fair value of the tangible and monetary assets, less the fair value of the debts and provisions. If, for example, the cost of property would be used instead of the fair value, the difference between fair value and historical cost would improperly be attributed to the valuation of the intellectual capital.

In case of reporting for intellectual capital, the distinction between elements C and D is important for the assessment of the company's financial position by stakeholders. The better a company is

able to translate its intellectual capital into identifiable and separable intangible assets, the less dependent the value becomes on future profit expectations: after all, identifiable and separable intangible assets can be traded independently and can therefore generate earnings independently, regardless of movements in the profitability of the organization as a whole.

This accounting model does not pose the problem of transparency, but it answers partially to the information needs of stakeholders, providing information about the aggregate value of intellectual capital. In this case, we have to mention that, in our opinion, the financial reporting (mainly related to performance indicators calculated in relation to intellectual capital and the valuation model) must combine with a non-financial, social reporting.

V. Conclusions

This paper is an overview of financial and non-financial indicators relating to the intellectual capital, which should be reported by companies, in order for them to answer to informational needs of their stakeholders. The impact of non-financial reporting of intellectual capital, as part of the corporate social responsibility, is a strong argument in this direction. Of course, the reporting may include a way to commensurate it using the accounting data.

Yet, regardless of the nature of information, for it to be included in external reports, it imposes restrictions: the question of which level of aggregation of information can still provide meaningful and useful information for the stakeholders. A financial amount is enough or it must be completed by non-financial aspects, which determined that amount? The question of whether information included in reviews intended for internal corporate control, in the form of performance indicators, qualifies for publication in external reports must also be answered. Clearly, confidential information and information of strategic importance to competitors cannot be disclosed, despite the fact that stakeholders are seen as privileged users. This last point poses the problem of transparency. *Where the confidentiality ends and transparency starts? Because, in the case of intellectual capital, transparency is not regulated, it became a matter of responsibility and professional reasoning of the management?*

Arguing the need for transparency in financial and non-financial reporting of intellectual capital is defining in presenting a company as a sum of tangible and intangible resources. Limiting the transparency and awareness of users can affect the quality of decisions and their degree of confidence in decision making. Promoting this concept and its influence on the materiality of disclosed information can improve the quality of financial and non-financial reporting of economic entities.

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CORPORATE GOVERNANCE—THE ROLE AND APPLICATION OF THE PRINCIPLE OF TRANSPARENCY

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The aim of the current research is to clarify the concept of ‘corporate governance’ as we believe it is a relatively new concept at national level. At the same time, our analysis focused on the manner in which the principle of transparency has been incorporated into the recommendations and regulations/provisions of the Bucharest Stock Exchange (Romanian: BVB) and how this principle has been applied by the companies listed with the BVB. In order to accomplish the objectives of our research, we adopted a deductive approach, from general to specific, by means of which we were able to combine qualitative with quantitative studies. Therefore, our approach started from the definition found within the principles of OECD according to which ‘corporate governance’ is the system by which companies are run and controlled. In Romania, the concept of ‘corporate governance’ was first advanced in 1999 by the Strategic Alliance of the Business Associations (Romanian: ASAA), which drew up a “Voluntary code of corporate governance” in association with the Confederation of Private Entrepreneurs in Timiş county and the Chamber of Commerce and Industry of Romania and Bucharest. Another facet of our research is the principle of transparency and the manner in which entities should put it to practice in order to ensure efficient corporate governance. To this effect, since the beginning of 2009 the entities listed with the BVB have been under obligation to report which recommendations of the new Corporate Governance Code have actually been implemented by the company in the current financial year by disclosing to BVB the “Comply or Explain” Statement. The findings of our research show that the concept of ‘corporate governance’ has lately been a matter for intense debate due to the famous financial failures in recent years. In 2009, Transelectrica was the only company in tier I of the BVB which filled in and submitted the “Comply or Explain” Statement. Therefore, we believe that Transelectrica should serve as a fine example for the entities listed with the BVB as regards the filling in and submitting of the said Statement.

Keywords: corporate governance, transparency, efficiency, recommendations, regulations M42, M48

1. Introduction

As framework for the operation of the external audit, corporate governance has been conceptually analyzed starting from the universally acknowledged definition found in the principles of OECD, then in terms of its attributes by taking into account its underlying principles. Therefore, we believe that efficiency may be a defining attribute for corporate governance on condition that all recommendations and principles of OECD issued in this regard are strictly followed. Our purpose has been to deal at great length with the principle of transparency, as it is closely related to the topic being researched. To this effect, we studied the manner in which the principle of transparency has been incorporated into the recommendations and regulations of the BVB. In order to conclude our theoretical study we analyzed the manner in which this principle is applied by the Romanian societies/companies listed with BVB in tier I, and then we made a detailed presentation of an example of good practice and conducted a case study focused on Transelectrica society.

In the final part of our scientific endeavour we present the main conclusions which highlight the findings of the research conducted.

2. Research methodology

In order to accomplish the objectives of our research, our scientific endeavour adopted a deductive approach, from general to specific, which combines qualitative with quantitative studies. The starting point of our research is based on the current level of knowledge of the key concept „corporate governance”.

The concept of governance has been approached in terms of the Principles of Corporate Governance issued by OECD as well as the degree to which these principles have been incorporated at national level and the role they play in developing efficient corporate governance. Going from synthesis to analysis, we continued by stressing the importance of observing the principle of transparency and conducted a case study about the observance of the said principle by the Romanian entities.

In conducting our case study on the practices of efficient corporate governance adopted by the societies listed with the Bucharest Stock Exchange, we made use of the non-participant observation method which, according to Krüger (1988), gives a series of advantages because the information can be obtained easily and at little expense when the respondents are not willing to impart it. Thus, we were able to obtain in-depth, direct information which has not been processed or interpreted.

3. Defining the concept of corporate governance

The concept of corporate governance was first introduced in 1999 by the Organization for Economic Co-operation and Development (OECD). OECD defines ‘corporate governance’ as the system by which companies are run and controlled as well as the manner in which liabilities and rights are shared by the main actors (shareholders) of an entity. Of these, OECD mentions the Board of Directors, who has a substantial decision-making role to play in a company, followed by managers, shareholders and other stakeholders. In order to support entities to apply the principles of corporate governance, OECD published a guide to corporate governance describing the principles underlying an efficient corporate governance.

The OECD principles describe the manner in which decisions should be taken within an entity, starting from the definition of the strategic objectives, the proper means to achieve them and the monitoring of the financial performance. Managers occupy the leading role in bringing more efficiency to the corporate governance. Therefore, a good corporate governance must provide managers with adequate incentives in order to motivate them to run the entity properly and pursue the accomplishment of the entity’s and shareholders’ objectives (OECD, 2004).

The concept of corporate governance could be well summarized as being a set of processes, customs, policies, laws and institutions affecting the way an entity is administered and controlled, with a view to increasing its performance and value. It actually refers to enhancing the efficiency of the management systems, with special emphasis on the role of the Board of Directors, the responsibility and remuneration of its members, the credibility of the financial situation/standing and the efficiency of the risk management systems.

In Romania, the concept of corporate governance was first advanced in 1999 by the Strategic Alliance of the Business Associations (Romanian: ASAA), which drew up a “Voluntary code of corporate governance” in association with the Confederation of Private Entrepreneurs in Timiș county and the Chamber of Commerce and Industry of Romania and Bucharest. The Code’s purpose is to draw the attention of the business environments, the Boards of Directors and CEOs of the incorporated enterprises to the experience of the OECD countries and the principles they adopted in the field of corporate governance.

On the other hand, the Bucharest Stock Exchange is actively engaged in promoting the principles of corporate governance issued by the OECD. One of the first steps in this regard was the establishment in 2001 of a Corporate Governance Code which the entities trading on the market of the BVB should apply in whole or in part. In 2008, the Code was amended in order to be harmonized with the principles of corporate governance issued by OECD. The Code, taking effect from the beginning of 2009, contains certain recommendations on the transparency of the obligation toward the BVB and investors to submit the Annual Report. The Code contains 11 articles structured by the principles of OECD. One or more of the 19 principles are explained in each article and for each principle the Code elaborates recommendations for its application so that the Code comprises a total of 41 recommendations. In order to help the issuers apply the recommendations of the Code, in March 2010 the Bucharest Stock Exchange published 'Implementation Guidelines for the Corporate Governance Code' which provides details on the implementation of certain recommendations.

4. Efficient corporate governance

It is necessary to strictly observe each and every principle so that corporate governance may properly be termed "efficient".

a) The role of observing the principle of transparency in developing efficient corporate governance.

Below we shall deal exclusively with the principle of transparency and the manner in which the entities must put it to practice to ensure efficient corporate governance, as the said principle is directly related to the purpose of our research.

An important role within corporate governance is occupied by the transparent information of shareholders and other stakeholder categories. In order to build up their trust in the financial and non-financial information provided by the entity, the information must be audited. As the financial auditor is an independent professional whose activity is carried out in the public interest, his opinion expressed in the audit report contributes to the increase of all stakeholders' trust in the accuracy of information provided by the entity.

The range of reports made up of balance sheet, profit and loss account, cash flow, capital inflow and outflow along with guidance notes and accounting policies are the main financial information provided to stakeholders.

The data contained in the range of financial reports are the product of accounting at organizational level and of the external reporting systems, which provide data on the entities' financial standing and performance.

In order to observe the principle of transparent information/informing of all stakeholders, equal importance must be attached to financial and non-financial information. This requirement is also emphasized in the study conducted by the McKinsey (2001) consultancy firm regarding the opinion of institutional investors from emergent countries (Asia, Southeastern Europe and Latin America) about corporate governance. The study shows that, when taking investment decisions, investors attach equal, if not more, importance to non-financial information on corporate governance as they do to financial information (Robu et.al., 2004).

Providing transparent information may contribute to efficient corporate governance through the improvement of the quality of information. The demand for information on the part of investors, financiers and financial analysts has increased considerably over the last years, as did the competition. This aspect, in corroboration with the international financial scandals, required that entities pay increased attention to the quality of information provided, especially in the case of listed companies, as well as the active involvement of security regulators and international accounting bodies.

As shown in the studies conducted by DeZoort et.al., (2002) and Porter (2009), at entity level an important role in observing the principle of transparency for the information provided is occupied by the triad internal audit—audit committee—external audit.

Taking these aspects into consideration, the Corporate Governance Code issued by the BVB deals with transparency, financial reporting, internal control and risk management within the same article, that is, Article 7.

b) Incorporation of the principle of transparency in the BVB's recommendations and regulations

Starting with 2009, the entities trading on the BVB market are under obligation to report which recommendations of the new Corporate Governance Code have been concretely implemented during the current financial year by submitting the “Comply or Explain” Statement.

In the “Comply or Explain” Statement, a set of questions were framed for each principle, concerning which recommendations should be adopted. Of the total number of recommendations published in the Code, the Statement only took 28 of them, framed as questions which can be answered by YES, NO and IF NOT, PLEASE EXPLAIN. The recommendations taken in the Statement focus on the following aspects: definite transparency structures, recommendations on the respect for and active and effective communication with stakeholders, choosing, structure and efficiency of the Board of Directors, establishment of the nomination committee, remuneration of the Board of Directors and various committees and governance structures, the protection of the entity's interests and not somebody's personal interests.

The recommendations which were not directly taken into the “Comply or Explain” Statement complete and provide details about those explicitly found in the Statement. In order to give an overall picture, below we specify those recommendations that were not taken in the Statement: participation of shareholders to the Shareholders General Meetings as well as using the best efforts to facilitate their participation, recommendation on the privilege-based transaction, responsibility and the balanced social structure of the Board of Directors, forwarding the list with the candidates to the office of administrator/director, coordination, appointing and evaluation of the members of the Board of Directors by the Nomination Council/Committee, if any, submitting to the Board of Directors the proposals on remuneration drafted by the Remuneration Council, if any, and last but not least, the modifications regarding the new management system (adopting the dualist system) and the application of the governance codes.

5. Transelectrica case study on the application of the principle of transparency by the Romanian societies

After we analyzed the annual reports of the 21 entities listed with the BVB in tier I, we found out, to our great disappointment, that only one of the 21 entities submitted the “Comply or Explain” Statement for 2009. Transelectrica is the only entity which disclosed to BVB the “Comply or Explain” Statement for 2009 in the Annual Report of Directors.

From the statement made by Transelectrica “Although the ‘Comply or Explain’ Statement is not compulsory for the current Annual Report, the company has decided to submit it as a token of respect for shareholders and investors” we can notice their keen interest in the corporate governance as well as in the participants to the capital market. The analysis of the statement filled in by the entity reveals a small number of negative answers (9) out of the 28 recommendations. Some negative answers were given for Principle XI “*The company will secure the services of good quality directors and executive managers by means of a suitable remuneration policy that is compatible with the long-term interests of the company*”. Of the negative answers, we would like to present the one given to the question “*Does the Board of Directors analyze at least once a year the need to register a remuneration Committee/policy for the directors and members of the executive management?*”. According to the negative answer provided, the company complies with the requirements of the Statement and offers a plausible explanation “*Not applicable. The*

Remuneration Committee was set up as of 2007”, which proves the entity’s interest in adopting the principles of corporate governance. The answer to the recommendation on the company’s remuneration policy is also negative, the explanation being “*Applicable legal provisions and decision of the majority shareholder are enforced*”. This explanation is offered for most of the negative answers.

Although one third of the answers provided by Transelectrica are negative, we would like to also pinpoint the great number of positive answers. Thus, the entity provides positive answers to two thirds of the questions framed according to the recommendations of the BVB’s Corporate Governance Code. Mention must be made of the fact that explanations are also provided in the case of some recommendations for which the entity gives positive answers, thus giving further details about that particular answer. The first explanation given for one of the positive answers was indeed enjoyable to read “*Are the corporate governance structures, positions, competences and liabilities of the Administration Board and of executive management defined in the Corporate governance best practices/regulation? These are defined in the Transelectrica Corporate Governance Regulation as well as in the supporting documents published*” because we could see the entity’s interest in obtaining information and in elaborating corporate governance regulations. Another positive answer whose explanation was worthy to notice is the one related to the audit committees “*Is there an Audit Committee within the company? The Audit Committee was set up as of 2007. Update of appointment currently in progress*” thus proving that the audit committees were set up on the initiative of the company and not under any legal constraints.

6. Conclusions

Our research focused on corporate governance, a topic of intense debate over the last years due to the failure of some famous international companies. One can develop efficient corporate governance only if all OECD principles in this regard are observed. Our research focused mainly on the manner in which the principle of transparency must be put to practice in order to ensure efficient corporate governance. To this effect, we studied the manner in which the principle of transparency has been incorporated into the recommendations and regulations of the BVB. In order to conclude our theoretical study we analyzed the manner in which this principle is applied by the Romanian societies/companies listed with BVB in tier I, and then we made a detailed presentation of an example of good practice and conducted a case study focused on Transelectrica society. By filling in and submitting the “Comply or Explain” Statement, we believe that Transelectrica should serve as a fine example for the entities listed with the Bucharest Stock Exchange. This Statement is a good means to provide the shareholders and potential investors with information on the structure and organization of the entity.

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THE ROLE OF THE ACCOUNTANCY PROFESSIONAL BODIES IN DEVELOPING SOCIAL AND ENVIRONMENTAL REPORTING****

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In March 2010, the European Commission renewed its strategy to promote Corporate Social Responsibility in order to ensure long term employee and consumer trust. Corporate Social Responsibility is considered more relevant in the context of the economic crisis because it can help to build (and rebuild) trust in business and to identify new forms of value creation based on addressing societal challenges, which may represent a way out of the crisis. A priority area is represented by companies' transparency on environmental and social issues.

This research aims to assess the involvement of the professional accountancy bodies in the development of social and environmental reporting. After a review of research studies on corporate social and environmental disclosure and the role of the accounting profession in this context, the research identifies the strategies, policies and actions taken by the International Federation of Accountants (IFAC) and of the Federation of European Expert Accountants (FEE) based on content analysis of public documents issued by the two bodies. The cases were selected having the influence exerted by the two organisms on other professional bodies and their ability to trace the strategic lines of the accounting profession at the international and European level.

The basis upon which the accounting profession was founded and continues to exist is public trust, which is the degree to which the public has confidence in the services provided by the accounting profession. Society is currently expressing high demands on the discipline of accounting and therefore the profession is under pressure to expand its horizons to better reflect these demands.

The research revealed that both accounting bodies had an intense activity and initiated political actions in the corporate social and environmental reporting field including sustainability in their strategic objectives. The following areas of involvement have been identified: issuance of assurance, education and ethics standards (in the case of IFAC which is also regulator), educational and web materials, participation in working parties, cooperation with other organisations in the development of reporting and assurance standards, research projects to support decision making, encouraging member bodies to develop similar policies, public statements inviting responsible parties to act. Based on its conclusions the study identifies some research directions to be developed. Academic and professional curricula of Romanian accountants could be analysed in order to determine how they could be improved in order to respond better to these societal requirements. This study identifies the political actions of main professional bodies (IFAC and FEE) that might influence the actions of other bodies and future profile of accountants.

Keywords: Social and environmental reporting, accountancy profession, professional bodies

JEL classification: Q 56, M4, M2

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1.INTRODUCTION

Corporate social responsibility becomes more important in the context of the global financial and economic crises because public confidence in the social and environmental responsibility of businesses has been shaken. Accounting has traditionally focused on an organisation's financial aspects, with a particular emphasis on the reporting of this information to shareholders and management. Lately, there has been growing condemnation of the insufficiency of this kind of information. The primacy of shareholders as owners and maximizing wealth creation for this constituency is being challenged, particularly because it has become evident that their short-term financial interests can be incompatible with the long-term viability. Long-term sustainable value creation requires responsible organizations, capable to direct their strategies and operations to achieving sustainable economic, social, and environmental performance. It also requires incorporating wider stakeholder perspectives into decision making. The financial crisis has created widespread scepticism about whether and how business contributes to the wider interests of society. Ensuring that organizations pursue sustainable business models and development practices will require radical changes in the way they do business. Professional accountants need to adapt to a world in which sustainability is the key to long-term business performance, and need to understand how, in their diverse roles in organizations, they play a significant role. The professional accountancy associations are an integral component of the operation of the accounting profession. They represent a link between business enterprise, the state and the (increasingly global) society (Burchell et al. 1980: 5-27). Traditionally, professional accountancy associations have been promoters of regulation and codification of practices. Additionally, the objective which legitimizes them consists in satisfying the 'public interest'. As such, it is justifiable to assume that the professional accountancy associations could have an interest in the social and environmental reporting field. Within this context we purpose identify the challenges raised by social and environmental reporting for the accounting profession and the strategies, policies and actions taken by the International Federation of Accountants (IFAC) and by the Federation of European Expert Accountants (FEE) within social and environmental reporting field based on a content analysis of public documents issued by the two bodies to answer to these challenges. The two cases were selected because of the ability of the two bodies to influence other accountancy bodies and the accounting practice at the international and European level.

2. CORPORATE ENVIRONMENTAL AND SOCIAL DISCLOSURE AND THE ROLE OF ACCOUNTANTS -LITERATURE REVIEW

Corporate environmental and social disclosure practices were explained within the theoretical framework of political economy, legitimacy, institutional and stakeholder theories. The nature and extent of corporate social reporting vary over time and between countries and related to both company size and industry (Adams et al. 1998: 1-21; Cowen et al. 1987: 111-122; Hackston and Milne 1996:77-108; Trotman and Bradley 1981:355-362; Deegan and Gordon, 1996:282-312; Roberts 1991:62-71). Researchers in the voluntary disclosure also reported that corporate governance influences accounting disclosure (Chen and Jaggi 2000:285-312; Eng and Mak, 2003:325-345). Good governance strengthens the quality and comprehensiveness of corporate report. The existence of a specialised committee on the board is also considered important in explaining the quality of this kind of disclosure across countries.

In the last period there has been a proliferation of standards at the global and the European level in the sustainability area. The Global Reporting Initiative (GRI) provides the most recognised global standard with its framework for sustainability reporting.

Within EU were approved Directives requiring social and environmental reporting. The Directive 2003/51 (the 'Modernisation Directive') amended the Accounting Directives and added that European companies are required to include non-financial information in their annual and

consolidated reports if it is necessary for an understanding of the company's development, performance or position. Another amendment of the Accounting Directives (Directive 2006/46) introduced an obligation for listed companies to include a corporate governance statement in their annual report. Both directives were implemented in Romania.

The EU Eco-Management and Audit Scheme (EMAS) is a management tool for companies requiring them to evaluate, report and improve their environmental performance. It states that organisations should make periodic environmental statements publicly available and in order to ensure relevance and comparability of the information, reporting on the organisations' environmental performance should be on the basis of generic and sector specific performance indicators (European Commission)

Recent years have witnessed a continual growth in the number of companies reporting publicly on various aspects of their environmental and social performance. Accountants are now involved in reporting on corporate environmental issues, particularly evaluating contingent liabilities, accounting for emission trading schemes or providing decision-makers with quantitative information on environmental performance (Elkington and Jennings 1991:8-12). Daykin (2006) identifies the role of the internal auditor in corporate responsibility reporting. The objective of the internal auditing function is to improve any process within the organization that will result in improved revenue and reduced risk. Corporate responsibility reporting is varied and has not yet been standardized at the global level. Regardless of the content or format, any company that intends to report on corporate social responsibility issues must first evaluate and determine the values and goals that are to be discussed and reflected in that report. Internal auditors have the responsibility of understanding the stated values and goals of the company. As performance targets and goals are established and distributed among the company and the public execution plans must also be created. The role of internal auditing with respect to corporate governance and their performance goals is to observe and examine the implementation of related execution plans as well as the outcomes of those plans. Corporate management and leadership must be held accountable for all actions within the corporation. Internal auditors must evaluate goals to ensure that reported results are truly accurate as stated and communicated internally as well as externally in either an annual report or separate corporate responsibility report.

An increasing number of sustainability reports worldwide are being assured by a financial auditor. Power (1997:123-146) observes that accountants have begun to compete for work in the environmental auditing field, such as the verification and development of Eco-Management and Audit Scheme (EMAS).

The management accountant has a significant role to play in both the ex-ante area of integrating strategic corporate responsibility thinking in organisations and the ex-post role of generating the corporate responsibility reports. Management accounting professionals are also trained in evaluating investment decisions regarding the future, and thus would be ideal professionals to support the independent assurance process.

3. RESEARCH METHODOLOGY

After a literature review inventorying the challenges raised by social and environmental reporting for the accounting profession our research will concentrate on analysing the policies and actions of main accountancy professional bodies at the international and European level to answer to these challenges.

This research aims to provide insights into the involvement of two leading professional accountancy associations (the International Federation of Accountants and the Federation of Expert Accountants) in the development of corporate social and environmental reporting. The two cases were selected because of the ability of the two bodies to influence other accountancy bodies and the accounting practice at the international and European level. The research design

comprises content analysis of public documents describing actions taken by the two professional bodies and statements of their policies and strategies. The main information source was represented by their web sites.

3. 1. THE INTERNATIONAL FEDERATION OF ACCOUNTANTS (IFAC)

IFAC is the global organization for the accountancy profession having 159 members and associates in 124 countries and jurisdictions. Its declared mission is to “strengthen the worldwide accountancy profession and contribute to the development of strong international economies by establishing and promoting adherence to high-quality professional standards, furthering the international convergence of such standards and speaking out on public interest issues where the profession's expertise is most relevant. IFAC develops reports, policy position papers and comment letters on topics and issues of relevance to the global accountancy profession. IFAC communications activities support IFAC’s overall strategy by increasing awareness of the accountancy profession’s many roles and, particularly, of its contributions to sustained and sustainable economic growth and development.

One initiative in this direction is the development of a web-based tool (IFAC Sustainability Framework) that targets professional accountants who can influence the way organizations integrate sustainability into strategy, planning, enterprise risk management, and operations. It highlights the issues that organizations must address to make sustainability an integral part of their business model. The Framework addresses four perspectives in bringing together all the critical areas required to successfully manage a sustainable organization. These perspectives are: business strategy, internal management, relationship with investors and other stakeholders.

In the same direction IFAC signed a Memorandum of Understanding with the Prince of Wales's Accounting for Sustainability (A4S) Project covering three major initiatives that support the work of professional accountants in embedding sustainable practices in organizations: the creation of a community website to help business leaders, finance professionals, academics, professional accountancy bodies and others exchange ideas and share good practice on how environmental and social performance can be better connected with strategy and financial performance, and embedded into day-to-day operations and decision-making, the establishment of the International Integrated Reporting Committee (IIRC) having as objective the creation of a framework which brings together financial, environmental, social and governance information in a clear, concise, consistent and comparable format, and participating in an Accounting for Sustainability (A4S) Accounting Bodies Network research project in the area of integrating sustainability issues in investment appraisal.

IFAC is represented on the Climate Disclosure Standards Board (CDSB) Technical Working Group which aims to develop standardized reporting guidelines on the inclusion of climate change information in mainstream reports.

IFAC is also standard setter developing auditing and assurance standards, educational ethics standards and standards for the public sector.

Assurance standards evolved as a reflection of the changing landscape and the increasing importance of social and environmental reporting and related assurance services. An increasing number of sustainability reports worldwide are being assured by a financial auditor. International Auditing and Assurance Standards Board (IAASB) of IFAC issued ISAE 3000 “Assurance Engagements”. The importance of reliable data on carbon emissions has also been recognized by the IAASB, which recently set up a working group to look at developing a specialized accounting standard. Due to the increasing need to ensure the reliability of greenhouse gas data in connection with emission trading schemes, the International Auditing and Assurance Standards Board (IAASB) issued a consultation paper “Assurance on a Greenhouse Gas Statement” in October 2009 which may develop into an international standard in this field.

The sustainability aspects need specific competencies in addition to those traditionally acquired by accountants and auditors. The integration of ethical and social aspects in accounting education is very important to the qualification of accountants and auditors who should be able to deal with new professional challenges.

The Professional Accountants in Business (PAIB) Committee of IFAC has as strategic direction to enhance the profile, influence, and relevance of professional accountants in business and issued several research papers related to the role of accountants within sustainability.

The International Federation of Accountants (IFAC) commissioned also a guidance document ("*International Guidance Document: Environmental Management Accounting*") bringing together some of the best experiences on Environmental Management Accounting (EMA).

3.2. THE FEDERATION OF EUROPEAN EXPERT ACCOUNTANTS (FEE)

Federation of European Expert Accountants (FEE) is a representative organization of the accounting and auditing profession in Europe consisting of 43 institutes from 32 European countries. FEE has released numerous policy statements on sustainability, the most important of which are "*Shaping a sustainable economy*" (July 2009), "*Towards a sustainable economy: the contribution of assurance*" (July 2009), "*Carbon emissions Information*" (July 2009), "*Embedding sustainability into corporate governance*" (July 2009), "*The contribution of the accountancy profession*" (January 2009), "*Cost internalisation*" (January 2009), "*Non-financial information*" (January 2009), "*Multi-Stakeholders: the essence of multidisciplinary teams*" (January 2009).

These policy statements state FEE's strategy on sustainability issues including the relationship between sustainability and the accounting profession. Each policy statement describes the importance of the issue and its impact on the accounting profession. FEE calls on the International Federation of Accountants (IFAC) to develop a general standard on assurance on sustainability reporting and makes an appeal to regulators to acknowledge that assurance has a role in reinforcing the trust and integrity around sustainability information. According to FEE, the measurement, disclosure and assurance aspects of the carbon emissions will affect the accountants. Carbon emissions data is not yet the subject of formal and generally accepted accounting and reporting standards. Likewise, assurance procedures in respect of carbon disclosures are not yet standardised. FEE stressed the importance of a multi-disciplinary approach in this area and the need for training of accountants in these new techniques.

FEE published also Call for action papers communicating important messages for actions needed to be taken such as: "*Sustainability Disclosures in Financial Information Can Be Improved*", "*Need to Increase Education in Sustainability for Accountants and Management!*", "*Enhance Sustainability in the Public Sector*", "*FEE calls on accountants in organisations of all kinds and sizes to acknowledge their role in embedding sustainability as a core part of strategy and decision-making*", "*The Federation of European Accountants (FEE) calls for unified global standards to mitigate climate change, integrating sustainability at the heart of policymaking, society and markets*".

FEE Sustainability Working Party developed Discussion Papers treating technical themes such as: the review of International Accounting Standards for environmental issues, providing assurance on environmental reports, creation of a generally accepted framework for environmental reporting, sustainability information in annual reports - building on implementation of the Modernisation Directive.

CONCLUSIONS

Examination of communication by IFAC and FEE indicates a commitment of the two bodies to the concept of social and environmental reporting. As we could notice the role of the professional accountancy associations is multi-dimensional. The following areas of involvement have been identified: issuance of assurance, education and ethics standards (in the case of IFAC which is also regulator), educational and web materials, participation in working parties, cooperation with other organisations in the development of reporting and assurance standards, research projects to support decision making, encouraging member bodies to develop similar policies, public statements inviting responsible parties to act. Within sustainability reporting, both bodies identify new areas in which accountants should apply their skills to answer societal needs. Accountants are required to understand the regulatory and voluntary reporting environment in which businesses operate and respond to new demands, to advise on risk management and the implications of entering into voluntary reporting mechanisms, to develop frameworks which allow the efficient measurement of financial and non-financial information and either maintain or assure the collection of information, to advise on the development of policies for determining the „necessity to report” decisions (where they exist), to help identify what to include in the report, to provide clear, reliable information and, where required, assurance of it, to advise organisations on the limitations of corporate decisions based on economic grounds, and suggest how externalities can be internalised. Because accountants have a role to play in this field their educational curricula should be developed with environment and sustainability related issues. FEE identified the following themes as necessary to be addressed in the basic and continuing education of accountants: company and business strategy, business ethics and integrity, management (including management accounting), stakeholder awareness, internal controls in relation to non-financial information, management accounting techniques on environmentally sensitive and operations, knowledge about accounting for externalities (“full cost accounting principles”), selection and measurement of KPIs, accounting for emission rights/trading schemes and financial reporting implications, risk approach integrating sustainability issues, sources and techniques of assurance. Future research could test the extent of the integration of these recommendations within the academic and professional curricula of Romanian accountants and establish actions for the Romanian accounting bodies and business universities.

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RECENT DEVELOPMENTS OF THE FINANCIAL REPORTING MODEL: THEORETICAL STUDIES IN REVIEW

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Our paper analyzes the manner in which the financial reporting model evolved towards fair value accounting. After a brief introduction into the context of financial reporting at international level, the analysis focuses on the accounting model of fair value. This is done by synthesizing main studies in accounting research literature that analyze fair value accounting through a theoretical approach. The analysis being developed relies on literature review methodology. The main purpose of the developed analysis is to synthesize main pros and cons as being documented through accounting research literature. Our findings underline both the advantages and shortcomings of fair value accounting and of the recent mixed attribute in nowadays financial reporting practices. The concluding remarks synthesize the obtained results and possible future developments of our analysis.

Keywords: fair value, accounting research literature, mixed attribute, pros, cons.

JEL Code: M41.

1. Introduction and theoretical background

Questions regarding the identification of the most adequate values for assets and debts evaluation, and the manner in which changes that occurred in these values should be reported, are directly linked by other considerations connected to the nature and goal of the financial reporting (Gwilliam and Jackson, 2008). In the extreme case of economical models that target general equilibrium, when all information is embedded in the individual prices of assets, the fact that traditional financial reporting (in regard to the balance sheet and the profit and loss account) has a reduced, but not inexistent role is unanimous accepted (Barth and Landsman, 1995; Beaver and Demski, 1979; Walker, 1988).

In a real environment, one that assumes the imperfections of available information and a degree of uncertainty, financial reporting has the potential in playing a series of roles, both in retrospective - in terms linked to stewardship††††, contract signing capacity, employee selection, resource consumption decisions, distribution, etc.; and in perspective - in terms referring to the anticipation capacity or to the, value, moment and probability of future cash-flows. In this context, the conceptual framework outlined by various accounting standard setting bodies such as the Financial Accounting Standards Board (US), the International Accounting Standards Board, and the Accounting Standards Board (UK), represents their attempt to offer, or at least to articulate, their own vision on a normative accounting foundation, and to identify a series of qualitative characteristics belonging to a “better” financial reporting in terms of relevance, credibility, etc. (Gwilliam și Jackson, 2008). In the US, recognizing assets and debts at fair value

†††† An additional role of accounting given that the market is not perfect and complete; a series of big entities entrust their assets and decisions to managers, having an informational advantage in terms of the degree of the decisions' adequacy; however it is difficult to conclude if a manger took some decisions that are inconsistent in relation to the shareholders goals; in other words, the shareholder cannot be certain if he “acquires” the decision he wants; accounting information can be useful in offering necessary incentives for diminishing the effects of the managers private information, and in supporting the company's' value growth

seems also to be favored by the Securities and Exchange Commission. In a report made for a Congress of the SEC (SEC, 2005), we can observe two major benefits of imposing fair value accounting for financial instruments. The first one would be the reduction in use of transactions structured in purely accounting ways by focusing on the exploitation of opportunities generated by managerial earnings created by the “mixed attribute” model - partially historical costs, partially fair values. The second one refers to fair value accounting of financial instruments which would lead to a reduction in the complexity of financial reporting, consequence of mixed attribute. Evidently, as the SEC report noted, there also are costs that are associated to the use of fair value.

A key aspect is the possibility to evaluate elements of financial statements at fair values, especially in the case of those financial instruments for which there aren't any active markets. Although market value is the recommended evaluation for fair value, the FASB adopted the term of “fair value” instead of market value, so that to underline the estimations of value necessary for financial instruments which are not traded on active markets. Both the FASB and IASB recommend, through the conceptual framework, the consideration of the cost/benefit report between relevance and credibility, when determining the optimum evaluation method for certain elements, analyzing if that evaluation has enough credibility to be recognized in financial situations. For investors, the assumed cost of fair value evaluations consists in the possibility, that one or more financial instruments might not be evaluated precisely enough to help them in their estimations regarding the financial position of the company and its potential to generate future benefits. This relevance cost is the consequence of the fact that in the absence of active markets for certain financial instruments, the management of the company must use fair value in its estimations, which leaves room for subjectivism and manipulation. Evaluating the costs and benefits of fair value accounting in the case of financial reporting, costs which affect investors and other users of accounting information in specific reporting systems is a difficult task (Matış and Bonaci, 2008). The remainder of our paper is organized as follows: some research methodology aspects are discussed, the main part of the paper deals with analyzing theoretical studies in the area of fair value accounting in order to synthesize pros and cons being documented through accounting research literature, and finally we conclude upon the developed analysis by also formulating some future developments that might complement our study.

2. Research methodology

Our paper uses literature review methodology in order to develop a critical and evaluative account of what has been published within accounting research literature on fair value accounting by only considering studies that develop a theoretical approach. Therefore, the purpose of such an analysis in the area of literature review studies is to summarise, synthesise and analyse the arguments of studies being analyzed. Besides developing a summary of sources in the approached area, the employed research methodology imposes a certain organizational pattern that combines both summary and synthesis. More precisely, our analysis of each considered study covered the following aspects: question formation, identification of the relevance, assessment of quality, evidence summarization and interpretation of findings.

3. Developing the analysis and interpreting results

There is a myriad of arguments that can be invoked in the favor of implementing fair value, such as the comparability of market values, the credibility of the information provided by market prices, the conceptual benefits of market based evaluation of financial instruments, and the accounting of risk coverage managerial decisions. Information aggregation refers to fair value in the sense of correspondence between reported (supplied) and demanded information, in this case the aspect of credibility seeming to be the main argument with the potential to limit the

implementation of fair value evaluation in future projects of accounting regulatory bodies, especially in the case of balance sheet recognition. The accounting research literature documents the preference of investors for the use of fair value as standard for financial reporting, generating a superior level in information comparability. The level of relevance obtained through use of fair value is also superior to the one of the historical costs, due to the fact that management bases its decisions on fair values, as investors do, while in fact even the managements' evaluation should rely on the obtained results, but expressed at their fair value (White, 2008). Although these arguments are extremely powerful, a series of problems emerge when referring to accounting practices, especially in terms inked to evaluation credibility. This is also true when referring to theory related aspects, mainly in terms of changes taking place in fair values and their reporting. Therefore, starting from questions that regard the reporting method for gains and losses reflected in the profit and loss account, are induced by varieties of complex aspects, which derive from different conceptions regarding what in fact is the "result" and from various perspectives on the nature and goal of financial reporting. Even if we considered a perfect environment as Hicks (1946) did, starting from the premise that at any moment given in time all cash-flows and actualization rates are known (although in the case of a partial equilibrium model these certainties become variables), a variety of result ratings can be derived from the base distinction between the results calculated as difference between net assets in two different moments (this is the main approach in accounting referential), and the result representing a sustainable value in future time frames (Gwilliam and Jackson, 2008). A series of queries are linked to the manner in which information regarding these gains and losses should be presented, referring specifically to the necessity of separation - whenever possible - of temporary gains and losses, and to achieving a distinction between gains and losses generated by management and ones generated by other causes.

We could state that the role of financial reports is to offer users, i.e. stakeholders, the possibility to evaluate the success of a company or even its management. In this context, a question arises: How should the recent earnings generated by owning shares in international oil and gas companies be reflected in accounting? The high demand on the market was further accentuated by the Middle East crisis, fueling an increase in oil and natural gas prices during 2003-2006, the price of a crude oil barrel rising from 25\$ (2003) to 70\$ (2006) (NYMEX - New York Mercantile Exchange). Therefore, we face yet another important question: to what extent should these earnings be attributed to activities performed by the management of these companies? (Gwilliam and Jackson, 2008).

The main discontents regarding aspects that affect the credibility and comparability of information supplied by using fair value for financial instruments are comprised in opinions of practitioners. They express their concerns regarding the fact that estimations using fair value in the case of similar financial instruments can vary significantly in practice; that the management has an exaggerated power of decision and influence - by choosing entry market data that will be used in the evaluation, when the prices themselves are nor offered by the market; that certain shades of assumptions used in estimation models can have significant consequence; and that verifying the prices determined using unobservable data will be extremely difficult (Reinhart, 2008). One of the main adversaries of fair value is Alex J. Pollock (American Enterprise Institute), who considers that applying fair value accounting can create various excesses within the market, both pessimistic and optimistic, through the reported results and implicitly through the capital, which in the present state of the global economy does nothing but to fuel panic. From the point of view of the derivative, when these are not traded, Pollok considers that fair value evaluation creates an opportunity for a manipulation of the system. From his somewhat ironical perspective, fair value accounting represents "the last invention of metaphysical accountants in

their search for the only true way of bookkeeping”. The arguments stated by Pollok address a series of problematic aspects that still require refining from the point of view of fair value.

For example, he mentions the situation in which the fair value of the debts of an entity decreases (which might happen due to the fact that the bonds market observes a worsening in the credit position of that entity), a case in which although the entity owes the same amount to its creditors - by the recognition of a smaller debt amount by its’ creditors - fair value evaluation would assume recognizing in return the diminishing of the debt in correspondence to an income, thus generating a “profit”.

Financial analysts also have their critics concerning the fair value concept, accentuating their role of functioning in a real world, where they have to offer decisional support to investors by operational systems and arbitrary rules of scientific models, and it is clear that the more instable entry data is, the more the analysts’ role diminishes. A compromise is therefore needed, between the utopist goals of a perfectly-transparent and efficient market and the real world, based on human actions and inefficiencies. If the general public is unable to understand or face the torrent of short term oscillations of asset prices, the net effect of fair value accounting could generate nothing but fear, anxiety and systemic instability. On the other hand, we are aware that losses, gains and volatility result from market behavior and not from financial reporting. Using fair value is also not enough, because there is a need for additional information regarding risk exposure, models and assumptions used in estimations (especially in the case of less active markets), and also regarding the changes in factors that can induce the modification of fair value (White, 2008). Radical attitudes are not useful to anyone. Instead, what would be of great use, is a collaboration based on individual experiences, so that the concept of fair value could be improved, thus becoming closer to the great goal of solving evaluation problems that have been troubling the accounting community for a few decades. Abacus published in 2008 a special issue dedicated to fair value, in which there are reproduced papers presented at the September Siena Forum in 2007 (the central theme of this forum was also fair value and conceptual framework). The respective papers cover a large number of matters concerning fair value evaluation, various initiatives of international organisms - especially IASB and FASB, etc. all of these needed for the development of a common conceptual framework. The majority of these papers resort to theoretical studies, meticulously processing the subtleties of the provisions of the regulations in cause. Following the Norwalk agreement from 2002 - through which IASB and FASB decided to strengthen their relations and to create a convergence plan for the standards they emitted - the events developed rapidly. Whittington (2008) evokes the strong affinities between the IASB and FASB conceptual framework, and the existence of important differences at the level of details. An important similar aspect between the two frameworks is the lack of an evaluation treatment, aspect which makes both frameworks incomplete (Whittington, 2008). We could say that there is still an “inheritance” of interests and some unsolved debates dating back from the 70’s when the regulating organizations fought each other on the matter of inflation accounting, trying to come up with a solution that would satisfy both the users of accounting information and the persons responsible with the preparation of financial situations. Also, the pressures and controversies from that period are also responsible for the importance of decisional utility - especially in the case of investors from the capital markets - the center of the objective of financial statements. This was a major step at that time, making the transition from the traditional vision - which stated that accounting has legal goals, which are linked to the responsibility of managers towards the shareholders - to the decisional utility, as a possible extra benefice. Later, there were opinions that considered the focus reorientation as exaggerated, according to current revisions of conceptual frameworks. Whittington (2008) and Ronen (2008) include in their works various discussions regarding the current state of provisions regarding fair value and conceptual framework, and the measures that need to be taken in this matter. Bradbury (2008) and Turley (2008) comment on their opinions,

suggesting a series of amendments. Even after these debates, Wells' opinions (2003) conclude in a philosophical yet complete way the fact that:

The base of an adequate conceptual framework can only be found in the mechanisms of day-to-day commerce...where money represents the modality of exchange and the measurement unit of the characteristics of goods and services, obligations and benefits. As long as the function of accounting is to answer the needs of the ones who act in the market, the market is the place where we must find the base of a conceptual framework.

Hitz (2007) has a different perspective on the notion of decisional utility of reporting systems based on fair value evaluations, analyzing in detail the theoretical solidity of the arguments belonging to regulating organizations in favor of fair value evaluations, especially from the point of view of the relevance, which determined the adopting of standards focused on various financial instruments and some non-financial elements of the new evaluation paradigm. His analysis - having an a priori economical angle - approaches two aspects of decisional utility: the evaluation perspective and the informational one. The results he obtained indicate the fact that decisional relevance of fair value evaluation can be justified from both perspectives, but the conceptual framework of this type of evaluation is not fully congealed. Another important aspect was that the comparative analysis between fair value accounting and historical costs one generated mixed results. Thus, an immediate implication of this study is that it emphasizes the necessity of clarification from the point of view of the regulating organizations, the income notion and the ability of fair value to increase the level of decisional relevancy before continuing in widening the application sphere of fair value accounting.

4. Concluding remarks and future developments

When discussing financial reporting, there already exists the tradition of the contrast between evaluations based on historical costs, which are considered credible, but at the same time irrelevant, and evaluations based on current values or market based ones, which can be thought of as being more relevant and less credible. The opposing parties' arguments suggest the fact that investors would become refractory to base their decisions on subjective estimations of fair value (Barth, 1994, p. 3). We can therefore conclude that when markets related to assets and debts that are evaluated are sufficiently profound to permit their evaluation, a fair value evaluation is completely adequate. But while informational qualities of market supplied values are undeniable - in the context of complete and perfect markets - the use of fair value evaluation for purposes such as evaluation and contracting is still unclear in a real context (Beaver et al., 1989: 161). We could assert that accounting standard setting bodies in the US and other international ones have evolved in the same direction. The Joint Work Group (JWG) initiated by the International Accounting Standards Committee (IASC – the IASB's predecessor) was the one who identified the main advantages of a market value based accounting for financial instruments. These refer primarily at the use of more current and relevant evaluations in the balance sheet, and secondly to generating results reflected in the profit and loss account, results which were superior from the point of view of the stewardship relation, and of the forecasting value^{****}. Barth and Landsman (1995) also present a general analysis of arguments for and against the use of fair value and of market based accounting in financial reporting. Although not highlighted by the JWG, there is an aspect that can't be ignored (Gwilliam și Jackson, 2008): accounting that is based on market provided values eliminates, at least from the theoretical point of view, the possibility for managers to chose the moment for profit and loss recognition.

^{****} The basis of the conclusions that the JWG reached regarding fair value use in the case of financial instruments can be accessed using the following link
: <http://www.iasplus.com/agenda/jwg.htm>.

The effects of this situation would be felt in multiple countries and regulations. For example, according to UK regulations, even though the reevaluation of long term debts was not allowed, it was always permitted for a company financed through bonds to refinance them in a manner that would allow any change in value reflecting interest rates changes to be incorporated within the profit and loss account once refinancing takes place, despite the fact that - ignoring transaction cost - the cash flow could not have been affected at all.

Creating a hybrid accounting system in which historical costs accounting is combined with the fair value one, or, in other words, a dual accounting system, is also analyzed by accounting research literature, which identifies a series of disadvantages generated by distortions of the reporting systems' coherence, thus facilitating the recognition of gaining resulted from managerial decision and embellishment of financial statements (Barlev and Haddad, 2004). Using market based evaluations can create problems for hedge operations regarding cash-flows, generating a context in which double attribute issues, therefore affecting the information provided by fair-value (Gigler et al., 2007; Shin, 2007). When assets are evaluated at values provided by the markets, and debts are not evaluated at fair value, the possibility of a significant distortion in the financial statements focused on equity is created. In this case, there are two possible outcomes: overrating or underrating that value (Wallace, 2008), depending on the interests of the distortion. Using the mixed attribute model leads to new information, this in turn can be misleading for its respective users, and reporting for hedge operations is difficult and opaque (White, 2008). Barlev and Haddad (2007: 495) succeed in underlining the connection between international accounting harmonization and the fair value accounting paradigm, by starting from the premises of the accounting comparability used in defining international accounting harmonization, the supporters of which consider necessary the elaboration of a unique set of Generally Accepted Accounting Principles – GAAP. These principles would lead, in their opinion to a complete “harmonization” at international level. They also bring to our attention the existence of a second requirement necessary for reaching a “complete harmonization”, i.e. a common denominator in the evaluation, recoding and reporting of transactions, assets, debts and equity, thus considering feasible the option of fair value paradigm, unlike the historical cost one. The concept of fair value has the capacity to offer that needed common denominator, which is necessary for the comparability of accounting information. This denominator acts like a catalyst during a harmonization cycle: fair value spreads international accounting harmonization, which in turn generates more useful information that could be beneficial for the efficiency of global markets, the final consequence of these results being increases in the quality of fair value that was evaluated in this manner (Barlev and Haddad, 2007: 498).

We conclude our analysis by stating that our findings could be completed by developing a similar analysis on studies in accounting research literature that have an empirical approach to fair value accounting and its implications.

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EVIDENCE FROM THE GERMAN CAPITAL MARKET REGARDING THE VALUE RELEVANCE OF CONSOLIDATED VERSUS PARENT COMPANY FINANCIAL STATEMENTS

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Financial statements' main objective is to give information on the financial position, performance and changes in financial position of the reporting entity, which is useful to investors and other users in making economic decisions. In order to be useful, financial information needs to be relevant to the decision-making process of users in general, and investors in particular. Hence, the following question arises logically – which of the two sets best serves the information needs of investors (and other categories of users), respectively which of the two sets is more relevant for investors? Of course, the possibility of both sets at the same time best serving the information needs should not be ruled out. In our scientific endeavor we conducted an empirical association study on the problem of market value relevance of consolidated financial statements and of individual financial statements of the parent company, searching for an answer to the above question. In this sense, we analyze the absolute and relative market value relevance of consolidated accounting information of listed companies on the Frankfurt Stock Exchange (one of the largest three stock markets in the European Union) between 2003 and 2008. Through this empirical study we intend to contribute to the relatively limited literature on this topic with a comparative time analysis of the absolute and incremental relevance of financial information supplied by the two categories of financial statements (group and individual). The results obtained indicate a statistically significant superiority of the relevance of consolidated statements (in detriment of individual ones). However, we could not statistically prove a superior value relevance of information provided together by consolidated and parent company financial statements as opposed to consolidated information. On the one hand, these results prove the importance (usefulness) of consolidated financial statements especially for investors on the capital market, and on the other hand, they question the necessity of publishing parent company financial statements.

Keywords: Consolidated Financial Statements, Parent Company Financial Statements, German Capital Market, Market Value Relevance

JEL Classification: M40, M41

I. Introduction

Financial statements' main objective is to give information on the financial position, performance and changes in financial position of the reporting entity, which is useful to a wide range of users in making economic decisions. In order to be useful, financial information must be relevant to the decision-making process of users in general, and investors in particular, meaning that it must have the capacity to influence their economic decisions. In fact, relevance constitutes one of the main characteristics of financial information quality (Francis et al. 2004: 968). Moreover, in the exposure draft regarding the improvement of the Conceptual framework, IASB and FASB named relevance and faithful representation as the two fundamental qualitative characteristics of financial information (QC2). Therefore, in order to make assessments on the quality of information of financial statements, it is absolutely necessary to quantify this relevance (capacity to influence) of financial information.

An appropriate environment to perform such a measurement is the capital market, where investors' decisions (as users of financial information) are reflected directly in the share price of the reporting entity. In this context, market value relevance is measured by the ability of financial information to capture or summarize information that influences share prices (Francis and Schipper 1999: 325). According to the same authors market value relevance means the existence of a statistical correlation/association between financial information and prices or returns, and also the fact that this information explains market prices to an extensive measure, starting from the presumption of the efficient market in which prices reflect the available information (Francis & Schipper 1999: 326).

Financial information is supplied mainly through financial statements of entities (listed on the capital market). As most listed companies (on the large European stock markets) own one or more subsidiaries, they are obligated (by accounting legislation and stock exchange regulations) to prepare consolidated financial statements for the group they own, besides their individual financial statements. Thus, parent companies are obligated to a dual reporting materialized in two sets of financial statements – one at individual level, the other at group level. Therefore, the following question arises naturally – which of the two sets best serves the information needs of investors, respectively which of the two sets is more value relevant. Of course, the possibility of both sets at the same time best serving the information needs is not ruled out.

Considering all these aspects, we set to carry out an empirical association study on the problem of market value relevance of consolidated financial statements and of individual financial statements of the parent company, searching for an answer to the above question. In this sense, we pursued an analysis of absolute and relative market value relevance of consolidated and parent company accounting information of listed entities between 2003-2008 on the Frankfurt Stock Exchange (one of the largest stock markets in Europe).

II. Literature Review

Concerning the empirical research that has approached this matter, there are only a few studies which could be identified in the international literature. In general, they bring evidence in favor of the superior relevance of consolidated financial statements (Harris et al. 1994, Niskanen et al. 1998, Abad et al. 2000) respectively evidence for the lack of relevance increment of individual financial statements of the parent company (Niskanen et al. 1998, Goncharov et al. 2009).

In their study, Harris et al. (1994) compare the value relevance of accounting measures for U.S. and German firms matched on industry and firm size. One of their conclusions based on their empirical findings states that the explanatory power of accounting data is increasing in the level of consolidation and that unconsolidated data perform poorly relative to the consolidated data. Niskanen et al. (1998) examine the information content of consolidated versus parent-only earnings, using accounting and market data from Finnish firms. Their results show that consolidated earnings are a significant incremental explanatory variable for stock returns, while parent-only earnings are not, thus indicating that consolidation improves the information content of earnings, and that the requirement to disclose parent-only earnings should be based on arguments other than their value-relevance to shareholders.

Abad et al. (2000) investigate the value relevance of consolidated versus parent company accounting information on a sample of Spanish firms listed on the Madrid Stock Exchange. The authors use the Edwards-Bell-Ohlson valuation framework to generate the results. The empirical findings show that, from this valuation perspective, consolidated information dominated parent company (non-consolidated) information. Finally, Goncharov et al. (2009) examine the possibly different economic functions of company and group accounts using a large number of accounting and market-based metrics from a sample of German companies. Their analysis indicates higher

value relevance, predictive ability, and timeliness of group accounts as compared to company accounts. Furthermore, they could not identify an incremental usefulness of single accounts.

III. Research Methodology

In this empirical research we followed the analysis of market value relevance of consolidated and unconsolidated accounting information on companies on the Frankfurt Stock Exchange for the period 2003-2008. The main criterion for the selection of companies is the belonging to the extended version of the main index (DAX 30), which is the HDAX 110. This index includes companies from the DAX, MDAX and TecDAX. We excluded financial and insurance companies from the sample because their structure and accounting practices differ significantly from those of non-financial companies (Hellström, 2006: 335). As well, to eliminate composition differences of the sample from one year to the other (which would affect comparability of results in time), we excluded companies that have not been listed on the stock exchange for the whole analyzed period. At the same time, to increase the homogeneity of the sample and to use the same time span (31.03 – 30.04) to determine average share price, companies with closing dates different from 31.12 were excluded. Therefore, after going through these steps, the final sample is made up of 35 companies, respectively 210 firm-year observations.

Consolidated and individual financial information (group equity, parent company equity, group earnings, parent company earnings, number of shares) was collected manually from the annual reports for the 210 year-observations of the complete sample, after being previously downloaded from the official web-sites of the respective companies. Share prices for the sampled observations were also collected manually from the finance.yahoo.com database. For the development of the study, we computed average closing share prices for 31.03 – 30.04 of each year, thus neutralizing possible daily fluctuations of the prices, caused by factors that are not linked to the financial information published in the annual reports.

For the purpose of this study, we formulated the following two hypotheses concerning the relevance of consolidated and parent company financial statements:

Hypothesis 1: Information supplied by consolidated financial statements are more value relevant than information supplied by individual financial statements of the parent company.

Hypothesis 2: Information supplied together by consolidated financial statements and parent company statements are more value relevant as opposite to information supplied only by consolidated financial statements.

In order to empirically test the research hypotheses on the market value relevance of information supplied by consolidated and parent company financial statements, we developed four econometric valuation models which measure the degree of association between share price and accounting information supplied by financial statements (equity and net income). The basis for this models is the Ohlson (1995) valuation model, which expresses share price as a function of current accounting value of equity plus discounted value of future (abnormal) results. To compare relevance in absolute values of information supplied by consolidated financial statements, respectively by parent company financial statements, the following empirical models were elaborated:

$$\text{Model 1: } Pit = a0 + a1 * pBVit + a2 * pEit + \varepsilon it \quad (1)$$

$$\text{Model 2: } Pit = a0 + a1 * cBVit + a2 * cEit + \varepsilon it \quad (2)$$

Where

| | | |
|-------|---|--|
| Pit | = | share price of company i in year t |
| pBVit | = | book value of parent company equity/share of company i in year t |
| pEit | = | parent company net income/share of company i in year t |
| cBVit | = | book value of group equity/share of company i in year t |
| cEit | = | group earnings/share of company i in year t |

In order to make inferences regarding incremental utility of information supplied by consolidated financial statements we developed a model to include both categories of information:

$$\text{Model 3: } Pit = \alpha_0 + \alpha_1 * pBVit + \alpha_2 * \Delta cBVit + \alpha_3 * pEit + \alpha_4 * \Delta cEit + \epsilon it \quad (3)$$

Where

- $\Delta cBVit$ = difference between group equity and parent company equity/share of company i in year t
- $\Delta cEit$ = difference between group earnings and parent company earnings/share of company i in year t

A fourth empirical model was developed to verify the second hypothesis, regarding the market value relevance superiority of information supplied (together) by consolidated and parent company financial statements as opposed to consolidated information. This is based on model 2 and also includes information supplied by parent company financial statements:

$$\text{Model 4: } Pit = \alpha_0 + \alpha_1 * cBVit + \alpha_2 * \Delta pBVit + \alpha_3 * cEit + \alpha_4 * \Delta pEit + \epsilon it \quad (4)$$

Where

- $\Delta pBVit$ = difference between parent company equity and group equity/share of company i in year t
- $\Delta pEit$ = difference between parent company earnings and group earnings/share of company i in year t

We statistically measured the explanation power of these models quantified by adjusted R2. As a general rule, the greater the explanation power, the higher the value relevance for the accounting information associated to the particular empirical model.

IV. Results

In order to test the hypothesis regarding the superior value relevance of consolidated financial statements (as opposed to parent company financial statements), we firstly compared the absolute value relevance of information supplied by the two types of financial statements, based on two regression models (Table no. 1 and Table no. 2). By comparing the explanatory power (Adj. R2) of the two models for the whole analyzed period (2004-2008), the superiority of the value relevance of information provided by consolidated financial statements clearly stands out. Concerning the coefficients of the two regressions, they are significant (and positive) at 0,001 level. At the same time, the estimated coefficients have values of variance inflation factor (VIF) under 5, indicating the fact that there are no worrying aspect regarding the effects of multicollinearity between explanatory variables of the model.

Table no. 1: Empirical results for model 1

| Sample | | Characteristics MODEL 1 | | | | |
|---------------------|------|-------------------------|-----------|-----------|--------|---------------------|
| | | α_0 | pBV | pE | F | Adj. R ² |
| Frankfurt n= 192 | Alfa | 22.105 | 0.772 | 3.784 | 26.758 | 22.50% |
| | t | 6.561**** | 3.841**** | 4.554**** | | |
| | VIF | - | 1.13 | 1.13 | | |

Made by the author

Table no. 2: Empirical results for model 2

| Sample | | Characteristics MODEL 2 | | | | |
|---------------------|------|-------------------------|-----------|-----------|--------|---------------------|
| | | $\alpha 0$ | pBV | pE | F | Adj. R ² |
| Frankfurt n= 192 | Alfa | 18.682 | 0.34 | 4.282 | 93.017 | 50.30% |
| | t | 8.262**** | 3.252**** | 7.459**** | | |
| | VIF | - | 1.873 | 1.873 | | |

Made by the author

In the second stage we considered testing the relevance difference between group financial statements and parent company financial statements (that is incremental Δ Adj. R²) to see if it is statistically significant. Therefore, based on models 1 and 3 (Table no. 3) we checked the level of statistical significance of changing the explanatory power of model 1 after introducing supplementary variables corresponding to consolidated information from model 3, and concluded that the relevance surplus is statistically significant at 0,001 level (Table no. 4). Consequently, the first hypothesis regarding the superiority in terms of relevance of consolidated financial statements is statistically confirmed.

Table no. 3: Empirical results for model 3

| Sample | | Characteristics MODEL 3 | | | | | | |
|---------------------|------|-------------------------|---------|--------------|-----------|-------------|--------|--------------------|
| | | $\alpha 0$ | pBV | Δ cBV | pE | Δ cE | F | Adj R ² |
| Frankfurt n= 192 | Alfa | 17.465 | 0.355 | 0.408 | 5.012 | 3.523 | 46.899 | 50.90% |
| | t | 6.418**** | 2.137** | 3.335**** | 6.485**** | 6.491**** | | |
| | VIF | - | 1.22 | 1.496 | 1.543 | 1.581 | | |

Made by the author

Table no. 4: Comparison between explanatory power of model 1 and model 3

| | | |
|------------------------------|--------------|--------|
| Adj. R ² | Model 1 PFS | 22.50% |
| Adj. R ² | Model 3 CFS* | 50.90% |
| Δ Adj. R ² | (M3-M1) | 28.40% |
| Sig. | | 0.000 |

Made by the author

To continue, we tested regression model 4, developed to verify the hypothesis regarding the superiority for the capital market of information provided (together) by consolidated financial statements and parent company statements as opposed to consolidated information (Table no.5).

Table no. 5: Empirical results for model 4

| Sample | | Characteristics MODEL 4 | | | | | | |
|---------------------|------|-------------------------|---------|--------------|-----------|-------------|--------|---------------------|
| | | $\alpha 0$ | cBV | Δ pBV | cE | Δ pE | F | Adj. R ² |
| Frankfurt n= 192 | Alfa | 17.099 | 0.356 | 0.76 | 5.347 | 1.287 | 48.063 | 50.80% |
| | t | 6.411**** | 2.207** | 0.382 | 6.844**** | 1.931* | | |
| | VIF | - | 4.504 | 3.97 | 3.508 | 2.342 | | |

This is based on model 2 (consolidated information) and also includes information offered by parent company financial statements. The comparison between the explanatory power of the two models (Table no. 6) reveals a superiority of model 4 (based on dual information) of 0,5% for the whole sample. However, this difference is not statistically significant at least at 0,1 level. This result does not allow, in our opinion, a confirmation of the second hypothesis regarding the superior relevance of dual reporting as opposed to consolidated financial reporting.

Table no. 6: Comparison between explanatory power of model 2 and model 4

| | | |
|------------------------------------|---------------------|--------|
| Adj. R2 | Model 2 SFC | 50.30% |
| Adj. R2 | Model 4 Dual | 50.80% |
| Δ Adj. R2 | (M4-M2) | 0.50% |
| Sig. | | 0.133 |

Made by the author

V. Conclusions

In this study we investigated using econometric regression models the absolute and relative market value relevance of consolidated financial statements for companies listed during 2003-2008 on the Frankfurt Stock Exchange. For this purpose we focused on the „confrontation” regarding the value relevance between consolidated and parent company financial statements. As expected (and in accord with previous empirical studies, for example Harris et al. 1994, Niskanen et al. 1998, Abad et al. 2000, Goncharov et al. 2009), the results have shown a statistically significant superiority of the relevance of consolidated statements (in detriment of individual ones). Moreover, we could not prove from a statistical point of view a superior value relevance of information provided (together) by consolidated and parent company financial statements as opposed to consolidated information. These results prove, of course, the importance (usefulness) of consolidated financial statements especially for investors on the capital market. They also question the necessity of publishing parent company financial statements (according to national regulations) as long as they present consolidated financial statements. As a matter of fact, in the USA the obligation to publish parent company financial statements was eliminated since 1982. We consider that these conclusions are valid not only for large European capital markets, but also for emerging capital markets (such as the one in Hungary, Romania, Bulgaria).

In the end, some aspects regarding the limitations of this study should be mentioned, as well as the perspectives of future empirical research. First, it is possible to raise the problem of sample representativeness (and implicitly of the results obtained) for the German capital markets. In this respect, future research could extend the analysis (and the sample) to other capital markets in Europe, as well as to companies that are not included in the main index of the stock market they are listed on. Second, the obtained results are based only on testing linear price level regression models. Future research could employ nonlinear models, for example logarithmic models (see Hellström, 2006) respectively return regression models (see Bartov et al. 2005). And third, the present study investigates relevance and therefore usefulness for decision making of consolidated financial statements only from the point of view of the investors on capital market. So, a future research theme less approached until now (see Goncharov et al. 2009) would be to investigate the relevance of financial statements from the perspective of other categories of users (for example financial institutions in their role as creditors).

VI. Acknowledgements

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AN INVESTIGATIVE STUDY REGARDING SMES SPECIFIC ACCOUNTING POLICIES

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In this paper we intend to continue the research regarding the enterprise accounting policies and the manner in which these are perceived by the practitioner accountants, Assistant Lecturers of financial statements. This time, in order to carry out the research, we made up a new questionnaire applied to the same sample, containing a number of 100 SMEs in Bihor County, selected according to the criterion of the average number of employees and that of the level of net turnover at the end of 2008. Continuing previous conducted research we have investigated this time the specific accounting policies of the sampled SMEs from Bihor County and the way these policies are understood by practitioners and implemented in order to prepare financial statements. Surprisingly, we have found that only 93.33% of the respondents agree that the elements presented in the annual financial statements of the entity are evaluated in accordance with the general accounting principles stipulated in Order 3055/2009, according to the accrual accounting. Half of the people interviewed had in view all four qualities of accounting information (intelligibility, relevance, credibility, comparability) in drawing up the annual financial statements, and most of them (56.67%) are not aware of the possibility to use a significance threshold (10%-15%) of the total value of that particular category of assets, liabilities, expenditure, income and results for an as faithful as possible presentation of information in the balance sheet and in the profit and loss account.

Key words: accounting policies, financial reporting, disclosure, SMEs

JEL codes: M41, M10, C81

1. Introduction

Our research hold forth to initiate a questionnaire based research in order to see the main perceptions of the accountant working in a small or medium sized enterprise, on accounting policies and their utility in providing the faithful image given by the accounting. The central objective of our research is to determine the degree of sensitivity regarding the formulation of written accounting policies by the Bihor county SMEs and the setting up of a manual of accounting policies and procedures at a certain entity level. We used directly applied questionnaires, on selected SMEs. Within each firm, we wanted to ask a person from the accounting department or from the management team to fill the questionnaire. Almost in all the cases the respondents belong to the accounting department, in most of the cases being the chief accountant or the firm's economic director. The structuring of the questionnaire was made on 3 essential levels: 1. general information about the respondent; 2. questions testing the managers or the accountants' perception on the enterprise accounting policies; 3. personal data about the respondent. In total, the questionnaire had 30 questions out of which, 11 require answers from a scale from one to five, varying between strongly agree (5) to strongly disagree (1).

In this paper we intend to continue the research regarding the enterprise accounting policies and the manner in which these are perceived by the practitioner accountants, Assistant Lecturers of financial statements. This time too, in order to carry out the research, we made up a new questionnaire applied to the same sample, containing a number of 100 SMEs in Bihor County, selected according to the criterion of the average number of employees and that of the level of net turnover at the end of 2008. Continuing previous conducted research we have investigated this time the specific accounting policies of the sampled SMEs from Bihor County and the way these policies are understood by practitioners and implemented in order to prepare financial statements.

2. Literature review

Several researchers (Hagerman & Zmijewski, 1979; Zmijewski & Hagerman, 1981; Francis, 1987; Leftwich, 1981; Gopalakrishnan, 1994) have been trying to explain the motivation of the managers in choosing the accounting methods and why the capital market reacts to the accounting changes imposed. In the literature regarding accounting policies, the researchers have used the following perspectives in order to identify the determinants of the accounting policies: the opportunistic behaviour, the efficient contacting and the perspective of the information.

On the other hand, in other studies (Tarca, 2002; Gernon and Meek, 2001; Saudagaran, 2001; Schipper, 1999; Nobes, 2000) the impact of international harmonisation pressures on companies' choices of accounting policies is investigated. Demands for greater comparability in reporting have arisen from increased international business activities and greater participation in global financial markets. Companies may seek more harmony in their reporting if they expect greater comparability to have more benefits than costs. If a company selected policies that were consistent with IFRS, then it would increase comparability of reporting with other companies using IFRS. An interesting research is presented in Gietzman and Trombetta (2003) study regarding disclosure interactions: accounting policy choice and voluntary disclosure effects on the cost of capital. In their research the authors considered how disclosure of accounting policy interacts with subsequent choice over voluntary disclosure of a non-financial performance metric. Other previous research works (Myers and Majluf, 1985; Healy and Palepu, 2001; Lang and Lundholm, 2000; Paprocki and Stone, 2004; Levine and Smith, 2006) build their study on investigating or examining choices of critical accounting policies, testing whether the quality of critical accounting policy disclosures is significantly associated with a proxy for information asymmetry. Critical accounting policies are the three, four or five policies that are very important to the portrayal of the company's financial condition and results and that require management's most difficult, subjective or complex judgments often because they require estimates about the effect of matters that are inherently uncertain. Such disclosures are intended to reduce information asymmetry.

Domestic accounting literature is mainly preoccupied with the conceptual aspects of the accounting policies and the analysis of the motivations leading to the selection of a certain policy by the management of enterprise. Authors like Duțescu (2003), Feleagă and Malciu (2002), Cernușca (2004), Diaconu (2004), Bunea (2006) are preoccupied in their research with the meanings of defining the concept of accounting policies as well as with the essential estimation criteria of accounting choices. Thus, according to Bunea (2006), if we make a review of the opinions regarding the content of the concept of accounting policies, in order to identify its nucleus, we will notice that it does exist and it is made up of an objective – restriction, represented by getting in the financial statements a superior quality piece of information, useful to different categories of users, but also from the estimation policies binomial – drafting and presentation policies of financial statements. Feleagă and Malciu (2002) are more incisive when referring to the delineation between the accounting policies and the estimation techniques: *„actually different accounting policies represent the same set of events in different ways or*

different aspects of the same set of events; on the contrary, the estimation techniques are used to get to the events that must be presented.” Cernușca (2004) considered that accounting policy requires licit and concerted actions supported by the research of the objectives suggested by the managers of the enterprise, but it can also be the expression of some implicit accounting options. The enterprise management, through the accounting policy it draws up, sets up certain objectives regarding the size of the result. The accounting policy chosen by the enterprise management has consequences on the determination of the size of result, represent a true decision of strategic management.

There are not many studies in the Romanian accounting literature preoccupied in investigating or exploring different aspects of SMEs concerning financial reporting, accounting regulation, disclosure of information or analyzing the used accounting policies. Nevertheless, it is worth mentioning the studies conducted by Deaconu *et al.* (2008), Pășcan, Neag and Virag (2009), Neag, Pășcan and Mașca (2010), Briciu, Ivan and Groza (2010). While authors like Deaconu *et al.* (2008) are mainly interested in analyzing the future accounting regulations for SMEs in the context of adopting at European level the IFRS for SMEs, Pășcan, Neag and Virag (2009) and Neag, Pășcan and Mașca (2010) focused on studies concerning financial statements or different accounting requirements for small or micro entities in Mureș County. Briciu, Ivan and Groza (2010) are concerned in aspects of development SMEs analyzing the role of accounting software and the way it encourages this segment of market.

3. Research methodology

The methodology used in the current paper is the human behaviour research methodology, whose methods are the interview, the questionnaire, the survey, the laboratory studies, the experiments etc. Regarding the investigation of the perception of the Bihor county SMEs Romanian accountants on the necessity to set up written accounting policies at the enterprise level, we used a questionnaire based survey. Thus, the empirical research was based on a pilot study constituted on a questionnaire applied in the territory. We wanted in this way to take the pulse of the population studied which is constituted of Bihor county SMEs, sampled according to size criteria: the net turnover reported at the end of 2008 financial year and the average number of employees reported at the end of the same period.

The central objective of our research is to determine the degree of sensitivity regarding the formulation of written accounting policies by the Bihor county SMEs and the setting up of a manual of accounting policies and procedures at the level of an entity. Within each firm, we wanted to ask a person from the accounting department or from the management team to fill the questionnaire. Almost in all the cases the respondents belong to the accounting department, in most of the cases being the chief accountant or the firm's economic director. It is important to emphasize the fact that in our research we have used the aleatory sampling procedure. The structuring of the questionnaire was made on 3 essential levels: 1) general information about the respondent; 2) questions testing the managers or the accountants' perception on the enterprise specific accounting policies; 3) personal data about the respondent.

4. Descriptive statistics and results

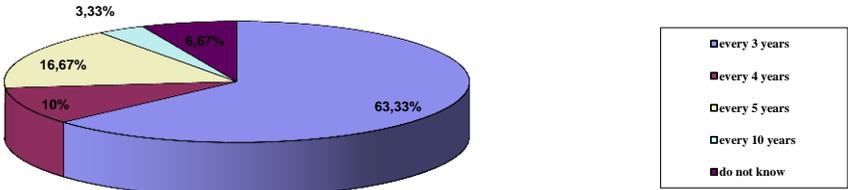
Out of the 17 enterprises which have not filled in our questionnaire, 7 have been found in a difficult financial situation, meaning insolvency and 10 enterprises expressed their clear intention not to fill in the questionnaire. Out of the total of 83 questionnaires processed, in a number of 80, the general information section was filled in, but only 77 mentioned the name of the entity where the subjects work as well. We consider that is worth mentioning that out of the total of the answers received, a number of 65 subjects have declared that they have more than 5 year experience in making financial statements, these having a weight of more than 85% of the total of

the sample, the rest having 1 to 5 year experience. Out of the 83 people interviewed, 66% were females and the distribution on age groups was the following: 41% were between 25 and 34 years old, 39% between 35 and 44 years old and the rest – over 45 years old. Regarding the subjects’ professional qualification, the distribution of the sample showed that 44% of respondents are chartered accountants that have also economic college education, 7% of respondents are certified accountants with college education and 5% have economic average education.

Our attention was focused on the 24 questions in the second part of the questionnaire, those regarding the enterprise specific accounting policies, as they are provided in Order 3055/2009.

The first 3 questions tackle the problem of presenting the accounting information in the financial statements and only 93.33% of the respondents agree that the elements presented in the annual financial statements of the entity are evaluated in accordance with the general accounting principles stipulated in Order 3055/2009, according to the accrual accounting. Half of the people interviewed had in view all four qualities of the accounting information (intelligibility, relevance, credibility, comparability) in drawing up the annual financial statements, and most of them (56.67%) are not aware of the possibility to use a significance threshold (10%-15%) of the total value of that particular category of assets, liabilities, expenditure, income and results for an as faithful as possible presentation of information in the balance sheet and in the profit and loss account. Out of 83 people interviewed, only 53.33% are aware of the fact that when entering into management the purchased tangible assets are evaluated at the purchase cost and 3.33% are not aware or have a vague opinion about the fact that the depreciation policy is based on the detailed depreciations periods used for each tangible asset and the depreciation methods correspond to the manner in which these tangible assets are used and they start producing effects the moment they are used. As a depreciation accounting method used to recover the input value of the tangible assets, 95% of the entities prefer the linear method, 1.67% use only the accelerated method and the rest apply the accelerated method for machinery and means of transport and the linear method for the rest of the tangible assets.

In accordance to the provisions of OMFP 3055/2009 *re-evaluations must be carried out with sufficient regularity so that the accounting value of the tangible assets do not substantially differ from that which would be determined by using the equitable value on the date of the balance sheet. The equitable value of the tangible assets is generally determined starting with their market value.*” As it results from figure 1, 63.33% of the interviewed companies have in view the re-evaluation of the tangible assets every 3 years, 10% every 4 years, 16.67% every 5 years and the rest either uses a too high interval of re-evaluation or they are not aware of this aspect.



(Source: authors’ calculus)

Figure 1. The distribution of answers in the sample regarding the time interval of the tangible assets’ re-evaluation

Regarding the significance threshold established for the recording of differences in the assets' re-evaluation, an important percentage (18.33%) of the people interviewed are not aware of its percentage or the usefulness of its usage, 40% apply a percentage of 5%, 38.33% use a significance threshold of 10%, a company 15%, and another only 1%. The following table (*Table 2.*) presents in a grouped manner the distribution of answers regarding the accounting policy of tangible assets in sample, noticing that only 86.67% of the respondents are aware of the fact that the modernization expenditure and capital repair services are included in the accounting value of tangible assets if these increase productivity or the life of the asset.

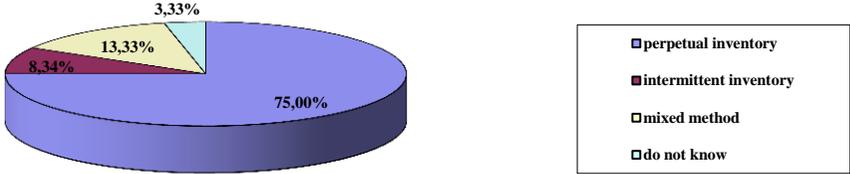
Table 2. The distribution of answers regarding the accounting policy of tangible assets in the sample

| Nature of problem investigated | Answers | | | |
|---|---------|-------|-----------|-------|
| | Correct | Vague | Incorrect | Total |
| Evaluation of purchased tangible assets | 53.33% | 0% | 46.67% | 100% |
| The depreciation policy is based on the depreciation periods and methods corresponding to each asset, starting to produce effects the moment they are used | 96.67% | 1.67% | 1.67% | 100% |
| Inclusion of modernization expenditure and capital repair services in the accounting value of the tangible assets – capitalization of costs | 86.67% | 1.67% | 11.67% | 100% |
| Estimation and creation of provisions when there are litigations with the suppliers or lessors/lessees of an asset at the end of the financial year | 75% | 8.33% | 16.67% | 100% |
| Essential changes regarding the evolution of litigations occurred between the closure date of the financial year and the date when the annual financial statements are subduced to approval are considered “an event subsequent to the date of the balance sheet, requiring accounting adjustments” | 90% | 3.33% | 6.67% | 100% |
| Evaluation of asset at the lessee in case of a financial leasing contract | 18.18% | 0% | 81.82% | 100% |

(Source: authors' calculus)

From the analysis of data presented in the table above, it results that many of the prepares of financial statements do not abide by the principle of prudence and that of financial year independence in presenting the accounting information for a quite low percentage (75%) resort the estimation and creation of provisions for litigations when they deal with this kind of situations. Moreover, 10% do not follow the evolution of these litigations and if an essential change occurs between the closure date of the financial year and the date when the annual financial statements are subduced for approval to the Annual General Meeting, they do not consider it as “an event subsequent to the date of the balance sheet requiring accounting adjustments”. Less than a quarter of those interviewed evaluate the asset sampled in financial leasing (the case of the lessor) at the value of the minimal leasing payments, the rest of them considering the equitable value, the cost or the minimum between the equitable value and the

value of the leasing payments more appropriate. The following 6 questions concern the inventory accounting policy. Three quarters of the analyzed enterprises prefer the perpetual inventory method as an accounting method used for the stock valuation, 8.33% intermittent inventory and 13.33% use the mixed method, according to the following figure:



(Source: authors' calculus)

Figure 3. The distribution of answers in the sample regarding the accounting method used for inventory valuation

The organization of inventories is made according to the quantitative-value method for raw materials, consumables, finished goods and other inventory goods. The global-value method is used for merchandise. Only 78.33% of the respondents agree with this provision, the same percentage being recorded also in the case of acknowledging in the profit and loss account of the period of the loss from the depreciation of the hardly marketable stocks when re-evaluating them (see Table 4.).

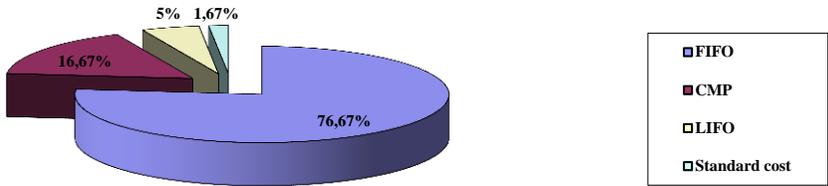
Table 4. The distribution of answers regarding the accounting policy of inventory in the sample

| Nature of problem investigated \ Answers | Correct | Vague | Incorrect | Total |
|---|---------|-------|-----------|-------|
| The use of quantitativ-value and global-value methods for the organization of inventory management | 78.33% | 8.34% | 13.33% | 100% |
| Re-evaluation of hardly marketable inventories and acknowledgement of loss from their depreciation in the profit and loss account of the period | 78.33% | 8.34% | 13.33% | 100% |
| Evaluation and presentation of inventories in the balance sheet | 16.67% | 0% | 83.33% | 100% |

(Source: authors' calculus)

A very small percentage (16.67%) of the total of practitioner accountants answering this interview are aware of the fact that inventories are evaluated and presented in the balance sheet at the smallest value between the cost and the net achievable value, the rest choosing either the first value or the second one. 63.33% of the entities organize internal control procedures of inventories, on each category. More than three quarters of the respondents evaluate the

indistinguishable inventories by using FIFO method, the rest use the other methods in accordance with the percentages in the following figure:



(Source: authors' calculus)

Figure 5. The distribution of answers in the sample regarding the evaluation method of inventories

The last 5 questions are the object of accounting policies regarding the accounts receivable, income and expenditure. Only 76.67% of those interviewed agree that short term accounts receivable are evaluated at their nominal value, on the date of their occurrence, periodical updates not being necessary anymore. The long term accounts receivable are emphasised at the updated value, in accordance with an average rate of the inter-banking interest, an exchange rate or in accordance with the graph of collections staging. A significant percentage (20%) does not agree with these regulations. From the table below, it results another unsatisfying aspect, the fact that there are respondents (36.67%) who do not consider that for the clients who have not paid for more than 60 days, adjustments for depreciation are required. Also, all the accounts receivable whose age of bad payment is more than 90 days are uncertain accounts receivable and will be presented as such, with the presentation in the explanatory notes of the professional judgment applied and those particular clients will be prosecuted.

Table 6. The distribution of answers regarding the accounting policy of accounts receivable, debts, income and expenditure in the sample

| Nature of problem investigated | Answers | Correct | Vague | Incorrect | Total |
|---|---------|---------|-------|-----------|-------|
| Evaluation of short term accounts receivable at their nominal value and of long term accounts receivable at their updated value | | 76.67% | 3.33% | 20% | 100% |
| Setting up adjustments for depreciation, for the accounts receivable which have not been cashed in 60 days and those outrunning 90 days are uncertain accounts receivable and these particular clients will be prosecuted | | 63.33% | 0% | 36.67% | 100% |
| Evaluation of accounts receivable and foreign currency debts by acknowledging the income or expenditure from the differences | | 95% | 1.67% | 3.33% | 100% |

| Nature of problem investigated | Answers | Correct | Vague | Incorrect | Total |
|---|---------|---------|-------|-----------|-------|
| in the exchange rate | | | | | |
| Adjustment of income and expenditure entailed of fundamental errors | | 95% | 3.33% | 1.67% | 100% |

(Source: authors' calculus)

It is rejoicing the fact that regarding the evaluation at the end of each month of the accounts receivable and foreign currency debts and of the accounts receivable and debts expressed in lei, whose settlement is made according to a foreign currency's exchange rate, 95% agreed (60% strongly agree and 35% agree) that this is made in accordance with the exchange rate of the foreign currency market, communicated by the National Bank of Romania on the last banking day of the month in discussion. The recorded exchange rate differences are showed in accounting in the expenditure or income from the exchange rate differences or other financial income or other financial expenditure, may be the case. The situation is similar in the case of correction policy of fundamental errors observed in income or expenditure. If the errors are afferent to a period of current year, they will be corrected in the period in which the error is discovered. If the error is discovered in the following years, its correction will not affect anymore the income or expenditure accounts but the result account reported from corrections of fundamental errors and changes in the accounting policies. Regarding the drawing up of cash-flow statements, 48.33% of the SMEs in the sample state that they carry out this statement, while 51.67% do not carry out this document.

5. Conclusions, limits and future research

As we presented in the previous sections, our study is a questionnaire based research, applied on a sample formed by 100 SMEs from Bihor county, selected using size, annual turnover at the end of 2008 as well as the average number of employees criteria. Only 83 of the applied questionnaires were validated. It is important to note that 65 of the respondents have over 5 years experience in preparing financial reports, that is over 85% of the sample, the others have an experience of 1 to 5 years, in the meantime, 44% of the respondents have economic higher education and other 44% are chartered accountants. The most interesting results were obtained from the answers to the questions from the second section of the questionnaire. Our attention was focused on the 24 questions in the second part of the questionnaire, those regarding the enterprise specific accounting policies, as they are provided in Order 3055/2009. The first 3 questions tackle the problem of presenting the accounting information in the financial statements and only 93.33% of the respondents agree that the elements presented in the annual financial statements of the entity are evaluated in accordance with the general accounting principles stipulated in Order 3055/2009, according to the accrual accounting. Half of the people interviewed had in view all four qualities of the accounting information (intelligibility, relevance, credibility, comparability) in drawing up the annual financial statements, and most of them (56.67%) are not aware of the possibility to use a significance threshold (10%-15%) of the total value of that particular category of assets, liabilities, expenditure, income and results for an as faithful as possible presentation of the information in the balance sheet and in the profit and loss account.

Out of 83 people interviewed, only 53.33% are aware of the fact that when entering into management the purchased tangible assets are evaluated at the purchase cost and 3.33% are not aware or have a vague opinion about the fact that the depreciation policy is based on the detailed depreciations periods used for each tangible asset and the depreciation methods correspond to the manner in which these tangible assets are used and they start producing effects the moment they

are used. As a depreciation accounting method used to recover the input value of the tangible assets, 95% of the entities prefer the linear method, 1.67% use only the accelerated method and the rest apply the accelerated method for machinery and means of transport and the linear method for the rest of the tangible assets. As regards accounting policy of inventories three quarters of the analysed enterprises prefer the perpetual inventory method as an accounting method used for the stock valuation, 8.33% intermittent inventory and 13.33% use the mixed method. A very small percentage (16.67%) of the total of practitioner accountants answering this interview are aware of the fact that inventories are evaluated and presented in the balance sheet at the smallest value between the cost and the net achievable value, the rest choosing either the first value or the second one. 63.33% of the entities organize internal control procedures of inventories, on each category. More than three quarters of the respondents evaluate the indistinguishable inventories by using FIFO method, the rest use the other methods.

Finally, only 76.67% of those interviewed agree that short term accounts receivable are evaluated at their nominal value, on the date of their occurrence, periodical updates not being necessary anymore. The long term accounts receivable are emphasized at the updated value, in accordance with an average rate of the inter-banking interest, an exchange rate or in accordance with the graph of collections staging. A significant percentage (20%) does not agree with these regulations. Cash-flow statements, only for 48.33% of SMEs in the sample is relevant to be completed, while 51.67% do not carry out this document. The main result of our investigative research on the SMEs from Bihor county sample is the identification of the need of specialists' training in the development of specific accounting policies, according to the entity's features, as well as the necessity of specialized assistance in the elaboration of a policy and procedure manual(guide) for the accounting department, which should comprise the specific theoretical framework for the development of strong accounting policies, premise of a believable and comparable financial reports, reflecting the economic substance of events and transactions. The limits of our study are related especially to the elaboration of the questionnaire, the formulation of the questions as well as the choice of the sample. Future research will be centered on the investigation of specific accounting policies used in the region of North West Romanian SMEs, their presentation in the financial reports and the motivations behind the choose of an accounting policy or method in the detriment of another one.

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CURRENT STATE AND EVOLUTION PERSPECTIVES FOR MANAGEMENT ACCOUNTING IN THE ENERGY SECTOR BY IMPLEMENTING THE ABC METHOD

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*Based on a controversial issue, namely determining and controlling costs in the energy sector, the present study falls within the scope of management accounting and control. This scientific approach was initiated as a result of personal research concerns in the area of accounting, starting from the need to know and quantify costs in a sector of the economy that is less exploited. The main objective of this scientific approach is to address the evolution of the energy sector in a national and international context, in terms of economy and finances, with the aim to underline the need to organize and conduct management accounting in this sector. We will present a few particularities of the energy system, the current status of implementation of a medium and long term strategy aimed at developing the energy sector, as well as the need to adopt modern costing methods in this sector, which ensure operative cost control and performance growth of the entities that operate in this sector. Information on the reviewed topic was conducted by studying the national and international literature in the field, by analyzing the associated legislation, by consulting specialized web-sites and various articles in the database. The main research methods used in this scientific approach were **analysis** and **synthesis**, and qualitative research was the type of used research. The results of the research will materialize in providing the necessary conditions for designing an econometric model for implementing the ABC method, the conceptual and ideological delimitation of the ABC method, the deepening of the positive and negative aspects that the implementation of the Activity Based Costing involves. The major implication for the researched field is ensuring success for the implementation of a modern costing method in the energy sector, underlining the shortcomings of the traditional costing methods. The added value of the paper consists in conducting a rigorous study of the current state of an overlooked sector of global economy and shaping trends in the evolution of energy costing.*

Keywords: energy sector, strategy, costing method, activities, operative control

JEL classification: M40, M41

1.Introduction

The purposes of this research are to study, present and adopt a modern costing method for production in the energy sector, starting from the specific of the entities that operate in this sector. The characteristics of the energy sector, such as: extended periods of implementation for various sectorial policies, achieving strategic objectives, the large capital requested for the development of this sector, the need to achieve production at the same time with consumption, and others, require the existence of **medium and long term strategies** aimed at developing the energy sector. These characteristics require organizing and conducting an efficient management accounting in terms of costs.

To achieve this goal, we will propose the implementation of the ABC method (Activity Based Costing) whose targets include: revealing the causes that lead to choosing the activity based costing method; the reorganisation in cross-section of the entities where the method will be implemented by taking into account the organizational and technological features of the production in the energy sector; developing the account system used to reflect consumption and activity costs, which is specific for entities in the energy sector; drafting specific documents that match the needs of evidence, analysis and control, and highlighting the links between them; the

contribution of the activity based costing method to the development of the methodological and informational support in entities from the energy sector.

2.The energy sector in national and international context

Energy represents an indispensable product, having high economic, social, strategic and political value. The general objective of any implemented strategy in the global energy sector consists in meeting the energy needs both now and on the medium and long term, at an appropriate price for the modern market economy and complying with a good living standard, in conditions of quality and safety of power supply, but especially by complying with principles of sustainable development.

Forecasts indicate an economic growth that will generate increased energy consumption. In the context of these evolutions, it is estimated that the total energy demand for 2030 will be higher by 50% than in 2003, and the demand for oil will increase by 46%. Other equally gloomy provisions refer to the global oil reserves that could last until 2040 at the current rate of consumption, natural gas reserves would ensure consumption until 2070, while coal reserves are ensured for the next 200 years.

The International Energy Agency (IEA) and the World Energy Council (WEC) claim that for the next decade, the primary energy consumption structure will see an increase of the share of renewable sources, but also of natural gases. Furthermore, it is estimated that a quarter of the primary energy needs will still be covered by coal.

The lack of refining capacities, the tendency of some countries to increase their energy stocks in order to cope with the crisis, the increase of the energy demand combined with geopolitical factors have determined the growth of crude-oil prices, which further determined an increase of prices for natural gases. All these factors led to the reorientation of energy policies in countries that import energy, in terms of increasing focus on renewable energy sources and improving energy efficiency.

In modern times, Europe was the true centre of the world. It was the continent which was always at the helm of the development process.

The energy sector represents, at EU level, a major economic and geopolitical factor. EU is the second energy market in the world. Currently, it imports over 70% of its oil and almost 45% of its gas, and this dependency could reach 90% for natural gases and almost 100% for oil by 2030.

Although the European Union has tried to reduce energy consumption and to promote renewable energy, its dependency to global suppliers of fossil fuels is increasing. EU is the world's largest importer of energy and the second consumer, being dependent on gas supplies from Russia (24%), Norway (15%) and Algeria (11%). While the energy consumption of European Union members is going upward, it is estimated that by 2015 only 30% of the need for natural gases will be covered from own sources.

In order to ensure energy sustainability, competitiveness and security, the European energy strategy project, called **A European Strategy for Sustainable, Competitive and Secure Energy**, establishes the main courses of action for the European Union:

- diversity of energy sources;
- strengthening solidarity between member states and ensuring the energy flow by revising the legislation regarding national gas and oil stocks;
- developing a joint external policy for all the EU states and building a protection infrastructure of the energy system.

Romania, a member of the European Union, is in a particular situation. Because the energy sector represents the main contributor to environmental pollution and climate changes, our country must meet a double requirement: on one hand, the high standards of the European Union regarding

energy and its impact on the environment, and, on the other hand, Romania has to correct its own deficiencies in the energy sector.

Because it is a member of the European Union, our country has to comply with the **Integrated strategy on energy and climate changes**, adopted in March 2007 by EU, which had the strategic objective to reduce emissions of greenhouse gases (especially CO₂) by 20% by the year 2020, taking into account the limitation of the global warming effect to only 2 Celsius degrees more than the temperatures in the preindustrial age (the energy sector contributed with 80% to the total volume of emissions). Another target of the European Union was to reduce energy consumption by increasing energy efficiency by 20% by the year 2020.

Romania “*has a wide range of primary energy resources, but they are reduced in quantity: crude-oil, natural gases, coal, uranium ore, as well as an important potential of renewable energy that may be capitalized*”

(Official Gazette of Romania 2007: 4).

The priorities of the energy industry in our country involve *energy efficiency* (the Romanian energy industry is the most energy-intensive in the European Union, with a potential to reduce energy losses of about 30-35% of consumed primary resources, half of them being imported), *co-generation and district heating* (approximately 70 towns in our countries need modernization, because the total energy losses in urban systems are high), *the energy production capacities are old and unreliable*.

In addressing the development of the energy sector, in Romania was considered the need to create structures that will adapt to the sole European market, where national markets gradually lose their traditional borders and become an integrated part of the common market.

In conclusion, improving legislation in the field, modernizing and privatizing the production sector, improving the electric energy markets, electrifying the rural area, reducing environmental pollution, stimulating research, bringing development and innovation in the field are only a few important priorities of the energy sector in our country.

Starting from the expression “energy is not expensive, but its lack is”, we may state that in Romania the following decades will be dominated by the challenges of developing an energy efficient and competitive economy, with low carbon emissions and energy security.

3. Research methodology

Information on the reviewed topic was achieved by studying national and international literature in the field, by analyzing the associated legislation, by consulting specialized web-sites and various articles in the database. The main research methods used in my scientific approach were *analysis* and *synthesis*, and qualitative research was the type of used research.

4. The need to organize management accounting in the energy sector

The managerial information is used by the management factors of the economic entity as a product of management accounting. Sometimes, “*the information is credible, but irrelevant. Other times, it is relevant, but it’s not credible. In both cases, it is not useful*”(Briciu et al. 2009: 12).

Being regarded as a “*specific method of processing accounting information*”(Pântea and Bodea 2008: 16) management accounting aims to know the costs of various functions of the entity, to ensure the assessment basis for its produced goods, to explain the obtained results and to establish forecasts. Reaching all these objectives requires the adoption of a proper costing method.

The main dysfunctional elements that characterize the energy sector in our country are related to: energy prices, which are kept low for reasons of social protection; high energy losses on the

entire stream, from primary resources to energy use; maintaining state property in the production sector, with multiple adverse economic consequences; old and inefficient equipments that need high investments; an unstable and unattractive legal framework; high level of pollution, etc.

In terms of accounting, one of the pressing needs in this system is organizing and conducting a management accounting by implementing modern costing methods, capable to facilitate the calculus of performance.

The permanent evolution of the global business environment has generated the permanent adaptation of management accounting to current requirements. The evolution perspectives of these two has manifested under the mark of being open to change, this being one of the most important features that globalization has brought to management accounting and control.

In the context of macroeconomic phenomena, such as: stagnation of economic activity, increased global competition, inflation and environmental turbulences that considerably increased the vulnerability of entities, management accounting and control are forced to intervene to enable work in optimum conditions and operational decisions. Reducing this vulnerability may be achieved by increasing the reaction of the entity through the implementation of an information system capable to signal these “dangers”, but also by improving the entity’s competitiveness through the adoption of a reliable information system.

Starting with the 1990s, the issues of management accounting and costing have started to be approached separately, the basic approach being “*a costing method like full costing, doubled by a booking technique specific for accounting, using Class 9 of accounts – Management Accounts – stipulated in the regulations issued by the Ministry of Public Finance*”(Dumitru and Calu: 31). Over the next two decades, in Romania, the issue of management control has started to take shape in close relation to management accounting. The more prominent manifestation of the role of management accounting as an information tool of management has led to adopting and using on a wider scale the notion of management accounting.

Currently, there are a number of factors that influence the organization forms of management accounting. These factors are numerous and are related to the specific of the technological process, to the functional and operational structures of the entity, to the full or partial interference of the management accounting’s objectives in assisting the decision-making process, to the flexibility or rigidity of using one or another system of accounts to reach these objectives.

Under the influence of these factors, the specialized literature shaped two models of organization of management accounting (a dualistic model and an integrated model) that resulted in four organization concepts for management accounting (the concept of single-entry bookkeeping, the integral organization concept, the dualistic concept and the modern concept of organizing management accounting). **The basic components** of management accounting organization are: “*costing, budgeting and conducting a rigorous budgetary control, writing reports of internal information necessary in assisting the decision-making process, the control of activities and performances of the entity based on the concept of efficiency of the responsibility centres within the entity*”(Fătăcean 2009: 43).

The delimitation of these components is associated with clipping the entity into responsibility centres. The cross-clipping of the entity complies with the logic of purpose and cooperation in order to describe the object of the actions that are determined internally for the organization process. This new way of practical organization achieves the connection between strategic objectives and their materialization into actions, “*the clipping of the enterprise, seen as an accounting entity, into analysis centres that are considered accounting sub-units is the most important stage in implementing a costing system, upon which the reality, accuracy and exactness of the registered information supplied by management accounting depends*”(Pântea and al. 1993: 64).

5. Adopting Activity Based Costing in the energy sector

Management accounting as an end in itself has the obligation to meet the informational requirements enunciated by the managers of the entity, but satisfying these requirements depends on the chosen calculation method and on the percentage at which this method is orientated or not towards the principle of efficient management of the activity.

In terms of costs, the efficiency of the information become essential for the efficiency of the production process because any information that is not useful on time will lose ground and its use value, and therefore, the work consumption necessary to obtain it is wasted. The goal of applying the activity based costing method is to enable reception of efficient information, efficiency that should reach a point where any unsaved expense will be tracked down before it even occurs.

Activity based costing represents one of the latest advancements in the area of costing.

“The origin of the activity based costing method is found in US literature in the paper *“The Hidden Factory”* written by Jeffrey G. Miller and Thomas E. Vollman, which subjects to critical analysis the sectors generating indirect costs”(Caraiani and Dumitru 2005: 225). The two authors have examined with great accuracy the places where indirect costs occur, concluding that it is very important to assign a decisive role within cost control to the development of a more detailed model for the causes of these costs. They didn’t insist on creating a new system for determining costs, but they insisted only on detailing the occurrence of indirect costs and the measures that should be taken when clarifying the causes that contributed to the recording of negative deviations of indirect costs.

Applying the ABC method in the energy sector provides enhancement of the classification of costs not only in terms of their economic nature, but especially in terms of destination, and creates bigger analysis opportunities on three categories of activities: production, transport and supply.

Accounting of environmental costs may be partially considered as a special application of the ABC method. It is successfully applied to monitor the use and allocation of material, financial and energy resources based on the life cycle of the products. *“Applying the ABC method to determine environmental costs requires identifying the costs related to the environment that are normally attributed to the common centres, which involve environmental costs, and the environmental costs hidden in indirect costs”*(Bețianu 2008: 350).

Activity based costing represents only one of the ways in which environmental management accounting is integrated into the business. One of the major advantages of using the ABC method to assess environmental costs is that it may be used to integrate environmental costs within the strategic management process, thereby incorporating environmental issues within the strategic objectives of the entity’s life.

The ABC method is not limited to providing more relevant and accurate informational costs than traditional approaches. In this new approach, costing is still considered a significant management tool, but isn’t an end in itself. The aim isn’t to influence the level of costs (such as the cost method of cost centres) but rather to allocate an efficient action on activities, which determines costs. *“People can’t manage costs, they can only manage the activities that determine costs”* (H.T. Johnson). Therefore, a new dimension was given to the ABC method: Activity Based Management (ABM). A simple calculating feature is not the main element of the method, but adding strategic and managerial dimensions increases it.

Among the modern methods of calculation, Activity Based Costing asserted as one of the new strategic initiatives in business, being considered by experts an innovation in cost management. It is only one of the refining methods of the cost system, *“it is not an entirely new or original method, it is not a perfect management tool, but it seems to solve in a satisfying manner for the enterprise the limits of the traditional cost system”*(Albu and Albu 2003: 158).

Following research conducted by specialists in the management accounting field, the next causes of processes' costs have been identified: the deficiencies of costing systems for contemporary costs, the diversification of the information demand for management and changes in the strategic position of the company.

We are practically dealing with two types of activities: *“on one hand, activities that can be attached to products, called **primary or main activities** (are the ones used outside the entity, either by a product or a different entity; they express the main mission of the entity, but they don't necessarily have a direct relation with the products that may be support activities) [...]; on the other hand, we are considering activities that the entity carries out in conjunction with main activities, as their support. They are called secondary activities and are not related to products”*(Bouquin 2004: 184).

Activity Based Costing was perceived as an alternative to the traditional accounting systems, having a production system organized like a set of activities. Managers were asked to consider first the resources consumed by different activities, and only afterwards to allocate costs to products. Practically, the ABC method is based on the cross-section clipping of the entity. The method became known as a cost measuring process of operations with the help of: analyzing the costs' elements, determining performances based on activities, measuring production and functional costs.

The ABC method *“provides two ways to reduce costs: it helps identify the opportunities of real reduction of costs (with the help of cost inductors) and furnishes simulations of the impact of cost reduction”*(Dumitru and Calu 2008: 186).

Once an entity decides to implement the ABC method, it must determine the level of informational details that it wants to collect and put at the disposal of management, knowing that more accurate information is much more expensive. To a certain point, the additional detail is not worth it. Cokins, Stratton and Helbling provide a useful focus on implementing the ABC method and discuss these issues. For example, the entities will have to pay attention especially to expensive resources, to resources whose consumption varies depending on the product and to resources whose demand models are not correlated to traditional allocation standards.

The ABC method *“is more than a simple cost allocation tool, it can also be a tool to control the activities of a business in order to optimize the allocation of resources”*(Mendoza and al. 2009: 167).

The hypothesis of the ABC method is that the careful analysis of activities should lead to the identification of relationships that maintain several products. Activity Based Costing rejects imputations in cascade and seeks to maintain relations between costs and the causes behind them. For this reason, the costing method believes that each entity producing directly productive activities ensures peripheral activities also. *“To gain a better understanding of the company, we look first at a measurable volume unit or at the activity that serves as cost-driver”*(Meigs and al. 1996: 955). Thus, we establish for each product a list of directly consuming activities and of those that they generate.

6. Conclusions

The improvement of management accounting in the energy sector requires adopting budgetary methods and techniques, monitoring and costing that allow simplicity, efficiency, economy, anticipation, accompanied by higher quality of the obtained results. The value created by improving costing techniques and methods in the energy sector should largely compensate the used or consumed resources.

One of the most important contributions of Activity Based Costing is that it repairs the weaknesses of traditional production costing approaches. Although the ABC method was quickly accepted, there were still a variety of opinions regarding its efficiency. Over time, by stimulating

the adoption of this method, literature presented a series of factors with influence over the effectiveness of this method, particularly financial factors. The results of the study confirmed the benefits of the ABC method when it is used in parallel with other strategies and when it is implemented within entities with complex activities, where costs are relatively important.

Currently, we are talking about successfully applying the ABC method for environmental costing. The managers of entities believe that, in general, environmental costs are not significant for the functioning of their business, but they ignore that some production costs, especially in the energy sector, have an environmental component also.

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SOME INSIGHTS REGARDING CREATIVE ACCOUNTING IN ROMANIAN ACCOUNTING ENVIRONMENT - REGULATORS, FINANCIAL AUDITORS AND PROFESSIONAL BODIES OPINION

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This empirical study reports the results of a survey designed to explore the existence and magnitude of creative accounting practices in the Romanian accounting environment using as a reference point the opinion of some of the top representative accounting professionals like: financial auditors, regulators and professional bodies representatives of the Chamber of Financial Auditors of Romania and also representative of the Body of Expert and Licensed Accountants of Romania.

Since the existence of creative accounting practices are connected in accounting with issues of vulnerability and in some cases panic getting to know its magnitude can be regarded of higher importance. In this respect we were interested to see if our respondents can document its existence and magnitude based on their experience. In order to achieve this goal our methodology employed neutral and direct interviews based on closed questions questionnaire.

The results of our empirical study documented that the credibility of accounting profession in the Romanian accounting environment is not affected by items like creative accounting since all our respondents asserted that is not facile to employ creative accounting schemes in the practice of accounting. One particular question was concerned about the ease of detection of creative accounting practices. In this respect we interviewed our respondents and all had similar opinions that in order to detect those practice skilled professionals are needed and more than that the desire to engage in this demarche since it is not specified particularly in the law.

When it comes to creative accounting schemes that our respondents could identify in their day to day work they shared similar views: items like profit overstatement and profit undervaluation, income tax and leasing can be included frequently in those schemes. On the other hand practices of creative accounting that include goodwill, provisions and developments costs are not found in a significant proportion in the Romanian economic environment.

Keywords: creative accounting, creative accounting practices, credibility, existence, magnitude

JEL code: M 41

Introduction

Nothing is more important or more rewarding in the course of preparing and communicating accounting information that the ability to present it to users and in this context the wording "ability" is representative since this profession is based entirely on professional judgment. Accounting is assessed primarily through its capacity to present financial information for the process of decision making. In this respect objectivity of accounting information is crucial since it should be elaborated under the TFV requirements. The above describe the fair accounting part while all the items that are not included in this category were documented as unfair components that made their presence felt increasingly as empirical studies documented their existence through elaborate evidence (Smith 1992:4-221; Mulford and Comiskey 2002, 2005).

Motivation of the study

Instead of extending the importance of such a topic we bring into attention the opinion of Katherine Schipper (1989:91-102) regarding the importance of getting to know earnings management and pointing out the fact that her opinion can be expanded to our entire study area: "Understanding earnings management concerns one of the central questions in accounting". From that point in time and until the present time its opinion becomes even more appreciated even if it was formulated long time ago and referred only to a small part of creative accounting: earnings management.

State of the art

Creative accounting presented under all its forms of manifestation represents a highly debated subject in the literature with old roots in accounting literature in the debating area. Naser (1993:9) asserted in his book *Creative Accounting: Its Nature and Use*, that manipulation of accounts is an old accounting problem that goes back in the 1920s. The trend of examining creative accounting increased over the years and the interest in examining its existence and the taxonomy of its practices also. Sen and Inanga (2009:27-42) asserted in their study also that creative accounting occurrence increased in many developed countries in recent years. Recent developments (Vinnari and Nasi, 2008:97-116) place creative accounting in the public sector too, defying a general wording according to which creative accounting is present only in the private sector. Erickson, Hanlon and Maydew (2006:113-144) discussing on the demand for research in the area of accounts manipulation discussed about the importance of such a topic and also about the legislative and regulatory changes. Earlier empirical studies documented the existence of earnings losses and decreases (Burgstahler and Dichev 1997:99-126), executive compensation and manipulation (Erickson, Hanlon and Maydew 2006:113-144), off balance sheet financing, creative cash flow and goodwill, manipulated development costs, stock valuation methods, income tax and provisions (Mulford and Comiskey, 2002, 2005), accrued income, depreciations and others manipulated items likewise (Naser, 1993).

Methodology

The methodology employed for our empirical study consisted in the neutral and direct interviews based on a series of 18 closed questions addressed to top representatives of the Romanian regulators, financial auditors and professional bodies' representatives.

The motivation for choosing this particular methodology comprised the fact that we wanted to minimize the discrepancies that exists between the declared opinions and the actual behavior (Chelcea, 2001:124). In this respect we wanted to minimize the biases that could occur. By using this particular path we eliminated any freedom to innovate or changing the actual path of research since our scope of the study was to collect the respondent's opinion (Ghiglione and Matalon 1991:77) regarding a predefined set of questions. The main advantages of this instrument are that we had the possibility to observe the nonverbal behavior, to ensure the standardization of the response condition and to collect spontaneous responses.

The closed questions were developed based on Likert Scale rating the items in a group of judges using 1 to 5 rating scale where: 1 can be defined as *strongly unfavorable to the concept*, 2 is *somewhat unfavorable to the concept*, 3 is used when *undecided* rating item is used, 4 is *somewhat favorable to the concept* and 5 is *strongly favorable to the concept*.

The interview lasted from minimum 25 minutes to 80 minutes with a mean of 55 minutes conducted in the workplace of the respondents and one at the Faculty of Economics and Business Administration from Babes Bolyai University from Cluj Napoca. In Appedix 1 we summarized the list of the interviews, the dates and the duration of the interviews, the person who interviewed the respondents.

All our respondents were Romanian citizens based in Cluj Napoca, except one respondent from Bucharest. All interviews were conducted in Romanian language and both researchers took notes during the interviews. No ambiguous answers were received and all questions had an answer.

Research Design

This empirical study conducted in the Romanian accounting environment reports the main results of a survey that used as a research instrument the interview, focused on the perceptions of regulators, financial auditors and representatives of professional bodies regarding the magnitude of creative accounting practices. Since the empirical studies conducted in the literature documented the existence of creative accounting practices in various economic environments (Jones 1991:193-228; Dechow *et al.* 1995:193-225; Burgustahler and Dichev 1997:99-126; Mulford and Comiskey 2002:2-375; 2005:289-303), the Romanian economic environment is also susceptible of being characterized by its incidence. The perception regarding the magnitude of creative accounting practices may depend firstly on the category that we interview: regulators, financial auditors and professional bodies.

In order to explain if that magnitude has the potential to differ in those particular respondents view in practice of accounting we interviewed 8 respondents involved in accounting regulation and accounting practice in Romanian accounting environment. Our sample was not randomly chosen since we were interesting in interviewing some top respondents of Romanian accounting environment and cannot be considered as being a sample that compressed any statistical path that must be followed in the construction of samples used in a research area.

Findings

Our questionnaire contained as we stated before 18 closed questions. The first five questions assessed the credibility of accounting information when taking economic decisions (Q1: *Can one trust the information compressed in the financial statements when taking economic decisions in the Romanian accounting environment*); the ease for a company to employ creative accounting schemes (Q2: *Can be considered facile for a company to employ creative accounting schemes in Romanian accounting environment*); the ease to detect those schemes in general (Q3: *Can be facile to detect creative accounting schemes*); the role of professional bodies and regulators in fighting creative accounting (Q4: *The role of the professional bodies and regulators is essential in fighting creative accounting schemes*) and the role of financial audit in fighting creative accounting (Q5: *The role of the financial audit is essential in fighting creative*). The 13 questions remained tested for the magnitude of some of the most cited items of creative accounting practices or techniques of creative accounting as it is presented in table 2.

The results for the first 5 questions are presented in table 1 as following:

Table 1. Credibility of the accounting information, ease to employ and detect creative accounting practices and the role of regulators, professional bodies and financial audit:

| Questions/Respondents | Financial auditors | Regulators | Professional bodies |
|-----------------------|--------------------|-------------------|---------------------|
| Q1 | FA 1, FA 2 /4 | R 1, R2, R3/ 5 | PM 1, PM3/4; PM2/5 |
| Q2 | FA 1/3; FA 2/4 | R 1, R3/ 1; R 2/2 | PM 1, PM3/2; PM2/2 |
| Q3 | FA 1/2; FA 2/4 | R 1, R3/ 2; R 2/3 | PM 1, PM3/4; PM2/2 |
| Q4 | FA 1, FA 2/4 | R 1, R3/ 4; R 2/5 | PM 1, PM2, PM3/5 |
| Q5 | FA 1, FA 2/3 | R 1, R3/ 3; R 2/4 | PM 1, PM2/3, PM3/5 |

Source: Projection of the authors|

When it comes to assessing the answers received for our first question one interesting aspect can be discussed and that is related to the fact that only the professional bodies and the regulators asserted that one can trust fully in the accounting information. In their vision the “financial statements are constructing under the principle of TFV and should be no place for misjudgment” as PM 2 asserted.

FA 1 consider that “ we cannot say that we can trust 100% of the information that is comprised in the financial statement but on the other side we can never say that this particular information is always characterized under the creative accounting influence how some international studies documented”. R2 in this respect admits that accounting information can be manipulated but the incidence is not high. The second question shared contradictory answers as the financial auditors considered that is not difficult to employ creative accounting schemes in the Romanian accounting environment while the latter categories strongly disagree with this. R3 asserted that „ the mirage of creative accounting is beautiful but how much can we talk about creative accounting indeed and how much can we talk about the desire of doing that”. The third question was the only one that received only the strict answers with no additional information on behalf of the regulators. FA 2 asserted that „the detection process of creative accounting schemes must be judged according to the experience of the person that analyzes one accounting item”. PM 1 and PM 4 asserted that is easy to detect those practices “as long as the person that follow this demarche is interested in this” (PM 1) and “you just need the right person to detect them” (PM 3). The role of regulators and professional bodies in fighting creative accounting was considered very important since all respondents were strongly agreed. FA2 declared in this context that “the accounting practices that do not lead to TFV must be inhibited through accounting regulations and that is an ongoing process that never ends”. PM 3 asserted that „everybody must fight creative accounting. I see it only through a spectrum of negativity. We are all responsible for constructing the credibility of the accounting proffesion and for that reason we all must limit unfair practices”.

The role of the financial audit in fighting those practices was seen as not essential by the financial auditors itself. The latter categories strongly agreed. In this respect PM 3 asserted that “when we discuss about the financial audit and creative accounting the answer may appear as simple, but is complex. We have noticed that every time creative accounting practices are discovered, financial auditors are to be blamed but the truth is that this is not their responsibility to detect that. They must verify for the legality of the accounting information not for items of morality particularly”. Table 6 combined schemes of creative accounting documented in the literature (the references are the ones above). Some of them were presented to the respondents in order for them to assess the frequency that they head or found the item in their day to day work.

Table 6: Schemes of creative accounting and their magnitude in the Romanian accounting environment:

| Schemes of creative accounting | Financial auditors | Regulators | Professional bodies |
|--------------------------------|--------------------|------------------|---------------------|
| Profit undervaluation | FA 1, FA 2/4 | R1, R 2, R3/5 | PM 1, PM 2, PM 3/4 |
| Profit overstatement | FA 1, FA 2/4 | R1, R 2, R3/4 | PM 1, PM 2, PM 3/4 |
| Income tax | FA 1, FA 2/4 | R1, R 2/4, R 3/5 | PM 1, PM 2, PM 3/4 |
| Depreciation | FA 1/2, FA 2/1 | R1/2, R2/1, R3/3 | PM1, PM2/2, PM3/3 |
| Provisions | FA 1, FA 2/1 | R1, R2, R3/1 | PM1/2, PM 2, PM3/1 |
| Goodwill | FA 1, FA 2/1 | R1, R2, R3/1 | PM1/2, PM 2, PM3/1 |
| Prepayments | FA 1/4, FA 2/2 | R1, R 2, R3/4 | PM 1, PM 2, PM 3/2 |
| Accrued incomes | FA 1/4, FA 2/2 | R1, R 2, R3/4 | PM 1, PM 2, PM 3/2 |
| Adjustments | FA 1, FA 2/1 | R1, R 2, R3/1 | PM 1, PM 2/1, PM3/2 |
| Leasing | FA 1, FA 2/4 | R1, R 2, R3/4 | PM 1, PM 2, PM 3/4 |
| Development costs | FA 1, FA 2/1 | R1, R2, R3/1 | PM 1, PM 2/1, PM3/2 |
| Off balance sheet schemes | FA 1, FA 2/1 | R1, R2/1, R3/2 | PM 1, PM 2/1, PM3/2 |
| Stock valuation methods | FA 1, FA 2/1 | R1, R2/1, R3/2 | PM 1, PM 2/2, PM3/3 |

Source: Projection of the authors

As it can be observed from table 6, some of the techniques of creative accounting are present in the Romanian economic environment and as it can be concluded based on their answers in a higher proportion. Those schemes of creative accounting are the ones that include: profit underestimation and overstatement, income tax and leasing manipulations. Other items that are present in a higher proportion (Smith 1992:4-241; Mulford and Comiskey 2002:2-375) in other

economic environments like stock evaluation, off balance sheet, developments costs are somehow inexistent in the Romanian economic environment based on the respondent's answers. When it comes the creative accounting schemes that are developed based on provisions we cannot assert that those are present in our economic environment since none of the respondents declared it as being present. Regarding to this item all respondents asserted that Assistant Lecturers of accounting information don't use provisions even if from a legal point of view they have this possibility. Also none of the respondents declared that they could found in their day to day work an item like goodwill included in a scheme of creative accounting. In this respect PMI asserted that "I have heard of cases like those where this item was used creatively but I personally didn't found in my work this situation".

Conclusions

In the Romanian accounting environment the credibility is the accounting information has described by our categories of respondents as being high which is not surprisingly since two of the categories are directly responsible for constructing the credibility of the accounting profession. Contrary to the international studies results (e.g. the above cited sources) our respondents asserted that is difficult to employ schemes of creative accounting and the detection process of those scheme involved skilled professionals. The role of regulators and professional bodies is important in limiting its incidence. Profit overstatement and undervaluation, income tax and leasing manipulation are found in the Romanian accounting environment while others techniques of creative accounting that involve goodwill, or developments costs weren't documented by our respondents.

Further developments and scope for future research

Having the fact that this research instrument may offer multiple advantages we intend to use it in our future research but to apply only the interview without combining it with the questionnaire, leaving in this respect room for creativity and also for no influence at all. We intend to use a larger sample and to develop a more robust study at a national level including respondents from each category plus two new categories: Assistant Lecturers and financial analysts. Also from a lack of space we couldn't approach on a higher scale the additional explanations that our respondents gave so in a further study we intend to discuss this part too since that could explain better their opinions.

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Appendix 1 – List of interviewees

| Category of respondents | Abbreviation | Duration | Month | Day | Year | Researcher |
|---|--------------|----------|-------|-----|------|----------------|
| Financial auditor 1 | FA 1 | 45 min. | Dec. | 12 | 2010 | Alina B. Vladu |
| Financial auditor 2 | FA 2 | 30 min. | Apr. | 30 | 2011 | Alina B. Vladu |
| Professional bodies member 1 (Representative of the Chamber of Financial Auditors of Romania) | PM 1 | 25 min. | Jan. | 18 | 2011 | Adrian Grosanu |
| Professional bodies member 2 (Representative of the Body of Expert and Licensed Accountants of Romania) | PM 2 | 70 min. | Jan. | 20 | 2011 | Adrian Grosanu |
| Professional bodies member 3 (Representative of the Body of Expert and Licensed Accountants of Romania) | PM 3 | 80 min. | Feb. | 11 | 2011 | Adrian Grosanu |
| Regulator 1 | R 1 | 80 min | Feb. | 17 | 2011 | Alina B. Vladu |
| Regulator 2 | R 2 | 40 min. | Mar. | 10 | 2011 | Alina B. Vladu |
| Regulator 3 | R 3 | 65 min. | Mar. | 30 | 2011 | Adrian Grosanu |

SECTION: MANAGEMENT AND MARKETING

SUB-SECTION: MANAGEMENT

INTRINSIC AND EXTRINSIC MOTIVATION. AN INVESTIGATION OF PERFORMANCE CORRELATION ON STUDENTS

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A series of research undertaken in the last decade have revealed some interesting aspects regarding the effects of different types of motivation on performance. Among the researchers who have shown interest in this field we can number: Richard Ryan, Edward Deci, Sam Glucksberg, Dan Ariely, Robert Eisenhower, Linda Shanock, analysts from London School of Economics, and others. Their findings suggest that extrinsic incentives may have a negative impact on overall performance, but a general agreement in this respect has not been reached.

In this paper we intend to shed some light upon the relationship between intrinsic and extrinsic motivation and performance. Experts define intrinsic motivation as being the execution of a task or activity because of the inherent satisfaction arising from it rather than due to some separate outcome. In contrast with intrinsic motivation, we speak of extrinsic motivation whenever an activity is done in order to attain some separable outcome.

With the purpose of contributing to the clarification of the links between concepts, we initiated and conducted an explanatory research. The research is based on the analysis of the relations between the results obtained by third year students and their predominant type of motivation. For this, we formulated and tested four work hypotheses using a combination of quantitative methods (investigation) and qualitative methods (focus group). After the validation of the questionnaires, the respondents were divided into four categories: intrinsically motivated, extrinsically motivated, both intrinsically and extrinsically motivated and unmotivated. To analyze the collected data, we made use of Excel and SPSS.

Some of the primary conclusions of the research are as follows: as the average increases, the percent of individuals having both extrinsic and intrinsic motivation is decreasing; the highest percentage of unmotivated students is concentrated in the highest average category; Female students tend to have better performance at university level. The research intends to be nearly a first step in the attempt to clarify the relationship between intrinsic (and extrinsic) motivation and performance. Further research is needed.

Keywords: intrinsic motivation, extrinsic motivation, performance, correlation.

JEL: M12, I23

I. Introduction

The concept of motivation has emerged around 1930 and it was long debated and studied in an attempt to identify what drives people to undertake a particular action. After decades of studies and research it can not be said that there is a unified theory of motivation. However, some characteristics of motivation are generally accepted.

A series of research undertaken in the last decade have revealed some interesting aspects regarding the effects of different types of motivation on performance. Among the researchers who have shown interest in this field we can number: Richard Ryan, Edward Deci, Sam Glucksberg, renowned economist Dan Ariely (together with his colleagues from Carnegie Mellon and the University of Chicago), analysts from London School of Economics, Robert Eisenhower, Linda Shanock and others (Pink: 2009). Their findings suggest that extrinsic incentives may have a negative impact on overall performance, but a general agreement in this respect has not been

reached. Although there is no clear answer yet on the effect of extrinsic incentives on creativity or in regards to the implications of intrinsic motivation on performance, many companies are building a new conception based on autonomy, mastery and purpose (Matei and Abrudan: 2010, 1137-1139).

In this paper we intend to shed some light upon the relationship between motivation and performance. With this purpose, we initiated and conducted an explanatory research. The research is based on the analysis of the relations between the results (performance) obtained by third year students and their predominant type of motivation (intrinsic and extrinsic motivation).

II. Intrinsic and extrinsic motivation - defining the concepts

When an individual is motivated, he feels energized or inspired to act, whereas an unmotivated person feels no impetus to do so (Ryan and Deci: 2000, 54). Thus, it is clear that people have different amounts of motivation. In addition, human motivation can vary not only in level, but also in orientation and type of motivation. Some of the contemporary researches are based precisely on these peculiarities of motivation and intrinsic versus extrinsic motivation has never been more debated.

Intrinsic motivation is defined as being the execution of a task or activity because of the inherent satisfaction arising from it rather than due to some separate outcome. Intrinsic motivation reflects the natural propensity of people toward learning and assimilation. Despite this, theorists (Ryan and Deci: 2000, 56) have shown that this propensity appears to be expressed *only under specifiable conditions*.

In contrast with intrinsic motivation, we speak of *extrinsic motivation* whenever an activity is done in order to attain some separable outcome (Ryan and Deci: 2000, 60).

Experts Ryan and Deci (Ryan and Deci: 2000, 58) state that extrinsic rewards can decrease intrinsic motivation. Rewards linked to the completion of a task, threats, deadlines and directives undermine intrinsic motivation because individuals perceive them as behaviour control techniques. On the other hand, free choice and the opportunity for self-direction can increase intrinsic motivation because of the sense of autonomy linked to them. Yet, even extrinsic motivation can have a certain amount of autonomy. The degree of autonomy varies in extrinsic motivation and it can be a reflection of either external control or true self-regulation (Ryan and Deci: 2000, 59).

III. Research methodology

In conducting the research, we considered the following work hypotheses:

- Individuals for whom the intrinsic motivation is prevailing have higher averages than those for whom extrinsic motivation is prevailing.
- Individuals having both extrinsic and intrinsic motivation are better performers than individuals with only one active type of motivation.
- Unmotivated individuals have the lowest averages.
- Intrinsic motivation is present in significant different proportions in women than in men.

To test the work hypothesis an explanatory research has been conducted. For this, quantitative methods were combined with qualitative methods so as to achieve the most significant results. Thus, we associated the investigation – which was the primary method of research – with the focus group to attain suggestions for data interpretation.

Within the investigation, a questionnaire was used as research tool. The questionnaire - which was adapted from that of Horst H. Siewert and Renate Siewert (Siewert H.H, Siewert R., 2000) – contains 31 closed questions and it is designed to measure extrinsic and intrinsic motivation. The questionnaire was applied to 37 third year Management students from The Faculty of Economics. Of the 37 questionnaires, 35 were validated and 2 were not taken into account.

To facilitate the interpretation of data collected, we organized three focus groups. The grouping of participants was based upon the results of the questionnaire, as follows:

- The first focus group gathered individuals with both extrinsic and intrinsic motivation (16 students);
- The second focus group brought together individuals with either intrinsic or extrinsic prevailing motivation (12 students);
- Unmotivated individuals participated in the third focus group (7 students).

IV. Research findings

The sample consisted of 37 third year students who took part in the first phase of the research: the questionnaire. Subsequently, 35 questionnaires have been declared valid. Of these respondents, 37,1% were men and 62,9% women. The results of the questionnaire can be summarized as follows:

- 45,8% of respondents have both extrinsic and intrinsic motivation prevailing;
- 17,1% of respondents are intrinsically motivated;
- 17,1% of respondents are extrinsically motivated;
- 20% of respondents are unmotivated (neither extrinsic nor intrinsic motivation prevailing).

To analyze the relations between the prevailing type of motivation and performance we considered the average of each student for the first two years of university studies. The averages were divided into three categories so as to be roughly equal proportion:

- the first category: averages between 5 and 6,5;
- the second category: averages between 6,5 and 7,5;
- the third category: averages higher than 7,5.

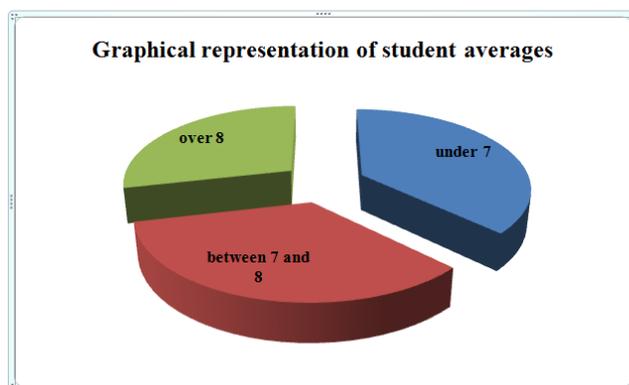


Exhibit 1. Graphical representation of student averages

Source: own research

Further, we made use of the Crosstabulation function available in the SPSS software in order to get an idea on the possible relationships between motivation and averages (Exhibit 2). This reveals the following conclusions:

- 46,2% of *students with averages lower than 6,5* have both extrinsic and intrinsic motivation prevailing; 23,1% of them are intrinsically motivated, while 15,4% are extrinsically motivated and 15,4% are unmotivated;
- 58,3% of *students with averages between 6,5 and 7,5* are extrinsically, as well as intrinsically, motivated; only 8% are just intrinsically motivated, while equal proportions of 16,7% are extrinsically motivated, respectively unmotivated;

- in the case of *students with the highest average (over 7,5)*, a percentage of 30 are both extrinsically and intrinsically motivated, 20% are just extrinsically motivated, for 20% intrinsic motivation is prevailing, and the remaining 20% are unmotivated.

Average_1 * Motivation Crosstabulation

| | | | Motivation | | | | Total |
|------------------------|---------------------|---------------------|-------------------|---------|---------|-----------|--------|
| | | | Neither EM nor IM | Just EM | Just IM | EM and IM | |
| Average_1 5 and 6,5 | between | Count | 2 | 2 | 3 | 6 | 13 |
| | | % within Average_1 | 15,4% | 15,4% | 23,1% | 46,2% | 100,0% |
| | | % within Motivation | 28,6% | 33,3% | 50,0% | 37,5% | 37,1% |
| | | % of Total | 5,7% | 5,7% | 8,6% | 17,1% | 37,1% |
| 6,5 and 7,5 | between | Count | 2 | 2 | 1 | 7 | 12 |
| | | % within Average_1 | 16,7% | 16,7% | 8,3% | 58,3% | 100,0% |
| | | % within Motivation | 28,6% | 33,3% | 16,7% | 43,8% | 34,3% |
| | | % of Total | 5,7% | 5,7% | 2,9% | 20,0% | 34,3% |
| over 7,5 | Count | 3 | 2 | 2 | 3 | 10 | |
| | % within Average_1 | 30,0% | 20,0% | 20,0% | 30,0% | 100,0% | |
| | % within Motivation | 42,9% | 33,3% | 33,3% | 18,8% | 28,6% | |
| | % of Total | 8,6% | 5,7% | 5,7% | 8,6% | 28,6% | |
| Total | Count | 7 | 6 | 6 | 16 | 35 | |
| | % within Average_1 | 20,0% | 17,1% | 17,1% | 45,7% | 100,0% | |
| | % within Motivation | 100,0% | 100,0% | 100,0% | 100,0% | 100,0% | |
| | % of Total | 20,0% | 17,1% | 17,1% | 45,7% | 100,0% | |

Exhibit 2. Crosstabulation between averages and the types of motivation prevailing
Source: own research

The findings are not encouraging as three of the work hypotheses are, evidently, not verified. Moreover, apparently as the average increases the percent of individuals having both extrinsic and intrinsic motivation is decreasing. Furthermore, it is worth mentioning that the highest percentage of unmotivated students (30%) is concentrated in the highest average category. Concluding, it seems *there is no correlation* between the two variables considered. The correlation coefficient is presented in Exhibit 3. The small value of the correlation coefficient (0,139) suggests *there is no significant relationship between motivation and performance (average)*.

| | Average | Motivation |
|------------|-----------|------------|
| Average | 1 | |
| Motivation | 0,1397454 | 1 |

Exhibit 3. Correlation between average and motivation
Source: own research

The first three hypotheses are not verified. Further, we focused on the fourth hypothesis, which is: Intrinsic motivation is present in significant different proportions in women than in men. To verify this, we applied a Crosstabulation analyze on average and gender variables, we calculated Chi-Square and the correlation coefficient. The findings can be summarized as follows:

- The majority of students with the average lower than 7,5 are men (60%). 92,3% of male students fall into the category with the lowest average.

- 93,3% of the students with the highest average are women. 63,6% of female students are situated in the highest average category.

Average * Gender Crosstabulation

| | | Gender | | Total |
|-------------------|----------------|--------|--------|--------|
| | | Male | Female | |
| Average Under 7,5 | Count | 12 | 8 | 20 |
| | % within Media | 60,0% | 40,0% | 100,0% |
| | % within Gen | 92,3% | 36,4% | 57,1% |
| Over 7,5 | Count | 1 | 14 | 15 |
| | % within Media | 6,7% | 93,3% | 100,0% |
| | % within Gen | 7,7% | 63,6% | 42,9% |
| Total | Count | 13 | 22 | 35 |
| | % within Media | 37,1% | 62,9% | 100,0% |
| | % within Gen | 100,0% | 100,0% | 100,0% |

Exhibit 4. Crosstabulation between averages and gender

Source: own research

Based on these observations, as well as on the results of the Chi-Square Tests (Exhibit 4) and on the correlation coefficient calculated (Exhibit 5), we can state that *there exists a correlation between the two variables.*

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) | Exact Sig. (2-sided) | Exact Sig. (1-sided) |
|------------------------------------|---------------------|----|-----------------------|----------------------|----------------------|
| Pearson Chi-Square | 10,443 ^a | 1 | | .001 | |
| Continuity Correction ^b | 8,283 | 1 | | ,004 | |
| Likelihood Ratio | 11,911 | 1 | | ,001 | |
| Fisher's Exact Test | | | | ,002 | ,001 |
| Linear-by-Linear Association | 10,145 | 1 | | ,001 | |
| N of Valid Cases | 35 | | | | |

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5,57.

b. Computed only for a 2x2 table

Exhibit 5. Chi-Square Tests: Average and gender

Source: own research

Thus, female students tend to have better performance at university level.

| | Average | Gender |
|---------|-------------|--------|
| Average | 1 | |
| Gender | 0,403640948 | 1 |

Exhibit 6. Correlation: Average and gender

Source: own research

In regards to the relationship between gender and motivation there are no significant differences between male students and female students. Yet, the percentage of men who are intrinsically motivated is higher than that of women.

V. Conclusions

In order to draw the conclusions of the research conducted, we revisit the work hypotheses:

- Individuals for whom the intrinsic motivation is prevailing have higher averages than those for whom extrinsic motivation is prevailing. *Not verified*. There are equal percentages of intrinsically motivated students and extrinsically motivated students in the highest average category. Research at this level can not state that there is a correlation between intrinsic motivation and better performance.

- Individuals having both extrinsic and intrinsic motivation are better performers than individuals with only one active type of motivation. *Not verified*. It appears that, as the average increases, the percent of individuals having both extrinsic and intrinsic motivation is decreasing. Further research is needed.

- Unmotivated individuals have the lowest averages. *Not verified*. For the sample analyzed, the highest percentage of unmotivated students is concentrated in the highest average category.

- Intrinsic motivation is present in significant different proportions in women than in men. *Verified*. Female students tend to have better performance at university level.

The research conducted has, of course, limitations. The most important aspect worth mentioning is that there is no statistical representativeness for the population investigated. The research intends to be nearly a first step in the attempt to clarify the relationship between intrinsic (and extrinsic) motivation and performance.

VI. Acknowledgments

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EDUCATIONAL MANAGEMENT- AS THE RESPONSE TO THE SOCIAL-ECONOMIC CRISIS IN CONTEMPORARY EUROPE

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Taking carefully into consideration the way in which emerged and evolved the actual economic and financial crisis, in Europe and in Romania, one can conclude that the educational management, as an academic program, or as a scientific research, can provide some solutions. First are analyzed the initiatives taken by the decision factors from the superior European education, in 1999, before the breaking out of the crisis, through the Bologna Convention. Due to the educational management's particularity to establish a communication channel between academics, specialists in educational sciences, educational institutions managers and political leaders, are presented the beneficial effects which a number of decisions like the stimulation of young people's interest for the studying of economical and entrepreneurial sciences, systematic programs open socially and culturally of knowing the foreign languages, the analysis of career's dynamic in parallel to the modernization of the career education, could have.

A few decades after the ending of Second World War, Europe was the witness of some velvet revolutions, including a bloody revolution in Romania, after which the communist system collapsed.

The hopes that accompanied the long period of transition and of adherence to the democratic traditions and to a united Europe were interrupted by a serious economic and financial crisis. As it is known, the crisis, which first started in The United States of America in 2008, expanded across Europe, a little bit later, but more violently in Romania where it surprised us extremely vulnerable and unprepared.

The main problem that we are facing is if the decisions of educational management from the level of a university or from a national and European level can contribute significantly to the attenuation of the actual economic crisis. We also ask, in a democratic way, which political decisions or of educational management can be taken and what their effects will be.

Let's determine some regulations taken by the European responsible factors before the bursting of the crisis. As it is known through the Bologna Declaration, from 1999, the responsible factors from the educational level initiated a long process of homogenization of European education, so that the education to be more efficient facing the severe social-economic problems of our continent. Studies have been restructured in order to make bachelor, master and doctor's degree aimig the compatibility between the academic educational systems and the introduction of transferrable credits. The transnational hypothesis of the university represents of course, an earlier challenge. We want to mention, in this context, the invocation of John Allen "which defines university like an organisation which can be reduced, almost entirely, at people, whose task, in a variety of roles, is to keep on searching the truth and the knowledge that will be disseminated, through communication, firstly among young people." (Stefan Buzarnescu, 2004, pag. 241). Such a definition corresponds to the conception of Paul Temple, who ironically observed that some universities were in the head of the complex process of internationalisation and globalization which have acted as global market institutions. The internationalization of European higher education has been facilitated by the transferable credit system, which evolved in two phases:

- a. internal adjustment of universities, through the transformation of the old academic programs in the permeable system of transferrable credits,
- b. the establishment of a set of rules and procedures through which the credits to be recognized between universities and to favor in this way the students' and the teachers' mobility (Stefan Buzarnescu, 2004, pag. 253).

The illusion that through decisions taken by responsible factors, the European education could become harmonious in a short period of time and the circulation of scientific, technical and cultural information, was quickly crumbled. The spreading of transferrable credit system developed slowly, the students' and the teachers' mobility being delayed not only by financial and bureaucratic difficulties, but also by small number of universities which speak several foreign languages.

Given that Europe as a whole cannot respond promptly and appropriately to crisis calls, and national governments face increasing difficulties, the opportunities that appear at the level of some educational institutions from one country or another, are promising.

The current economical and financial crisis from Romania generated complex, unbelievable problems in all sectors of economic life, which continued to manifest themselves.

This brings us to a problem closer to our possibilities. What kind of decisions can we have, the specialists in educational sciences, in order to ameliorate the actual situation and in order to open more advantageous perspectives?

Even bigger hopes fall on the faculties with an economic profile, which could give economic and financial projects, through which we could decrease the most severe effects of the crisis.

What other solutions taken at an institutional level could have beneficial effects?

Let's take into consideration the cruel reality of intempemstive bankruptcies, the big number of firms which closed their activity and the fear that this process will go on, so that some activities will stop.

Political and legal regulations taken by the Parliament and the Government are decisive. Through these regulations they should promote the economical activity. The managers of the educational institutions could find their ways in this context giving a bigger attention to the economic and entrepreneurial training of the young people.

The economic sciences chairs could interfere supporting young people's interest for the economic preparation for the world of business. We could take into consideration not only measures that concern the number of students, but also the structure of the curriculum, giving a bigger attention to those subjects and modules that broadly speak about the beginning, the development and the efficiency of business.

The psycho-pedagogical sciences could also offer help if they would offer more efficient patterns for the career counseling. It has been observed that the complex activity of career counseling is appreciated as "a rational process of informing and testing the person counseled, the testing based on the use of quantitative evaluation" (G. Tomsa, V. Ionel, M. Popescu, 2008, pag. 478). It was also noticed that in counseling problems emotional and familiar aspects could appear. An important role occupy the individual preferences, the parents' and friends' advice. The career education appears to be a complex process where appears beside building a career or the decision to follow a certain career, elements more or less related, but also the knowing of the world of jobs.

The educational sciences can interfere in this direction for an appropriate knowledge of jobs, the accurate description of jobs and the study and hiring conditions and of course the salary.

Another set of decisions could be taken not only at the academic level, but also by the community leaders, starting from the reality that millions of young people and grown-ups are working in different European countries: Italy, Spain, Germany, etc.

In our opinion the best decision in this respect would be the multiplication of foreign language programs: English, French, etc. coordinated by the philology faculties in a large social opening. This kind of programs could be funded from European funds or budget resources.

The experience so far demonstrated outstanding skills in the field of information, which weren't supported enough by the political factors. At the academic level from the leaders' initiative and the chair of Informatics, systematic activities that attract the young people in this area could be initiated.

The specialists in the sciences of education are increasingly realizing the need for systematic studies regarding the dynamics of jobs in Romania on the whole or from certain areas, or European countries. It would be desirable a direct communication between the researchers and the decision factors from academic level and from the community level. We take into consideration not only the funding of these programs but also the quick dissemination of the conclusions.

The current economic and financial crisis has destroyed the myth according to which the educational management is and it should remain a neutral academic discipline and placed at a certain distance in reality. The specialist in educational management has the duty to discuss with the manager of an educational institution and after that in collaboration with other leaders and finally to extract well-balanced decisions, the only viable way to break the deadlock.

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STUDY ON QUALITY PARAMETERS AND ENZYMATIC ACTIVITY OF GRAIN MILL PRODUCTS REGION IN TRANSYLVANIA

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This paper aims at determining the main quality parameters of grain mill products in the Transylvania region, also studying and emphasizing the enzymatic activity of flour. Determination of quality characteristics of grain mill products entails establishing physical, chemical and sensory parameters and assessing them against the limits imposed by law.

Analysis was performed on samples formed by mixing basic medium extracted from different batches. Incremental size, sampling tools, how to extract them, the training sample and laboratory environments, packaging and labeling of samples were performed according to STAS 1068 69.

Determination of the fall (Falling Number), an empirical test that relies on the ability of endogenous α -amylase to reduce viscosity of the treated warm flour suspension is used, large scale milling and bakery industry to predict and assess the Baking quality of flour. In sprouted wheat, characterised by a low Falling number, dextrin produced by the action of α -amylase leads to a sticky bread core. Experiments suggest that the values fall turnover (FN) does not shrink in direct proportion to the percentage of germinating seeds. Amylolytic activity depends on the stage of sprouting of grains. Lack of α -amylase activity can be corrected by adding malt grain α -amylase or fungal α -amylase.

Keywords: quality control, parameters, grain mill products, α -amylase activity, Transilvania, food quality

JEL Cods: L15, O13, Q5, Q53

1. General aspects

Enzymes are used for a long time to convert complex carbohydrates in the fermentation processes. Except for sugar processing and use of glucose isomerase cyclodextrin glycodextriltransferase, enzymes are used for hydrolysing carbohydrates, with reducing the size of macromolecules as the main transformation suffered.

Enzymes carry all biochemical transformations. Amylase is an enzyme that hydrolyzes amylose, breaking down a specific glycosidic linkage in starch to yield its degradation products in the form of oligosaccharides. Amylase participates in numerous biological processes such as maturation and germination of cereals or in the digestion of starchy substrates by animals and

microorganisms. They are, on the other hand, of significant importance in industry, where their ability to depolymerised starch is paramount in the preparation of glucose syrup or bread. The objective is to transform bakery flour, plus possibly other ingredients (yeast, salt, malt, milk fat) in food preparation and easily preserved by operation of alcoholic fermentation and baking. Alcoholic fermentation is a clear step to understand the role of amylase.

Amylolyze is the process of hydrolysis of starch under the action of α and β amylase. The process is particularly important in dough of flour because its sugars are insufficient to maintain throughout the fermentation in the technological bakery process. Bread obtained only from the fermentation of carbohydrates originating in the flour has a low volume, is dense and undeveloped. Maltose derived from starch hydrolysis is the main sugar that is fermented and thus provides the necessary amount of gas in the final part of the technological process. For this reason, the starch is considered as the main source of carbohydrates in the dough leavening process. In a normal bakery is 6 ... 12% hydrolysed starch in dough. Amylases allow the production of glucose and maltose, which are then fermented; a poor fermentation, resulting in an increase of less than bread. Low percentage of carbohydrates in the flour initial content (0.5 to 2%) involved a hydrolysis of starch in the proportion of 1-2%. The action of amylases in the dough is influenced by environmental conditions: the degree of hydration of the dough, temperature and state of degradation of starch granules. Baking dough cause a gradual increase in internal temperature, with dual action on enzymatic activity and physical state of starch. However, the surface temperature will be about 250 °C. During temperature increase, there is a short period or longer (depending on how baking is done) in which enzymes can act. Amylase is activated by adding water to the dough during the manufacturing.

Dough fermentation and, especially, the production of carbon dioxide are related to the presence of fermentable carbohydrates. The α -amylase activity has a significant effect on excessive water absorption capacity of the dough and the core training. An excessive activity causes an overproduction of dextrin, which leads to a colourless core with large pores, and a colourful crust. The ratio of α and β amylase activity influence the quality of bread. If there is an excess of α -amylase against β -amylase, not all dextrin will be hydrolysed and this leads to the formation of a sticky dough.

2. Experimental part

The determination principle consists in jellifying of flour suspension in a test-tube located in a boiling water bath and measurement of gel liquefaction degree under the influence of amylase. The falling time of grain and its products is the activity criterion of α -amylase enzyme which occurs in small quantities in grain when they are correctly grown and gathered in dry conditions. In conditions of increased cereal moisture, above 15%, especially when crops are gathered in unfavourable weather conditions, activation of α -amylase occurs, which results in starch damage. Dough made of such flour has disadvantageous physio-chemical properties which negatively influence the quality of bread. Therefore, the determination of the damage degree of grain and their products allows classifying and using cereals differently, for example:

- as feed
- in mixtures of damaged cereal and grain not affected by α -amylase
- development of individual technological processes with addition of “improvers” to avoid unexpected losses

2.1. Working mode

Falling-number Hagberg Method (Hagberg, 1961) is a method based on autolytic degradation of starch in starch milk by α -amylase. An increased α -amylase activity resulting in a low viscosity, which is defined as the time in which a metal rod falls through the starch gel. The method is used, broadly, to measure the trade of grain sprouting. Also, endogenous enzymes are known for their adverse effects when sprouting before harvest.

Pre-harvest sprouting of grain shows the effects of enzymes during germination and also influences the milling industry, bread and beer.

Index fall (Hagberg index) provides information on amylase activity (in α -amylase) and on the process of fermentation that occurs in wheat flour dough. Fall index values are inversely proportional to amylase activity.

Table 1. Index values fall and their influence on flour

| Drop index (in seconds) | Comments |
|-------------------------|---|
| 60 – 150 | Increased amylase activity. This flour is made from sprouted grain bread and its use leads to the core that remains tacky and immature. It is almost useless, unless it is mixed, as appropriate, with other flours with high drop index. |
| 150 – 220 | Amylase activity superior to that which is normal. This requires a correction by mixing flour with the flour with the index falling sea or by using special methods of making bread |
| 220 – 280 | Normal amylase activity. |
| > 280 – 300 | Low amylase activity. Using these results in bread flour that is not developed, small and middle volume too dry. Requires addition of diastases malt. |

Drop method is used for the samples which contain starch as a substrate. It is based on rapid jellifying of flour suspension in a boiling water bath and measuring the gel liquefies under the action of α -amylase.

Equipments:

1. Falling Number Mill 3100 or 120 with a grid $\phi=0.8\text{mm}$;
2. Falling Number device.

Method:

Crush 300 g of wheat to a mill Falling Number. The water bath device is inserted to mark water and bring to boiling temperature is maintained throughout the determination. Weigh $7 \pm 0,05$ g flour, are inserted into the tube viscometer were previously added 25 cm³ of distilled water at 200C with a rubber stopper and shake 20-30 times, until smooth.

With mixer viscometer loose particulate flour that joined the wall of the tube, then insert the tube with mixer viscometer bath water and start the device. Just after 5 seconds after inserting in the bathroom starts shaking suspension in the tube. After 59 seconds stir bring superior position (up or automatically) and after 60 seconds (5-55) falls under its own weight of flour heated gel at a speed that depends on the degree of liquefaction of starch gel.

Time measured from the time the tube viscometer bath water and stirs until it falls on a given distance, expressed in seconds and does the number of falls. Media repeated measurements differ by max $\pm 5\%$. The α -amylase activity Is relationship between the number of drop C inversely and expressed by calculating the „number of softening”

With the number of softening we may calculation the flour mixture with a certain number of falls, from lots of different qualities, so that the processing technology resulting in better quality products.

3. Results and discussion

Samples analyzed were purchased from different locations in the region of Transylvania. For each sample were made ten determinations of the index falls. The average value of determination is placed in the table below.

Table 2. Amylase activity

| Sample | Determination value Ic (sec) | Normal value Ic (sec) | Observations |
|-------------------------------|---------------------------------|--------------------------|---|
| 1- Gambas (Alba county) | 250 | 220 – 280 | Normal amylase activity. |
| 2- Gambas (Alba county) | 220 | 220 – 280 | Normal amylase activity |
| 3- Gambas (Alba county) | 217 | 220 – 280 | Normal amylase activity. |
| 4- Aiud (Alba county) | 243 | 220 – 280 | Normal amylase activity. |
| 5- Ghirbom (Alba county) | 276 | 220 – 280 | Normal amylase activity |
| 6- Blaj (Alba county) | 336 | 220 – 280 | Low amylase activity. Using this flour has resulted in bread that is not developed, with low volume and very dry pulp.. Require the addition of diastatic malt. |
| 7- Craciunel (Alba county) | 225 | 220 – 280 | Normal amylase activity. |
| 8- Valea Lunga (Alba county) | 375 | 220 – 280 | Low amylase activity. Using this flour has resulted in bread that is not developed, with low volume and very dry pulp.. Require the addition of diastatic malt. |
| 9- Blaj (Alba county) | 319 | 220 – 280 | Low amylase activity. Using this flour has resulted in bread that is not developed, with low volume and very dry pulp.. Require the addition of diastatic malt. |
| 10- Valea Lunga (Alba county) | 322 | 220 – 280 | Low amylase activity. Using this flour has resulted in bread that is not developed, with |

| Sample | Determination value Ic (sec) | Normal value Ic (sec) | Observations |
|-------------------------------|---------------------------------|--------------------------|---|
| | | | low volume and very dry pulp.. Require the addition of diastatic malt. |
| 11-Lancram(Alba county) | 264 | 220 – 280 | Normal amylase activity. |
| 12- Lancram(Alba county) | 282 | 220 – 280 | Normal amylase activity. |
| 13-Lancram(Alba county) | 252 | 220 – 280 | Normal amylase activity. |
| 14- Galda de Jos(Alba county) | 270 | 220 – 280 | Normal amylase activity. |
| 15-Galda de Jos(Alba county) | 212 | 150 – 220 | Medium activity of alphaamylase |
| 16- Ighiu(Alba county) | 193 | 150 – 220 | Medium activity of alphaamylase |
| 17- Ighiu(Alba county) | 195 | 150 – 220 | Medium activity of alphaamylase |

4. Conclusions

Determination of the fall (Falling Number), an empirical test that relies on the ability of endogenous α -amylase to reduce viscosity of the suspension treated warm flour is used, large scale milling and bakery industry to predict, assess the Baking quality of flour. Falling number – index drop is inversely proportional to α -amylase activity of flour and acceptable field depends on cereal product. In the wheat sprouted, with a low Falling number, dextrin formed by α -amylase action leads to a bread with sticky core. It was found from experiments that the values fall turnover (FN) do not shrink in direct proportion to the percentage of seeds germinate. Amylolytic activity depends on the stage of sprouting of grain. Lack α -amylase activity can be corrected by adding malt grain or fungal α -amylase.

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THE EVALUATION OF EDUCATIONAL SERVICES QUALITY BY THE STUDENTS OF THE FACULTY OF ECONOMICAL SCIENCES „DIMITRIE CANTEMIR” CLUJ-NAPOCA

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Abstract: *The evaluation of the educational services quality by the students represents an important element of the internal quality monitoring process for the identification of the necessary actions required in the continuous improvement of the offered educational quality, and on the other hand it represents an indicator of the university interest of having access at the student's point of view. Starting from the student needs, together with the staff involved in the evaluation and quality assurance committee of the Faculty of Economic Sciences Cluj-Napoca, “Dimitrie Cantemir” Christian University Bucharest, we elaborated a questionnaire for the evaluation of the educational services quality by the students, concerning: teaching-learning activities, available admission information, tutorial system, class schedule, material base, laboratory, course and seminar rooms equipments, administrative services, student organizations, counselling services offered by the faculty. The conclusions of the study were discussed with the faculty's management, decisions being made to take actions in order to increase the student satisfaction level.*

By developing and implementing their own strategy to quality policies and procedures, the higher education institution is explicitly committed to develop a quality culture in all its activities.

Keywords – *quality, university management, educational services, higher education, the quality circle.*

JEL Codes – I23, M10, M31.

The questionnaires were individually applied, between May and June, to the students following the bachelor's degree programs of the faculty, regardless of the education form or the specialization, the results being as follows:

32 questionnaires were applied through personal interview, all of them being validated as they were fully completed;

40 questionnaires were distributed among the students, only 27 of them being processed in the end (because only these many were brought completed to the faculty's Evaluation and Quality Assurance Committee).

The results of the study are given below.

At the first question, related to the importance of the Romanian higher education, in their professional preparation, the respondents appreciated:

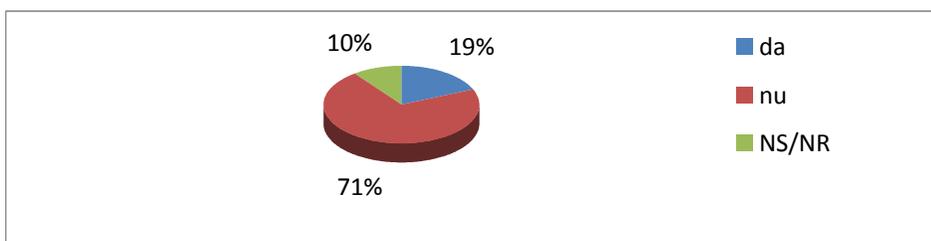


Fig. no.1. The answers to the question related to the importance of the higher education in Romania.

Realised by the author

The ones who chose the first answer version (“yes”), cumulate approximately 19% of the respondents. We could say that they have confidence in the bigger chances of integration on the labour market after obtaining a higher education diploma. We assume that these students consider that the higher education offer has been very well adapted to the needs imposed by a changing society.

The majority of the questioned students (approximately 71%) consider that the higher education has not managed that well to adapt to the changes in the Romanian society, maybe from the same reasons why they consider that the society is heading towards a wrong direction. The expectations, the needs of these students, in their opinion, are not fully satisfied by the higher education offer. In this respect higher education institutions can be recommended a more extensive analyze of the Romanian society.

The students that preferred the third choice (DK/DA) add up about 10% in the total answers. Like a short motivation to these answers, we could think about the fact that these students, are either not informed about the evolution of the higher education in Romania or maybe they don’t believe that the risk of not finding a job after the graduation of these studies is too big.

The question “*You have chosen to become a student of the Faculty of Economical Sciences, Cluj-Napoca, “Dimitrie Cantemir” Christian University, Bucharest. What were the main reasons of your choice?*” is trying to identify what were and what still are the main information source for the future students, related to the faculty they will apply to, the answers highlighting the following:

Approximately 15% of the respondents chose this faculty because they considered it a faculty with a high level of education. Through quality we understand quality of offered conditions and services.

12% of the ones questioned answered that they made this choice because of the level of the tuition fee. We can say that they consider the tuition practiced by the faculty acceptable in comparison with their income.

The third answer choice (“I preferred to be a student in the city where my parents live,”) had a 5% of the total answers. It is possible that these students are still living with their parents or they wish to stay close to their families.

A good marketer appreciates that the advertise coming from the satisfied clients is the most inexpensive and in the same time the most efficient way of promoting the products and services offered by a company. It is also said that 20 satisfied clients can bring another 100 to the organization. These theories are also available for our study, which is proved through the very high percentage (60%) of those who chose this faculty at the advice and insinences of other people (these people being considered those clients satisfied by the quality of the education in the faculty).

The “DK /DA” was the choice of 2% of the students. We could say that this students got into registered into this faculty without putting into the balance what is important for their career,

without allow time for thinking about this decision or simply refusing to give a concrete answer to this question.

The following question offers information about the student satisfaction, the respondents having to appreciate the next aspects:

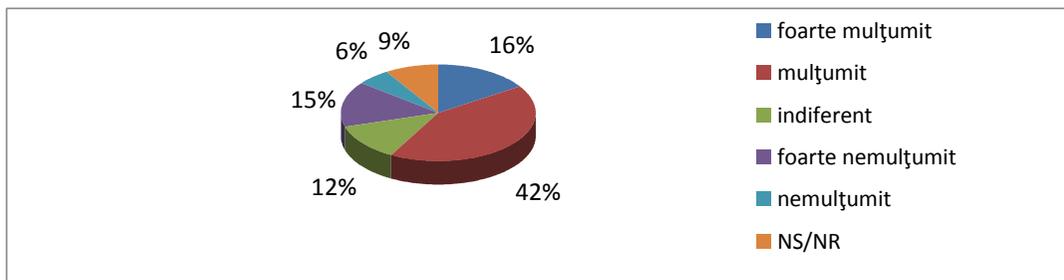


Fig.nr.2 The answer to the question related to the student satisfaction

Realised by the author

According to the chosen criteria, about 16% of the students declared that they are very satisfied with the conditions and services offered by the faculty. This could be a gratifying percent for the faculty's administration, but it cannot be considered big enough or satisfactory enough.

Approximately 42% of the students declared that they are satisfied with the conditions and services offered by the faculty, while 12% are not concerned about them.

From the ones questioned, 15% declared themselves dissatisfied and 6% very dissatisfied with the conditions and services offered by the faculty. Therefore a 9% of the students are left, who do not consider themselves able to evaluate some of the criteria regarding the activity that takes place in the faculty and the conditions it offers or they just refuse to give an answer.

Regarding the question related to the services offered by the Centre for Information, Counselling and Career guidance for students out of the total questioned students, approximately 5% answered that they are very satisfied with the services offered by the CICOC Centre, and about 19% said they are "satisfied" with it. The percentages for the other answers present themselves as follows: 41%"indifferent", 35%"DK/DA". The CICOC Centre is a service made available for the students to guide them in their career or to help them make a decision about their future career. The 41%, respectively 35%, mentioned above could raise question marks regarding the notoriety of this centre among the students. One recommendation that we can do from this point of view to the faculty management is to concentrate on promoting the centre and thus try to attract more students into the information and career orientation centre.

The usefulness of the studied subjects in relation to the specialization's (study program) requirements.

The percentages of the answers given to this criterion are the following: 22 % „very satisfied”, 44% „satisfied”, 13% „indifferent”, 19% „dissatisfied”, 2% „very dissatisfied”.

The study programs are formulated in detail, according to the results expected by learning and are matched with an academic qualification. Therefore, subjects to be studied separately for each specialization must be carefully selected to meet program objectives and targets.

The percentages are quite satisfactory, which means that the curriculum is well thought out, in accordance with the requirements of the specialization.

However, there is a fairly large percentage of students who were not satisfied. Talking with some of them I found that their complaints are related to the fact that they consider some material unsuitable for their specialization or expect a greater depth of material (in terms of practical application of the theory studied).

Complementarities and relations between classes

Flow rates are needed so that information obtained by studying a subject to be related to the information material studied further on, to create a "homogeneous" field where all the parts fill each other.

A very high percentage was obtained to the "satisfied" option, approximately 36%, but nevertheless an almost equal percentage (about 32%) was obtained for "dissatisfied." All of this could be related to the above criterion, namely „usefulness of subjects studied in relation to the requirements of specialization”

The other answer versions cumulated approximate percentages of: 12% "very satisfied"; 7% "indifferent"; 13% "very dissatisfied".

Teacher-student communication

After the responses given to this statement we are very pleased because about 71% of students surveyed were "very satisfied" or "satisfied" with how their communication with teachers is carried out.

A percentage of about 12% of students say "indifferent" ,10% are "dissatisfied" and 7% "very dissatisfied."

The quality of the faculty website:

A percentage of about 10% of surveyed students are "very satisfied" with the quality of the faculty website, and about 42% are "satisfied."

These percentages are considered positive, but, nevertheless, a percentage of 31% of students are "very dissatisfied" and 10% are "dissatisfied" with the quality of the site. We believe that we should improve the website of the faculty since lately young future students prefer searching the internet for the desired information on the faculties which they want to follow.

The quality of information provided by faculty staff (decisions, regulations, etc..)

The satisfied and very satisfied students, in relation to the quality of information provided by the faculty staff cumulated a rate of approximately 36% (5% "very satisfied" 31% "satisfied") of all responses. This can be considered a positive response.

But however, the real situation is the fact that, about 47% of respondents are dissatisfied or very dissatisfied with the quality of the received information.

Given that the percentage of dissatisfied students is higher than of the satisfied ones, we propose changing the way the students are being informed (from the summary information on the bulletin board to the detailed information available on the site, etc.).

We also obtained a rate of about 15% of students who said they were "indifferent" probably because, probably, for their part, student life at a university is about going to classes or not, passing the exams and all these, without considering other activities taking place within the faculty where they study.

About 2% of the students chose the answer "DK/DA"

Sense of community (student teachers)

We've all been told Lenin's famous words: "Learn-learn-learn!!!" But life in a university requires more than simply learning activity. It requires the formation of links, student growth and development within an academic community, a sense of community.

However, unfortunately, after analyzing the results we observed that not much sense of community is reflected among students. According to the answers , we have 7% "very satisfied" ,22% "satisfied" ,15% "indifferent" ,35% "very dissatisfied", 2% "dissatisfied" 19% "DK / DA".

We consider however, the percentages of the variants "regardless" and "DK / DA" rather sad than unsatisfactory. Efforts to create a "community" should not be made only by teachers but also by students. I believe now that Lenin wanted to say, "Learn- theory-learn to communicate -learn to behave!!!"

At the question "In general, in relation to the activity and the conditions offered by the Faculty of Economic Sciences in Cluj-Napoca" I am:" the questioned students answered: 13% "very satisfied"; 63% "satisfied"; 19% "unsatisfied"; 5% "very unsatisfied".

The results of this question show the fact that more than half of the questioned students declared themselves satisfied with the activity and the conditions in the faculty. If we consider the stipulations of the ARACIS methodology for external quality evaluation, which considers that if the minimum level of students that appreciate positively the learning/development environment offered by a higher education institution and their own learning path is 50%, then we can say that the faculty is in a good position from this point of view. However we cannot ignore the percentage of around 25% of students who are unsatisfied in relation to the activity and the conditions offered. This raises the problem of identifying the needs of the students and finding the methods for satisfying them as efficiently as possible.

CONCLUSIONS:

The students who filled in the questionnaire, according to the factual data, are mostly people over 30 years old, from urban areas, therefore we can consider that their answers are based on a life experience and an already established personality with a well-defined character.

We must take into account the fact that more than half of the respondents are from Cluj-Napoca, city considered one of the "big university centres" in Romania. This is because the lifestyle and the way of thinking in such a city cannot compare to the lifestyle in a smaller town and much less to the way of thinking and living in the rural area.

Also the type of education, year of study and specialization must be taken into account as policy makers in providing answers. The year of study is important in several ways, among which we mention the fact that, for example, the students in the second year are halfway through the study period. Therefore they do not know the content of all the subjects they are going to study, they are undecided (and, on one hand it is normal to be this way) on the career to follow, they are not decided on the job they wish to fill after graduation, etc. Specializations are a decision maker because they focus on labour market areas.

Speaking of employment, as part of the society we live in, in the present conditions of financial crisis it is not considered particularly "thriving". That is why I believe that some students gave negative answers to certain questions, such as forecasting a future for the changing Romanian society. However, leaving aside their social condition (not related to the activity in the faculty), I consider that the interviewed students appreciated positively the quality of the educational services offered by our faculty. The negative percentages obtained with certain evaluation criteria, can be fixed with little effort from all parties involved. For example, a closer communication between academics (teachers, tutors or faculty management) and students, *as many students as possible*, may reduce complaints about the quality and the quantity of the information offered by the teachers to the students, it could increase the sense of community, it could change the opinion of certain students on the complementarities and relations between classes as well as on the usefulness of the studied classes etc. It is understood that in order to remedy all these, a high level of student's participation in class is a must.

However the main problem is not the teacher-student communication, but the lack of effective participation of students in organized activities within the faculty. We consider inappropriate for such a large percentage of students not to be able to have an opinion, be it critical or appreciative, regarding the activity of student associations. Also there is too much indifference regarding the services available for students within the COCOC centre which was especially designed / created for students.

As a final conclusion, we wish to point out however that there is a disregard to the conditions and services that are available for students. I believe that as long as there were complaints against

them, suggestions could be made to the faculty's management and the spaces concerning these suggestions wouldn't have been left blank.

Higher education is a service offered to the society, with a great impact on the personal development of individuals, because it gives them " a chance for greater autonomy, a greater social mobility, professional and international mobility, higher incomes and an increased personal empowerment" (1) It is also, why we strongly affirm that the Romanian higher education has contributed and should contribute in the future in the formation of the nation, the development of Romanian society's intellectual capital, the training of elites from different activity fields and the consecration of the most important Romanian values.

In the last decade, the Romanian universities have gone through an extensive transformation process, which is not over yet. Changes imposed by the Bologna Process, the transition towards the knowledge economy, multiculturalism, information society, the pressure of more and more people to access higher education, face universities with new requirements.(2) At the same time, within the European and global academic space new universities are developing - such as the virtual or transnational ones - which compete with the traditional ones, competition that does not identify itself with anything that existed in the academic area ten years ago. The effects of this competition are felt in our academic area, causing profound changes in the specific rules and procedures of higher education, in the specific values of one or another of the Romanian universities, in the behaviour of the two categories of "actors" involved in the act of education : teachers and students. By developing and implementing their own strategy in the quality policies and procedures, the higher education institution explicitly commits for the development of a quality culture in all its activities.

Personally, I consider that the main objectives of the higher education institutions must address quality and at least in terms of relationship with the students these objectives should be:

- student involvement in extra-activities (debates on college activities and processes) in order to improve them;
- creating analysis and synthesis skills, communication and interpretation of certain situations, events, actual actions and activities;
- developing creativity in an ameliorative thinking system, to find solutions.

Given the conducted survey and its results we propose for the future activities of the Faculty of Economic Sciences, Cluj-Napoca, a discussion forum about the quality of teaching and learning within the faculty, organized under the title **Quality Circle**.

The circle of quality should be an activity based on a free agreement between students from all majors and years of study and at the dean's initiative. Meetings will be held once a month and, in general, will be attended by heads of year and other representatives.

The purpose of debates is to understand the concept of quality, not on a general level, but a concrete and practical level of the activities and processes that are actually occurring and to interpret the current situation, not from the perspective of finding guilty ones but solutions to improve. For example, if a student has passed an exam but does not have the mark written in the student book, we must not identify the responsible person for this situation (teacher, secretary, etc..), But solutions must be found to establish rules concerning the registration of marks (one teacher writes marks in the booklet - the teacher or assistant).

At the end of the academic year, the activity of the Quality Circle can be monitored, identifying the main conclusions and improvement proposals for certain activities. For example, in virtue of the conclusions drawn at the end of an academic year proposals can be submitted, that include solutions to problems identified on the way: changing the site, improving communication, etc.

The success of the activities carried out under the Quality Circle stands in the satisfaction of seeing the students participating in an organized way to improve faculty processes. Thus, the faculty's management knows better what the perception on various activities is, among students

and can apply procedures to improve on some activity components: schedules, teaching, seminars, students practice, the preparation of essays, evaluation etc. In the context of student-centred education, a requirement is that students are explained the working methods so that they understand the regulations and criteria for the requirement, without excluding the possibility of improving them. Future plans relate mainly to the effectiveness of professional practice and improve the practice period, both in duration and in the actual performance. It refers to defining new forms of partnerships or agreements with institutions that can accommodate the practice.

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ASPECTS OF SERVICE QUALITY AND ECO LABELLING OF ROMANIAN LODGING SERVICES

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Tourism has a significant environmental, economic and socio-cultural impact, which makes it important for environmental initiatives.

The Rio Earth Summit (1992) was a milestone for these initiatives, having introduced the concept of sustainable development, its major principles and recommendations of implementation. So, the ecological movement grew globally more and more by widely disseminated actions among various bodies such as governments, associations, businesses, academics, NGOs and communities.

In the European Union eco-labelling scheme, is “a voluntary initiative to promote products and services which have the potential to reduce negative environmental impacts, as compared to the other products and services in the same product or service group, thus contributing to the efficient use of resources and a high level of environmental protection. This shall be pursued through the provision of guidance and accurate, non-deceptive and scientifically based information to consumers on such products and services”. In fact this is official approach known as EU-Ecolabel Scheme, launched in 2005.

In general, the idea of sustainable development, and eco-attitude of many of the activities carried out in different economic sectors have been encouraged to be certified, and to adopt sustainable practices to improve their environmental practices, and to inform and educate their clients regarding their friendly-environmental policies. The tourism sector adopted all of these.

One by one in hospitality industry have emerged new trends, new destinations. Some of these trends are as well connected to environmental policy, eco-initiatives that certify EMS (Environmental Management System) and to use of eco-label in hospitality industry.

For years, the tourism sector in Romania was declared a strategic sector. Within this framework, we decided to examine this area, the specific topic of eco-labelling and quality of lodging services in Romania.

This paper proposes a short examination by observation of studies dedicated to lodging eco-label services and their quality based on a comparative analysis between Romanian supply of tourism "green services" and international one.

This study has as a result a synthetic perspective on eco-label services and some aspects on the state of art of this topic in Romanian and international context of lodging services.

Keywords: environmental policy, environmental management system, tourism, lodging services, quality of services, eco-labelling, Romania.

JEL Code: Q5, Q57, L15, L83

I. Introduction

The purpose of this paper is to examine and to present a short synthesis of literature, which is indicative of the quality and importance of factors which may lower the environmental impact during tourist product life cycle. The main focus is on lodging services / hotels which adopt a pro-natural and eco-label use (**EU-Ecolabel**), while examining the eco-labelling initiative in contemporary Romania¹⁶.

¹⁶ http://ec.europa.eu/environment/ecolabel/about_ecolabel/revision_of_ecolabel_en.htm

All products and services have an impact on the environment from one or all stages of their life cycle, starting during the extraction of raw materials, then going through the design, manufacture, assembly, marketing, distribution / sale, ending the use of and / or final disposal as waste¹⁷.

The **Rio Earth Summit** (1992) was a milestone for organic initiative, with the concept of sustainable development as its major principles and recommendations for implementation, and in recent years the movement has grown more and more.

In general, **sustainable development initiatives**, eco attitude and many activities in different economic sectors have been encouraged to be certified and such practices have been adopted to improve environmental practices, along with informing and educating the public about the environmental friendly policies.

Tourism has a great impact on the environment during its life cycle. The concept of "sustainable development" has been extended in this area, and the term "**sustainable tourism**" is becoming more present. The tourism sector has adopted these practices and initiatives. In the hospitality industry new trends have emerged, new destinations. Some of these trends are very well connected to **environmental policy, initiatives and eco-certified EMS** (Environmental Management System) and use eco-labelling in the hospitality industry. Higher levels of income cause consumption of goods and services so that they reach unsustainable levels that threaten the natural resource depletion. The Annual Report 2004 [1] of the World Watch Institute¹⁸, which focuses on consumer society, states that currently there are certain goods and services that have long term consequences for human wellbeing and the planet.

During its life cycle phases, tourism interferes with the environment, having a significant impact on natural habitats, urban environment, etc. The relationship between tourism and the environment is complex, because these two factors are interrelated. Fundamental principle regarding a friendly environment and quality tourism is axiomatic in ecology, and sustainable development from the viewpoint of the organizers (tour operators, hoteliers etc.), and partly to a proper use of the facilities from the point of view of tourists.

The court must first consider the effects of tourism on the environment, exploiting resources, but also by locating tourist structures (natural attraction of the area where a hotel is located is very important, so it is essential to be monitored and protected).

Many tourism-related activities directly or indirectly have an impact on bio-diversity.

Natural areas are affected, sometimes damaged by the arrangement of tourist facilities and the presence of tourists can destroy the local flora and fauna. It appears possible that environmental pollution and the use of large quantities of water contribute to desertification.

Attention should be focused on different phases of activity, which if they have been identified as environmental hazards, must be dealt with by proposing solutions that take into account the following objectives¹⁹:

- Major tourism operators;
- Education for Eco-living;
- Minimizing the impact of integrating environment and saving resources structures;
- Promoting and supporting responsible tourism;
- Protect the beauty of the countryside and biodiversity;
- Reduce production costs;
- Reducing waste.

For years, the tourism sector in Romania was declared a strategic sector. In this paper, we decided to examine, in the light of these assumptions stated above and in a comparative manner,

¹⁷ World Resources Institute -Global Ecolabel Monitor – 2010 http://pdf.wri.org/2010_global ecolabel_monitor.pdf

¹⁸ http://en.wikipedia.org/wiki/Worldwatch_Institute

¹⁹ Inițiativa VISIT: <http://www.ecotrans.org/visit/brochure/fr/100.htm> și <http://www.istaygreen.org/>

the relationship between eco-labelling and the situation of lodging services in Romania as compared with other countries.

II. Hospitality and the natural environment

Interest in an area is always in close contact with expectations of attracting more and more tourists, so hoteliers can recover the money invested. Most of the investors' interests often conflict with environmental interests. Investors tend to prefer quantity over quality. The result is a structure which continuously affects the environment, even in some ways it changes the socio-cultural elements. Do not forget that each tourist site has a different level of tolerance (number of tourists visiting an area, following a lifestyle), so operating over the limit can create environmental changes, compromising its appeal. In the tourism industry through the tourist-hotel relationship, sustainable development became a priority, which is achieved via careful application of new environmental management tools. Most environmental management systems are geared towards sustainable development and their application in the hotel industry is increasingly required, by its stated objectives and the instruments used to conduct a series of advantages (saving resources, prevent pollution, lower costs, attractiveness a particular segment of consumers, etc.).

Hospitality is an activity with a wide variety of high resource consumption, which requires environmental impact and hence the need to protect the environment.

In recent years, several studies have shown that people/tourists are more cautious to the environment, but also feel the need for a formal attestation of 'quality hotel', which is achieved through certification. Operators' interest in the industry stems from the need to differentiate the quality of services from those traditionally offered on the market. Quality must be certified. There is a tendency to amplify the importance of certification in accordance with standards of ISO 14000 and the Environmental Management and Audit Scheme EMAS and EU-Ecolabel.

Thus, the hotel business moves towards the introduction of environmental management tools, tools that are more credible and visible because they operate on an international level and are publicly recognized. **Applying the principles of EMS and its implementation is helping the hotel management to establish and assign responsibilities to motivate staff to implement best practices and monitor performance.**

At present, there are numerous national initiatives, even if, at first, they were strictly voluntary initiatives, and some operators have launched their own regulations and thus codes of conduct, guidance, quality label for tourist-oriented environment and structure arose.

One example is an Italian initiative, known in Italy as environmental label Jesolo, respectively and Green Hotel Riccione tags for the environment, but these initiatives have official recognition, so there is the risk of this kind from his own declaration of intent public hotels.

In the **hotel business these initiatives are likely to improve the quality**, the use of the following measures:

- a) Use of compatible eco-products (e.g. use clean products whose quality was recognized by certification and EU-Eco-labelling; or by national eco-labels instead of traditional).
- b) Streamlining services so that improvements to services may include either new technology or a better organization. Examples with optimization:
 - Discovery of loss or defects;
 - Flexible change of linen;
 - Reducing laundry costs by using paper products production;
 - Installing soap dispensers;
 - Use energy saving bulbs with low energy consumption;
 - Use of alternative sources of energy for water heating / solar panels);
 - Using sensors to turn on water and light;

- Electrical devices that operate with magnetic keys;
- Reducing the purchase of products such as soap, useless decoration;
- Increased use of recyclable packaging;
- Adoption of environmental criteria, etc. supply.

However the problem of protecting the environment should allow the service level offered in the hotel to remain high and to ensure customer satisfaction.

Practice shows that it definitely would be easier if the customer/tourist should be sensitized on the issue and would also become involved. The idea that the customer should be informed about the initiative taken by the hotel for environmental protection, might lead to cooperation between the two.

There have been studies aimed at discovering the criteria necessary for obtaining EU-Ecolabel environmental quality label.

These studies were based on the analysis of tourist services offered by hotels in the phases of life cycle.

In terms of life cycle phases of the environmental service that ought to draw the interested customer's attention are those foregoing the services (site and buildings) and the actual service. Location is considered important, except that, in general, when it comes to private operators, they often neglect this aspect in particular, something which should be evaluated during the planning phase through an environmental impact study.

The actual service stage is divided into elementary activities grouped into product life cycle phases of hotels, with relative impact on the environment; the impact of each of these phases on the environment and proposals for improvement can only be assessed once an overview of the whole stage exists.

III. Eco-Labeling the Hotels

In the European Union (EU) we note a modern trend of following "a voluntary initiative to promote products and services that have the potential to reduce negative environmental impact compared with other products and services in the same group of services, there by efficient use of resources and a high level of environmental protection. This is done by providing guidance to consumers and accurate, fair and scientifically based on such products and services" (**EU-Ecolabel Scheme**)²⁰.

The EU-Ecolabel is considered to provide certain economic benefits, as well as competitive aspects of differentiation and has a positive image in this area, outlining certain advantages when used [HoraBlaga A. 2010, 256]. In fact, eco-labelling:

- Is an internationally recognized collective mark;
- It may be a marketing tool promoting image quality, addressing certain segments of consumers;
- Is developing an environmental strategy that proposes to change consumer behaviour in the sense of environmental protection is increasingly sought.

Eco-label is granted for products and services with reduced environmental impact. "EU-Flower" is a distinctive sign recognizable at European level [Serbulescu L. 2005, 165].

Quality Certification is more increasingly common practice; even in tourism, it is presented as certification according to ISO 9000, ISO 14000, ISO 22000 etc. standards. However, for several years, lodging and restaurants were adapting to the market demanding certification of higher quality, and started following the ecological trends and their desire to modernize according of new standards. For this reason, we are witnessing a proliferation of brands in order to certify the

²⁰ Present the ecolabel of various eco business /products:<http://www.ecolabelindex.com/ecolabels>, for tourism sector:
http://www.ecolabelindex.com/ecolabels/?search=turism&as_values_032= for hotels:
http://www.ecolabelindex.com/ecolabels/?search=hotel&as_values_023=

environmental management system facilities relatively more countries. Germany, Denmark, Austria, USA, Italy.

Regulation no. 1980/2000 approved by Parliament and the Council reviewed the first EU-Ecolabel criteria, and is now expanding its scope and tourism focusing on all the hotel business. The hospitality industry is interested to certify that an accommodation meets some conditions within the rules of low environmental impact (use of renewable resources, has a waste collection system, etc.).

More specifically this kind of label can be applied to hotel units, provided in particular those related to improving the quality of service provided by the hotel relative to where²¹:

- Tourism demand is sensitive to environmental issues;
- Service providers are concerned about the environment and potentially interested in using eco-label;
- Series of five standards (ISO 14020 -14024) are dedicated to eco-labelling activities (Environmental labels and declarations)²²;
- Increasing interest in using eco-labels when the competitive advantage obtained by using labels, creates a chain effect of copying, the market should continue to encourage permanent improvements;
- Lodge/hotel operators sensitivity to environmental issues can be measured by the presence of policy, instruments and methods oriented to protect the environment;

The first specification for environmentally friendly tour operators, accommodation establishments and various tourist spots in 1991 was the brand / logo Green Suitcase / Der Grune Koffer created in Germany by Ökologischer Tourismus in Europa e.V²³ (OTE) to provide the tourism sector, a mark similar to Blau Engel²⁴ used for industrial products in 1978; now, the German mark used for ecological tourism is Viabono. There are other initiatives of this kind in Denmark (Den Gronn Nogle²⁵ The Green Key & Destination 21²⁶), USA (for 18 years, the Green Hotel Association²⁷), Austria (Das Österreichische Umweltzeichen Tourismusbetriebe seal²⁸), Italy (Legambiente Turismo²⁹), Portugal, the Netherlands (Milieubarometer /Green Key), Estonia and Sweden (Den Gronn Nogle) Nordic countries: Sweden, Norway, Iceland, Denmark, Finland (Nordic Swan³⁰), France (La Clef Verte³¹), Estonia (Estonian ecotourism Quality), Switzerland (Stainbock³²), United Kingdom, Ireland and Scotland (The Green Tourism Business³³), Hungary (1994-Hungarian Ecolabel/Környezetbarát Termék Védjegy³⁴).

At this moment it may access Ecocolabel Index³⁵, a database which lists 25 sectors, 377 eco products and services category, out of 211 countries, of which numerous are national, regional and global, including 44 dedicated to strictly eco-tourism.

²¹Manual for accommodation services eco-labelling http://ec.europa.eu/environment/ecolabel/ecolabelled_products/categories/pdf/appack_0904.pdf

²² http://www.iisd.org/business/markets/eco_label_iso14020.aspx

²³ <http://www.oete.de/de/oete.html>

²⁴ <http://www.blauer-engel.de>

²⁵ <http://www.green-key.dk/>

²⁶ http://www.cic-wildlife.org/uploads/media/Dest.21_-_a_labeling_scheme_for_tourist_2001_eng.pdf

²⁷ <http://greenhotels.com/index.php>

²⁸ <http://www.umweltzeichen.at/cms/home233/content.html>

²⁹ <http://www.legambienteturismo.it/>

³⁰ <http://www.nordic-ecolabel.org/>

³¹ <http://www.laclefverte.org>

³² <http://www.oe-plus.ch/>

³³ <http://www.green-business.co.uk/>

³⁴ <http://www.kornyezetbarat-termek.hu/>

³⁵ <http://www.ecolabelindex.com/ecolabel/eu-ecolabel>

As noticed in the literature, around 2001-2004 an increasing Eco-labelling trend appeared; in the year 2004, the total number of accommodation units labelled with the EU-Ecolabel was 20, while in the year 2010, there are hundreds across Europe, and thousands in the world.

Since 2002 in Romania, in accordance with EC Regulation no. 1980/2000 Eco-labelled Schemes and European Community eco-label criteria for product groups, the necessary legislative framework for eco-labelling was created and was valid until EU accession when Romania took all legal regulation and procedures of EU.

In year 2009³⁶, in Romania a number of 1170 hotels were functioning, of which only two were eco-labelled (representing 0,17% of the total)! We consider this result extremely modest, in spite of an existing legal framework, and also although there are professional concerns in this area. In 2009 we can identify the initiative of the Romanian Green Building Council (RoGBC)³⁷ that is interested to sustain this type of policy, beside NGOs aware of ecological aspects concerning tourism.

We note that the first hotel was certified only in 2008, when Hotel Saturn from the same name sea-side resort on the Black Sea. This was the first accommodation certified unit as green in Romania, and received the Eco-label from the Tourism Ministry at that time. After a year, another was certified; this is Vega Hotel in Mamaia, also on the Black Sea. Vega Hotel in Mamaia has been tagged by TUV Reihart and is the first hotel in Mamaia aligned to the European Eco-Hotel Management System standard³⁸.

The hotels have been awarded and certified, which demonstrates that they are trying to protect the environment using eco-friendly technologies, products etc. We remark that with only two eco-labelled hotels in Romania, this is a very modest result!

There is a procedure with 84 mandatory and optional criteria to be met in a proportion of 30%. In general, the criteria focus on reducing energy consumption, the reduced use of chemicals and selective waste collection, waste minimization, recycling and reuse of some resources/waste.

The objective of those who adopt this mode is to be a model for communities, consumers and other businesses.

IV. Conclusions

The presence of specific conditions that support the use of the EU-Ecolabel is linked for example to techniques adopted by hotels, and these able to improve the environment, besides economic and commercial opportunities for those lodging units who qualify as environmental quality.

Inclusion of EU-Ecolabel for the tourist facilities in a wide program of sustainable tourism, such as those for environmental management, namely in general EMAS, and/or in particular according to standards ISO 14000.

The ability of tourism operators to promote environmental protection and conservation is one of the main objectives of the job. This is a strong point of interest in business development and competitiveness.

Undoubtedly, the use of environmental labels increases the visibility of the business, and tourism Eco-labelled services can be seen by operators, as well as hoteliers as a positive thing, but only if it is accompanied by economic, competitive and commercial advantages that can add value to this initiative.

³⁶ Breviar statistic 2010 http://www.insse.ro/cms/files%5Cpublicatii%5Cbreviar%20turism_2010.pdf

³⁷ <http://www.rogbc.org/en/home>

³⁸ <http://www.ecomagazin.ro/info/hotel-eco/>

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MANAGING RENEWABLE ENERGY IN THE EU10 REGION

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The problems of renewable energy and regional development have gained a global dimension, as well as the concerns about the economic growth. Therefore, this study investigates the issue of managing renewable energy in the EU10 region, within the context of recovery and anticipated growth of the region. The findings of this study disclose that an important source of economic growth in the EU10 region's countries may be to start some new investments in renewable energy. In order to develop the field of renewable energy may be used EU funds, and may be envisaged different public-private partnership models, that may contribute to lower societal costs and increased deployment rates. The study was conducted by combining a wide variety of sources, such as statistics, reports and articles. The results reported in this study could be used for further research in the area of implementing green energy projects in the EU10 region. Another direction for further research could be to identify the most attractive countries for different renewable energy investment projects in the EU10 region.

Keywords: renewable energy, EU10 region, regional development, investment, economic growth

JEL Classification: Q42, R11, O30, M10.

1. Introduction

Nowadays all European regions are interdependent in terms of guaranteeing energy supplies, creating stable economic conditions and effectively combating climate change. All actors are playing an essential role in managing this change, at local, regional, national and European level. The aim of this paper is to reveal the issue of managing renewable energy in the EU10 region, within the context of recovery and anticipated growth of the region.

The research was conducted using a wide variety of sources, such as statistics, reports and articles. The research question was answered by analyzing published sources, evaluating and interpreting evidence.

2. Recovery and anticipated growth in the EU10 region

The EU10 region includes the eight Central European countries that joined the EU in 2004 (the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, the Slovak Republic and Slovenia), as well as the two countries that joined the EU in 2007 (Bulgaria and Romania).

The global financial crisis has harmed the supply potential of the EU10 economies. The credit constrains and higher risk aversion have lead to lower capital flows, restrained investment, possibly higher structural unemployment and lower total factor productivity growth (The World Bank, 2011a: 22).

In early 2011, about two and a half years after the global financial crisis broke, economic output in the EU10 region had returned to the pre-crisis level. The annual growth rates in the EU10 region in 2008-2010 timeframe is illustrated in figure 1. The pace of the recovery differs across the EU10 region, reflecting, among other factors, the overheating prior to the crisis, trade openness and competitiveness.

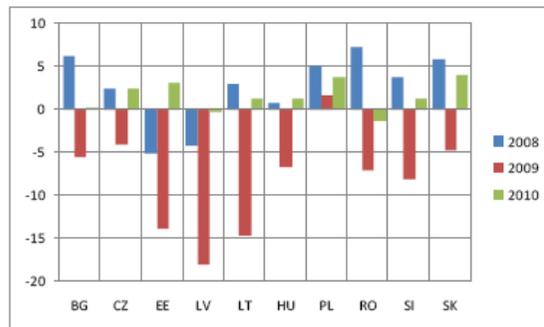


Figure 1 Annual growth rates in the EU10 region, year-on-year, in percent
(Source: The World Bank, 2011a: 6)

The recovery was mainly driven by external demand, while domestic demand was restrained by weak labour market conditions, higher commodity prices, and fiscal policy. The biggest growth improvements in 2010 were experienced by the countries with the most significant overheating prior to the crisis and largest contractions in 2009, such as Latvia, Estonia and Lithuania. As a result, growth differences across the EU10 region narrowed from almost 20 percentage points in 2009 to just over 5 percentage points in 2010. Nevertheless, country differences remained important. Three countries expanded by 3.1 percent or more: Estonia and the countries with limited pre-crisis imbalances, namely Slovakia and Poland. Strong restocking was supported by solid net exports in the case of Slovakia and Estonia, and by consumption in the case of Poland. The growth varied between 1.2 percent and 2.4 percent in the Czech Republic, Hungary and Slovenia where was supported by restocking and in Lithuania where was supported by very strong restocking. Growth remained close to zero in Bulgaria and negative in Romania and Latvia in light of weak consumption and even weaker investment (The World Bank, 2011a: 5). Further structural reforms can help to boost potential growth and facilitate the large fiscal consolidation (The World Bank, 2009).

The contribution to gross value added (GVA) growth in the EU10 countries (figure 2) shows that the accelerating growth in the EU10 region during 2010 came with a broadening of growth across sectors.

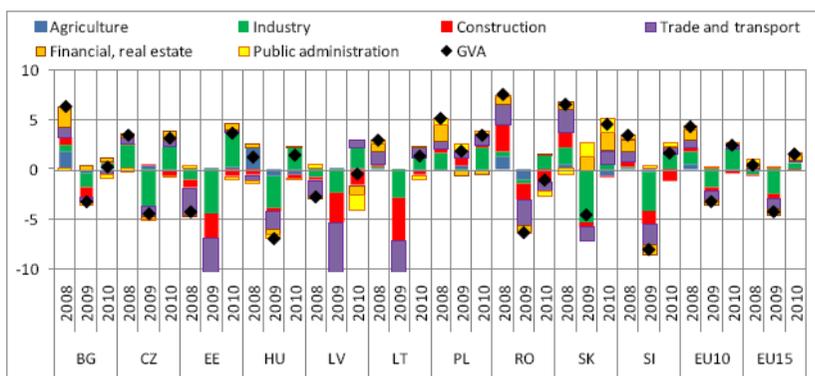


Figure 2 Contribution to GVA growth in the EU10 region
(Source: The World Bank, 2011a: 5)

The double-digits growth of industry reflects the rebound in global demand for capital goods and durables and the deep integration with European production chains (The World Bank, 2011a: 4). However, in some EU10 countries the growth spread to finance and real estate and strengthened

trade, hotels and restaurants, and transport, while public administration and community services remained subdued due to fiscal pressures across the region.

For the timeframe 2010-2012 firms are expected to raise investment with higher capacity utilization and strong global demand for capital goods and durables, and households to step up consumption with improving confidence about future prospects (The World Bank, 2011a: 2). Therefore, the projected gross domestic product (GDP) growth rates (figure 3) may be about 2-4 percents for some of the EU10 region’s countries, and more than 4 percent for other of the EU10 region’s countries in 2012.

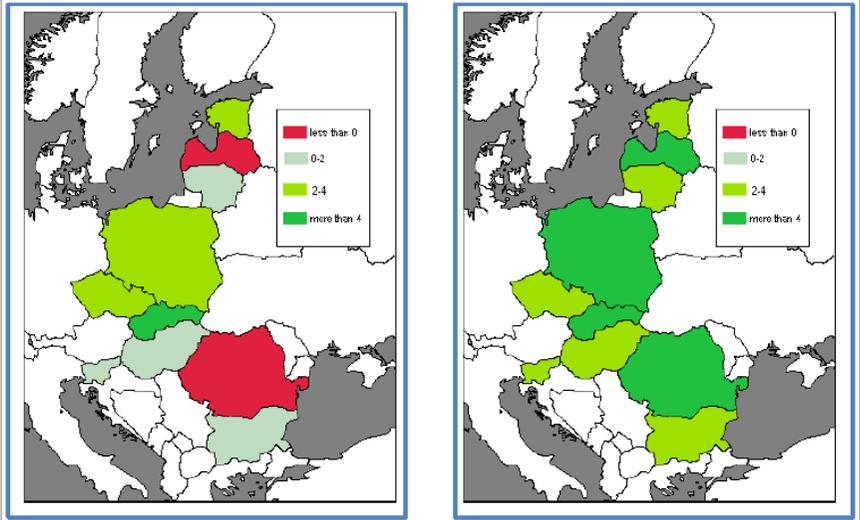


Figure 3 Projected 2010 and 2012 GDP growth rates in the EU10 region, percent
(Source: The World Bank, 2011b: 8)

The analysis of the anticipated growth in the EU10 region (figure 4) reveals that Slovenia, the Czech Republic and Hungary may have a growth somewhat less than elsewhere in the region. The growth in these countries could increase to about 2.5 percent to 3 percent by 2012. One reason for this increase may be that these countries have already converged more to EU income levels (The World Bank, 2011a: 21).

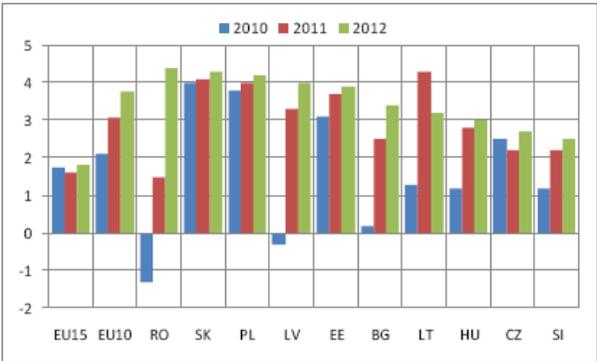


Figure 4 Anticipated growth in the EU10 region
(Source: The World Bank, 2011a: 22)

On the other hand, according to The World Bank (2011a: 21) the pace of the recovery in Slovakia and Poland is set to remain solid due to limited pre-crisis imbalances, strong integration in European production networks, EU funds, and, in the case of Poland, stable consumption. In

Estonia, Lithuania and Latvia growth could improve to about 4 percent by 2012 as domestic demand continues to recover. Aside from Latvia and Lithuania, Romania and Bulgaria, where the crisis hit later than elsewhere, are set to see the biggest improvements in growth in 2011.

In particular, the recovery of the Romanian economy may last more than expected. The Government of Romania is confronted with the difficult challenge of reconciling three objectives: to protect priority programs for economic and social development in order to enhance growth prospects and to mitigate the social costs of the economic crisis; to exit from anti-crisis policies and ensure fiscal consolidation once the recovery is under way in order to make room for a private sector led recovery; and to improve policies, regulations and coordination in order to prevent such crises in future (The World Bank, 2009).

An important source of economic growth in the EU10 region's countries may be to start some new investments in renewable energy.

3. Managing renewable energy's development in the EU10 region

The ambitious European 2020 targets on energy and climate, and more particular for renewable energy, request an important mobilization of investments in the coming decade (ECOFYS, 2011: 143). Before the financial crisis of 2008, several electricity-importing countries in the EU10 region had begun to experience difficulties with supply, but the crisis has reduced demand and created some breathing room. In addition, the crisis created the opportunity to take action to mitigate the impact of the anticipated energy crunch. Mitigating actions are required on both the supply side and the demand side and will require significant investments if the region wants to meet all its anticipated energy needs. This level of investment cannot be provided by the public sector alone and measures will be required to create a climate that appeals to private sector investors (The World Bank, 2010: 1).

There are some investment funds at the European Union's level, of which some may be used in order to develop the field of renewable energy. Through the European Regional Development Fund (ERDF) and the European Social Fund (ESF), otherwise known as the Structural Funds, as well as the Cohesion Fund, investments can be made in thousands of projects across all Europe's regions, with the aim to promote economic and social cohesion by reducing the disparities between Member States and regions. With a budget of €347 billion for 2007-2013, Cohesion Policy represents the single largest source of financial support at the European Union's level for investment in growth and jobs, designed to enable all regions to compete effectively in the internal market (European Commission, 2009: 1). The financial allocations through the Cohesion Policy for energy efficiency and renewable energy in the EU10 region are illustrated in figure 5.

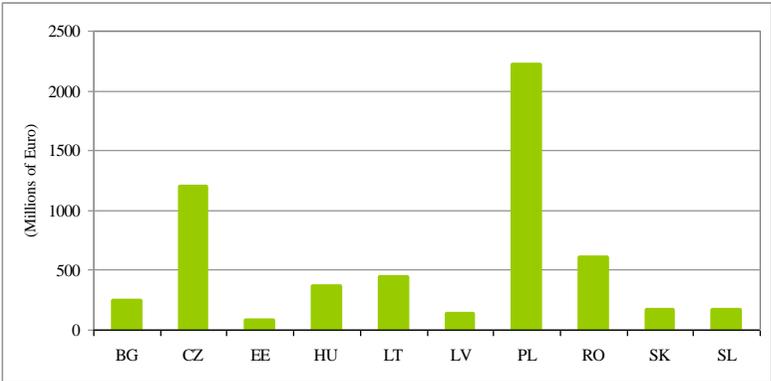


Figure 5 EU funds for energy efficiency and renewable energy in the EU10 region (Source: Adapted from European Commission, 2007)

As the challenges faced by Europe's regions have changed over time, so has changed the policy. Against a background of momentous change in the Union as a result of enlargement and of increasing globalisation, concerns about energy supplies, demographic decline, climate change and more recently, world recession, the policy has evolved, as a key part of the response to meet these new realities (European Commission, 2009: 1).

Governments have a major role to play in energy efficiency, by allowing energy tariffs to reflect costs, and also by being proactive in setting and updating energy efficiency standards for homes, equipment, and vehicles, and in enforcing them. Some measures that may be taken by governments may be carrying out energy efficiency programs in the public sector, informing the public on energy efficient technology options, and designing cities with alternative means of transport (The World Bank, 2010: 3).

The investment in energy efficiency can often give a major boost to local industries (for instance, the restoration of buildings). While regional energy strategies are implemented in the context of European integration, the role of regions as economic players is also becoming increasingly important and therefore, regions must work to create an overall framework which is conducive to action (Frant and Minica, 2008: 2). The deployment of most renewable energy technologies still needs both financial and non-financial policy support, due to the stage of development of either technology or market, and due to fact that renewable energy sources still do not have the same playing field as conventional energy technologies (ECOFYS, 2011: 143).

A key priority of the policy makers is to secure the funding to meet the region's future energy needs. However, the countries of the EU10 region also need to ensure that in developing their energy strategies and in implementing their investment programs they act in an environmentally responsible fashion (The World Bank, 2010: 4).

In case of the large-scale projects (that require investments of 50 M€ or more), with significant technological, regulatory, or market risks, government involvement/participation may help to establish financial close at lower cost of capital. In order to address this issue, different public-private partnership (PPP) models can be envisaged, and may contribute to lower (societal) costs and increased deployment rates (ECOFYS, 2011: 148).

4. Conclusions

This study has revealed that in early 2011, about two and a half years after the global financial crisis broke, economic output in the EU10 region had returned to the pre-crisis level. However, the pace of the recovery differs across the EU10 region, reflecting, among other factors, the overheating prior to the crisis, trade openness and competitiveness. The projected gross domestic product growth rates may be about 2-4 percents for some of the EU10 region's countries, and more than 4 percent for other of the EU10 region's countries in 2012. Firms are expected to raise investment with higher capacity utilization and strong global demand for capital goods and durables, and households to step up consumption with improving confidence about future prospects.

Another conclusion of this study is that an important source of economic growth in the EU10 region's countries may be to start some new investments in renewable energy. The ambitious European 2020 targets for renewable energy request an important mobilization of investments in the coming decade, which cannot be provided by the public sector alone and therefore measures will be required to create a climate that appeals to private sector investors. In addition, EU funds may be used in order to develop the field of renewable energy, and different public-private partnership models may be envisaged, and may contribute to lower (societal) costs and increased deployment rates.

The results reported in this study could be used for further research in the area of implementing green energy projects in the EU10 region. Another direction for further research could be to

identify the most attractive countries for different renewable energy investment projects in the EU10 region.

Acknowledgments

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SUB-SECTION: MARKETING

OBJECTIVES, PERFORMANCES, RESULTS – VIEWS ON THEIR USE IN THE PUBLIC ORGANIZATIONS FROM ROMANIA

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The present paper focuses on the management associated with relatively common concepts: objective, result and performance (ORP). The study is important because in the Romania of the year 2011, a “state reform” is being planned, which will substantiate into the reorganization of public institutions, as the improvement of their activity is set forth by utilizing the set of tools associated with the aforementioned concepts.

The study represents an analysis related to the use of the set of management tools associated with the aforementioned concepts within the Romanian public organizations. The study is concerned with a qualitative estimation involving the translation of the existing theory into the practice of the present moment.

The review of the specialized literature is aimed at selecting the most common theoretical milestones, in order to increase the probability to retrieve them from the practice of the organizations. The works of Drucker represent the first theoretical system of reference. The way the ORP concepts have been utilized within the American organizations generate the guiding elements of the present study.

The research presents a longitudinal segmentation, the frontier between the two parts being the present moment. The current state of facts is studied by means of an inductive approach. The hypothesis related to the ORP management in the near future is actually built on the grounds provided by the estimation of this state of facts. Its deductive approach starts from evaluating the pragmatic premises, involving the support of the process that will utilize the ORP in the near future, according to the theoretical percepts. The analysis is qualitative in nature. The identification of the cases that represented “the exception” was taken into account.

The analysis focused on public institutions considered a priori as more transparent: the university, the hospital and the town hall. Even if in the case of the university there are regulations that facilitate the strategic planning, the utilization of objectives according to the MBO precepts is absent. The same situation is to be found in the case of hospitals and town halls. The use of primary and secondary information sources prove that the ORP has not been utilized. It was ascertained that the premises for utilizing the ORP are the same for the near future, a fact that implies the same results.

The main implication is associated with the “myth or reality?” question. The result has a demystifying impact, showing that a reliable estimation on the ORP basis related to the activities of or people working in these organizations cannot be developed nowadays - in 2011.

The present study aims at a realistic analysis related to the discrepancy between words and facts within the management of the Romanian public organizations. The fact that the aforementioned organizations represent the object of the “management of shallow labels content” is signaled and demonstrated.

Key words: objectives, MBO, results, performance, public organization

JEL Codes: H11, I00, I23, L31

I. Introduction

The present-day economic crisis has augmented the segment of public opinion which is favorable to a critical analysis of the activity developed by the public organizations and by the public sector as a whole. The phenomenon is more than obvious in Romania, where salient transformations of the public sector occurred during the last two decades and where the major problems associated with the management of the public organizations persist. The dominant impression expressed explicitly and implicitly is that the public organizations involve too many resources, in order to develop activities whose results are prone to be criticized.

Being studied from the point of view based mainly on the principles of the new public management, the problem generated by the malfunction of these organizations focused mainly on the analysis of costs associated with the expected results. Even the shift of interest from processes and procedures to results represents a significant change in the management of these organizations. The advocates of this change of attitude, a change synthesized by Osborne and Gaebler (1992: 108-166) by means of “mission-driven government”, consider that in this manner the entrepreneurial approach is encouraged.

The pressure to implement a management guided by results and economic criteria is amplified by the consequences of certain unfavorable economic evolutions. In Romania the need for a critical analysis becomes obvious.

Even if there is a macroeconomic context which is favorable to this managerial approach, the expected success is determined by the understanding of the specificity related to the public sector. It cannot be omitted that, in theory, there are more important matters than the economic ones in guiding these organizations, while in practice there is the experience of many centuries which validates their existence and their manner of work.

II. Present-day concepts and practices

If the discourse of the people involved in reform of the public sector and organizations is followed carefully, it can be ascertained that there is an ambiguous manner to use of the terms objective, result and performance. The alarming aspect is generated by the fact that these confusions substantiate in public policies whose consequences are, of course, negative. The effect may be amplified if the terms are associated with certain management practices which are transferred from private organizations to the public organization.

In this respect, the management by objectives (MBO), the managing for results (MFR) and the performance management (MP) belong to the category of management tools on which hundreds of works of all types have been published. They have a different content because in the first place, from a detached point of view, the objective, the result, and the performance stand for different concepts. “The objective” relates to something that is to be accomplished, “the result” is a consequence and “the performance” represents the outstanding or the best result. On the other hand, the quantification of the objective is desirable as the quantification of the result represents a compulsory condition that involves the opportunity to discuss the performance. Taking into account these common observations based on the dictionary definitions of the respective terms, one can appreciate a “chronological sequence” of the discussion as logical, if related to the objective-results-performance type.

The management by objectives, MBO, is ascribed to Drucker (1954). MBO is associated mainly to the planning, being adopted after 1975 as a tool of strategic management. In this context, the objective embodies the mission of the organization. The rapid utilization of MBO by certain companies has generated a number of situations which imposed critical observations and methodological corrections. Drucker (1954; 1974) emphasizes that a system of objectives represents a necessity, and this system must be developed in a balanced manner, by avoiding

certain exaggerations related to the role played by the profitability. By extension, it can be inferred that this warning is valid in the case when the role of economic objectives are being exaggerated. However, in 1974, an international conference dealing with the MBO topic showed that 80% of the American companies use this instrument, not more than 3% doing it in a correct manner (Schuster and Kendall 1974). What is more important for this study is that the conference questioned the applicability for specific fields.

“Managing for results” (1964) is one of the Drucker’s works discussing “the business realities”. This book, which has generated an instrumental approach, focused on the individuals who were initiated in the business management but, however, certain “realities” may be perceived from the point of view of the management involved in other types of organizations. For instance, the idea that the resources and the results exist outside the organizations is worth to be understood and adapted to the public organizations. In this manner, it is suggested that the effort should be focused on the outputs/results.

As in the preceding cases, the performance management referred to the organization follows different “trajectories”, corresponding to the private and the public sector. In what the private sector is concerned, the performance of the organization is associated with a minimal limit of profitability which implies its survival. In the case of the public sector, the performance of the company hasn’t been associated with its survival. Due to political and social context, almost all the public organizations have been kept in function, without being affected by the appraisals of their results or performances. The continuity of their function has been considered in itself a positive result, despite the costs perceived as irrational.

Taking into account the main area where the theory was associated with the discussed concepts and the fact that most of the discussions promoted at a global scale are linked with the North American economic and social space, an estimation of the pragmatic results of the public sector becomes compulsory. From the time intervals needed to implement the strategy and then achieve certain results and from the problematic created, a series of particularities or consequences of the utilization of the respective management tools can be inferred. A source of this type, available in Romanian, is Henry (2005: 416-613). Henry’s textbook focuses on the US public administration, making available certain moments and data with a statistic value that offer an image of the significant elements. MBO was promoted in the American administration during the seventies. Other combinations objectives-results-performances followed a fact that generated more sophisticated public management instruments, known under different acronyms.

Finally, for this study the following facts can be taken into account:

- before the “official moments” concerning the discussed instruments it existed a practice that guided the elaboration of the theory related to their utilization;
- the utilization of instruments is promoted and experimented by some governmental agencies and the results are quantified and then made available for public discussion;
- the instruments are improved continuously, under the pressure of constant criticism and objective appraisals.

At the beginning of the nineties, after five decades of efforts to improve the public sector management in the USA, it was ascertained that the capacity of the government to estimate the performances, on a scale from 1 to 10, reached the level corresponding to the figure 2 on the named scale (Henry 2005: 448-449). An appraisal developed in 2002 and related to 26 federal agencies according to two criteria registered one maximal position for one organization, while half of the organizations scored at the minimum level while all the criteria were concerned.

Extending the study to other geographic areas, it can be ascertained that the theoretic bases and the practice associated with the ORP triad suggest a cautious and flexible approach, due to the dilemmas that appear in relation with the specificity of the public organizations. For instance,

Pollitt and Bouckaert (2000) discuss the reform of the public management, using the titles “The results – through the blurry mirror” or “The results: a slippery concept”. Even in this context, it is obvious that the various governments (of the OECD countries) interested in the matter attempt mainly transparent and gradual approaches, accompanied by projections of the consequences with a multitude of disapproving reactions at the public level.

In Romania, the discussion involving the strategic planning and implicitly the utilization of the mission and objectives in the public sector began more than 10 years ago. Brătianu and Lefter (2001) offer a discussion of the planned utilization of the objectives and of other strategic instruments in the universities. In practice, the fact that an institutional degree is afforded to a university by a public agency marks the implementation of minimal elements of performance.

III. Methodology

The study is aiming at an analysis with a retrospective character, on which is based a projection valid for the next years. This temporal orientation with two segments allows the use of two different approaches, which are connected by the idea of a construction with a preventive role.

An inductive approach was used for the last period of time. The approach was based on the collection of some qualitative data related to the utilization of the ORP triad within the framework of a public institution from the non-profit category, these institutions offering a higher transparency. The institutions belonging to the education, health and local administration systems were preferred. The analyzed elements were obtained via observation and were extracted from the different sources, which are available for public use due to the organizations websites, or were inferred from the events and operational processes. A special attention was paid to the elements with a “dissonant” character from the amount of collected data. Their estimation represented the appraisal of the agreement between the real state of facts and the data registered in the official documents.

The accomplishment of this inductive phase is substantiated in an assertion with a theoretical value. The research hypothesis is built on its basis, in order to realize a prediction associated with the next interval. A part of the collected data for the last period of time was used in order to test the hypothesis related to the manner the management instrument in discussion will operate in the near future.

The research strategy represents a mixture of case studies at the organizational level for several institutions from the fields which were mentioned previously. These case studies focus only on the elements related to the ORP triad. The chosen organizations represent a sample consisting of typical cases, but taking into account whichever event leads to “an extremely positive case”. “The extremely positive case” is represented by a confirmation in practice of the “textbook theory” associated with the ORP topic.

The methodology of data collection has included, beside the utilization of the secondary sources, the unstructured exploratory interviews and the direct observations which focused on the respective organization and on its executives.

Finally, the deductive reasoning implies a construction with a predictive character associated with the conclusions. The translation of the inductive sequence into an ulterior deductive sequence is based on the phenomenological continuity assumption, when elements that prove a certain discontinuity do not occur, as the ones involved in the catastrophe type .

IV. Findings

When taking into account the mentioned difficulties concerning the correct implementation of the MBO, the first public institution analyzed was the university. This institution is compelled to

elaborate a mission statement and a strategic plan. On the other hand, it can be assumed that the university is the institution which has acquired the theory.

The analysis began with the study of the strategic plans and university charters which were made available on the websites. After studying the plans of 40 public universities, it was ascertained that the objectives are formulated in a rather ambiguous manner, a fact that suggests a desideratum related to a process. The terms used are “increase”, “accomplishment”, “improvement”, and so on. No example where the objectives were formulated in a SMART (Specific, Measurable, Achievable, Realistic, Time related) structure was found and neither certain supplementary characteristics. The measurability was carefully avoided and the obligation to report in a determined period of time was inexistent. The term “permanent” occurred frequently as a formulation associated with the time related to an objective labeled as “improvement”. The interviews showed that the academics don’t assume the objectives deriving from the objectives of the organization. As a matter of fact, there are no elements to prove the existence of an MBO in the universities.

The orientation toward results and their appraisal within the universities is associated only with the research activities accomplished by academics. Each university establishes a minimal threshold concerning this type of results. Probably more than 90 % of the academics reach this threshold, a fact that proves that this threshold is not operative.

In what the “outputs” of the educational process are concerned, there is no serious system of assessment concerning the graduates’ success on the market, even if the accreditation of certain programs of studies supposes an assessment belonging to this type and this specific criterion is acquired in almost all the cases. The universities are categorized according to an aggregated indicator of qualitative type, labeled as “degree of trust”. There are no reasonable Romanian classifications to match the type used in the Western Europe or in the USA.

Finally, two separate “events” have tested indirectly the existence of a management based on the ORP triad: the “legal” reduction of the academics’ income during the year 2010 and the change, starting with February 2011, of the rules and procedures which deal with recruitment of new teachers. The lack of institutional reaction to events that endanger the autonomy of the organization’s management is obvious, no special situations being signaled.

In the case of the local public administration, one can ascertain the same ambiguous expression. Due to the enforcement of law, all the town halls have been determined to elaborate a plan with the title “strategy of sustainable development”. This plan is available on the official website of the town hall, the plan being more developed in the case of bigger cities. Without taking into account the volume of the named plan, the objectives were expressed in a rather ambiguous form. The results of the unstructured interviews emphasized the lack of any concrete elements when a time interval longer than a semester is concerned.

As in the case of the universities, the reduction of public clerks’ salaries and the diminution of the personnel working in the town halls, with uniform percentages for all the organizations, revealed the fact that there is no coherent approach which relates to the theory of the topic. The negotiations at the hierarchical level, the assessment of results which are relevant for the organization, or the comparison used in order to estimate the performance were not to be found. However, it can be admitted that there was established a target of budgetary nature, whose significance is obscure in the lack of a transparent argumentation coming from the government.

An interesting situation from the point of view of results is related to the organizations belonging to the public health system. In this area, there are a significant number of result or performance indicators, most of them having the characteristic “maximal threshold” and being related to costs. As a matter of fact, the significant indicators have an economical character, being dictated by budgetary constraints coming from the central administration. In what this matter is concerned,

the results of the interviews show that there is no reliable proof of using a range of management instruments associated to the ORP triad.

Finally, the reduction of salaries and the reshaping of the health system represent supplementary reasons that prove the management using these instruments doesn't live up to its role in the area related to the health system.

It can be also inferred that the system of wages related to the named institutions became more rigid due to the effect of the "unitary wages law" elaborated in 2010, which decreased the margin of the employees' positive motivation, increasing instead their negative motivation, as a result of the new legislation related to the work market. The effect of these laws, corroborated with the budgetary targets and other strategies of financial nature, which are decided and applied in very short periods of time, have drained of its real content the MBO, MfR or PM in the studied public organizations.

V. Conclusions

All the formal elements related to the elaboration of plan-type documents, in what the three institutions under discussion are concerned, refer to the concept "objective", but in all these cases there is no proof for operating with a SMART type form, or a form which should allow the measurement or operation within a control system. The existence of guiding elements belonging to the costs is not encompassed into a systemic construction which should involve a higher amount of objectives. Even if there are a number of prescriptions, sometimes in a fuzzy form, for formulating the mission or other documents for planning, nothing similar has been developed for the objectives, although the specialized literature offers several models and discussions.

In the practice specific to the organizations under discussion, there are no events able to represent in an indirect manner, by consequences related to their position (e. g. penalties), the proofs of utilizing an MBO type system. An objective such as "compliance with the budget", which is achievable by reducing the activity and by actually creating an operational discontinuity, cannot be validated as a proof to certify an acceptable managerial orientation for the public organizations. Even the "directional goals" such as "increase", "improvement" etc. are not to be found under forms which can be translated in practice within departments or positions.

The absence of the objectives triggers the post-factum character of any findings related to results. Actually, a complex set of results has been discussed that offers an unsubstantial image related to the activity of the organization. As regards the institutions analyzed, most of the universities close the year with substantial budget excesses, while the majority of hospitals fit into the opposite category. Almost all the published results represent the consequence of activities which are irrelevant for the basic process defined in the mission of the organization, or are concerned with the "output" of certain compartments and positions, without reflecting the consequence of a specific coordination, which should be able to provide a significant impact on the management style specific to the organization.

In a similar vein, this is also the case for using performance as a means to achieve a systematic improvement of the activity. Even if there is a tendency to compare the activity of similar organizations, the various classifications in Romania are questionable or of little relevance as compared to what are regarded as essential in the mission statement.

As compared to the past activity cycles of the institutions considered, it can be stated that a coherent application of a certain form of management - on the grounds of the ORP triad, in the sense of the reference theory - has not been signaled. The probability that other public institutions, less taken into account by mass media and by theoretical studies, would use certain strategies belonging to the MBO type is insignificant, because there are no regulations in this respect, and the practice does not reveal events of this type.

The inductive assessment related to the past and present cycles and to the premises of the same type associated with the category of processes guided by ORP allow the deduction that, in the near future, the estimation and control related to the activities of public organizations are not likely to develop in a coherent manner, by using the associated management techniques.

Due to the fact that the organizations do not utilize the ORP tools, the planned assessment of the employees or of certain organizational entities on these grounds has turned into the evaluator's arbitrary act of power with questionable consequences on the results that could prove relevant for the organization. As a matter of fact, following the same deductive reasoning, the consequences can only be negative for the management within a modern reference system.

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STUDY REGARDING STUDENTS' SATISFACTION WITH INSTRUCTIONAL PROCESS AS A DIMENSION OF ACADEMIC PERFORMANCE OF INSTITUTIONS OF HIGHER EDUCATION

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Economic education in Romania has gone through many changes in recent years, in order to modernize and adapt to the requirements of the economy based on knowledge. But, regardless of the stage, students' satisfaction is a key criterion for assessing the relevance and the accomplishment of the mission of universities in society. The highest satisfaction should be a constant concern for managers of higher education institutions. In order to achieve this goal, it is very important to periodically determine which are the most significant factors for students, how satisfied are they and which is the performance of the higher education for these attributes. The knowledge transfer process and the degree to which we can speak of a modern university tailored to the needs of the business environment and focused on increasing the relevance of the educational process for the labour market can be appreciated taking into consideration the content of the educational activities. The objective of this research is to identify relationships between the importance, satisfaction and performance of the instructional process in the process of improvement of the university management and the creation of better university programs. Our analysis was based on an empirical research conducted in a major Romanian faculty in the field: Faculty of Economics and Business Administration of Cluj-Napoca. The research was carried out by means of the survey method using quota sampling. Findings have revealed a significant positive contribution of the assessed factors to the increase of the quality of educational process. Also the factors that characterize the instructional process are correlated. The results revealed students' concern to acquire practical knowledge. There is also a significant difference between students' expectations and students' satisfaction regarding the quality of the content of teaching activity. Unfortunately, in case of all factors the performance of institution was negative associated with a number of negative effects.

Keywords: institutions of higher education, educational management and marketing, quality of educational services, student satisfaction, instructional process.

JEL Classification: I21, I23, M39

1. Introduction

Brătianu and Pop (2007:9) stated that even if the educational management and marketing in Romanian universities aren't a novelty, the instruments used are often simple or inappropriate. In the present context, both the Romanian universities and companies face the same problems (Pop, et al. 2009: 215): establishing a connection with the environment, raising resources, developing and providing quality services that contribute to the social welfare of the community, attracting

new customers and building their loyalty, maintaining a good image, fighting the intensifying competition and so on.

The competition in the current educational environment is intense due to the internationalisation of education and the impact of information technology and communications. Given the present context of global economy, the situation is even more dramatic in the case of the economic education. This competition profoundly affects one (but not the only one) essential components of a university mission: the learning process, the essence of the educational process, focused on knowledge transfer and creation of skills and competences usable in the labour market. The degree to which we can speak of a successful university can be determined through the overall satisfaction felt by its main category of public, namely the students, taking into consideration the content of the educational activities. This element along with the evaluation process and the quality of the human resources represent the main components of the instructional process and thus their evaluation is the first step to develop better educational programs.

2. Literature review

In order to provide educational services at the European Union level, the Romanian institutions of higher education must improve the educational management and marketing practices, especially given that the percentage of the budget funded by universities and students increased. (DesJardins 2002:531).

The increasing competition among universities, the decrease in government funding, the students' expectations increase and the general decline in birth rate have led to the awareness of the importance of providing quality educational services in order to retain a sufficient number of students with high abilities (Canic and McCarthy 2000: 41; Li-Wei 2005: 863). Researches show that student's satisfaction is the factor that contributes most to students' loyalty (Helgesen and Nettet 2007:51; Brown and Mazzarol 2008:90). Student satisfaction is defined by Elliot and Healy (2001: 2) as "a short-time attitude resulting from an evaluation of a student's educational experience" which occurs when the current performance meets or exceeds the student's expectations (Parasuraman, Zeithaml and Berry 1985: 42). Research undertaken by Munteanu et al. (2010: 138) had also shown that the most important satisfaction factors are different in case of students with low and high performance.

Hishamuddin et al. (2008) stated that there is a positive correlation between the quality of educational services and student satisfaction, thus the improvement of the services can lead to higher satisfaction. Aldridge and Rowley (1998:202) have found that students' dissatisfaction affects the learning process leading to low performances or even to abandonment of the studies. The necessity to determine students' satisfaction in order to improve the education management was confirmed by Carey, Cambiano and De Vore (2002:97) which found that higher education managers are rarely focused on determining students' satisfaction and believe that the satisfaction level is higher than the real one.

3. Study objectives and methodology

The main objective of the study, namely identifying the current situation of the economic higher education in Romania by evaluating its empirical dimension and its relevance for the labour market and using the satisfaction of those directly concerned with these issues - the students, in order to create more performant educational programs. Strongly connected with the main objective of the paper (and subsidiary to achieve it) we considered also important to study the following aspects:

- O1. Identifying the performance of higher education institutions as difference between student's expectations and perceived value of received services.

- O2. Identifying the main factors that contribute to the satisfaction with the instructional process.
- O3. The contribution of the satisfaction with the instructional process to the overall satisfaction with the economic higher education.

This research was carried out by means of the *survey method using quota sampling* (year of study, line of study, specialization). It employed the interview technique while the questionnaire was the instrument of data gathering. The study was conducted on a sample of 490 students enrolled at the Faculty of Economics and Business Administration of the „Babeş-Bolyai” University of Cluj-Napoca. The hypotheses of the study were:

- H1. There are several significant differences between the expected level of the factors specific to the educational process (represented by importance) and the perceived value from the educational experience (represented by satisfaction).
- H2. The factors contributing to students’ satisfaction with the instructional process are highly correlated.
- H3. There is a dependency relationship between the factors which influence the instructional process and the overall satisfaction, all these elements significantly influencing the relevance of the educational process.

The evaluation of the educational process in terms of its empirical character, adapted to the requirements of the society as a starting point for development of performant economic educational programs, focused on the labour market needs, was carried out through one dimension of educational experience: the content of the teaching activity, which contains eight items. Students were asked to evaluate their academic experience by comparing the importance of the considered factors and their satisfaction with these factors using a six-point scale, ranging from (1) “not at all important” to (6) “very important” and from (1) “not at all satisfied” to (6) “very satisfied”. It has also been determined the “satisfaction with the instructional process” and the “overall satisfaction with the educational experience” using same scale.

First of all, we determined the internal reliability of the items used to measure the content of teaching activity, namely the importance and satisfaction scores. Thus, we resorted to *Cronbach’s alpha reliability coefficient*, Item-total correlation and Cronbach’s alpha “if item deleted”. The value of the *Cronbach’s alpha coefficient* was 0.889, indicating a high internal reliability. We also have a high internal reliability of the model when analyzing the reliability of the items used to evaluate the level of satisfaction with the educational process, because the *Cronbach’s alpha value exceeds 0.850*. Therefore, all the conditions are met and we can proceed to the next step, namely data analysis and the interpretation of the results.

4. Research Results

In order to achieve the first objective, namely identifying the three key dimensions of the educational experience – student expectations, their satisfaction and the performance of the educational institution, we have identified the mean scores for the importance and the satisfaction with the content of teaching activities (Table no.1).

Table no. 1. MIS, MSS and MPS regarding the content of teaching activities

| | MIS | MSS | MPS=MIS-MSS | t-Student |
|--|------|------|-------------|-----------|
| 1.1. Valuable content of the courses | 5.44 | 4.38 | 1.06 | t=17.932 |
| 1.2. Interactiveness of the courses | 5.31 | 4.27 | 1.04 | t=15.778 |
| 1.3. Practical courses are based on case studies | 5.30 | 4.23 | 1.07 | t=16.715 |
| 1.4. Information is up to date | 5.33 | 4.43 | 0.9 | t=13.411 |

| | MIS | MSS | MPS=MIS-MSS | t-Student |
|---|-------------|-------------|-------------|---------------|
| 1.5. Specialists from companies are involved in teaching activity | 5.24 | 3.74 | 1.5 | t=21.087 |
| 1.6. Students may choose the desired courses | 5.30 | 3.94 | 1.36 | t=21.842 |
| 1.7. The courses offer is adequate | 5.34 | 4.39 | 0.95 | t=14.998 |
| 1.8. Opportunity for internships | 5.40 | 4.17 | 1.23 | t=14.144 |
| The content of teaching activity | 5.34 | 4.20 | 1.14 | (****) |

MIS= Mean Importance Score; MSS =Mean Satisfaction Score; MPS= Mean Performance Score

**** significant at $p < 0.001$. Source: authors' calculations

Then, in order to identify the institution's performance, we analyzed the differences between the importance and the satisfaction with the analyzed factors, as in the presented methodology. The results show that we have high or very high importance for all the factors investigated. The most important aspects of the educational dimension of the content is "valuable content of the course", "opportunity for internships", "the courses offer is adequate", and "information is up to date". As we can see, students' first focus is on acquiring practical, relevant and complete knowledge in order to integrate easily into the labour market. Therefore, the opinions of the students can be successfully used as a predictor of the relevance of the economic education to the business environment (H3), because this aspect is their main concern through the instructional process.

"The involvement of specialists from companies in teaching activity" is the factor with the lowest mean importance score. This is probably due to the high confidence that students have in the skills of university professors.

The highest values of the mean satisfaction scores regarding the content of education are encountered for "information is up to date" (the fourth most important factor), "the courses offer is adequate" (the third most important factor) and "valuable content of the courses" (the most important factor). Just in case of "the involvement of specialists from companies in teaching activity" (the least important factor) and "students may choose the desired courses" the mean satisfaction scores are lower than 4 ("mostly satisfied").

Analyzing the differences between the mean importance score (as an indicator of the expected value of the service) and the mean satisfaction score (as an indicator of the actual value provided), we obtained positive results for all factors considered in the case of the content of teaching activity. Therefore, at least at the moment, there is a negative performance of the educational institution in the case of content of teaching, meaning that the delivered services are lower than students' expectations. In order to determine the reliability of the results, the differences between MIS and MSS were tested using the Student t-test, which confirmed the existence of significant differences between the two dimensions considered (H1).

The worst performance is recorded for "the involvement of specialists from companies in teaching activity". Although it is the factor with the lowest importance it seems that the institution is far from reaching the level desired by the students. If we also take into consideration the performance of "opportunity for internships", we may conclude that the partnerships or the collaborations between academia and the private sector are not enough developed.

Instead, the smallest difference between what the students want and what the students get is for "the information received is up to date" and for "the courses offer is adequate". However, the result is very interesting, as students are willing to take a higher number of courses than they actually do. This means the economic institutions of higher education should increase the number of the subjects and the number of classes and not reduce them as in the last years.

Analyzing the relationships between the dimensions of the educational process (using the Spearman's correlation coefficient, for ordinal variables), we have noticed that an increase in the satisfaction of any factor (Table no. 2) implies an increase in the satisfaction level for all the other factors (*H2 was confirmed*). The same influence is displayed on the entire instructional process. Thus, the satisfactions with "valuable content of the course" and with "information is up to date" are strongly linked to the satisfaction with "interactiveness of the courses" (the most intense correlation identified). Those students, who appreciate the participation of specialists from companies in the teaching activities, equally appreciate the opportunity to choose the desired courses. The assessment of the "valuable content of courses" also implies to take into consideration the amount of "up to date information". We may conclude that the "interactiveness of the courses" is assessed through the others elements of the quality of teaching content (the most by the "valuable content of the courses" and the least by "opportunity for internships"). But for the entire instructional process it's not as relevant as the "information up to date" and the "valuable content of the courses" which have a greater influence.

Table no. 2. The Correlations between the scores of students' satisfaction with the Content of teaching activity

| Rho | I.P. | 1.1 | 1.2. | 1.3. | 1.4. | 1.5. | 1.6. | 1.7. |
|-------------|--------------|--------------|--------------|-------|-------|--------------|-------|-------|
| 1.1 | 0.376 | | (**) | (**) | (**) | (**) | (**) | (**) |
| 1.2. | 0.337 | 0.632 | | (**) | (**) | (**) | (**) | (**) |
| 1.3. | 0.349 | 0.498 | 0.537 | | (**) | (**) | (**) | (**) |
| 1.4. | 0.382 | 0.529 | 0.552 | 0.475 | | (**) | (**) | (**) |
| 1.5. | 0.275 | 0.380 | 0.519 | 0.360 | 0.465 | | (**) | (**) |
| 1.6. | 0.317 | 0.470 | 0.493 | 0.430 | 0.380 | 0.538 | | (**) |
| 1.7. | 0.269 | 0.491 | 0.443 | 0.316 | 0.421 | 0.250 | 0.326 | |
| 1.8. | 0.203 | 0.269 | 0.334 | 0.305 | 0.320 | 0.356 | 0.388 | 0.318 |

I.P. = Instructional Process; *Rho* = Spearman's correlation coefficient; **significant at $p < 0.001$.

Source: authors' calculations

Next, we sought to determine which of the 8 factors used to assess the satisfaction with the content of teaching activities are the best predictors of satisfaction with the instructional process (O2.) through a multiple regression. First of all we converted the independent variables into standardized variables (z-scores) to avoid the multicollinearity problems. Only one significant predictor was identified: the valuable content of the course, the dimension which may be interpreted as the knowledge utility and relevance in the labour market (*H3*), (*Beta*=0.250). The value of F statistics obtained from the ANOVA table was 23.389 ($p < 0.001$). The coefficient of determination ($R^2=0.276$) (standard error of the estimate=1.148) suggests that about one third of the variance of the satisfaction with the instructional process is determined by the selected factor. Next we tried to identify to what extent we can predict the overall students' satisfaction with education (Mean=4.27, SE=0.066) based on the satisfaction with the instructional process (Mean=4.33, SE=0.083) (O3.). The results of the linear regression allowed us to construct the following model: *Overall satisfaction with education*=2.539 (0.335)+0.417(0.017)* *Satisfaction with the instructional process*. Test value $F=29.928$ ($p=0.000$) from ANOVA table shows that the variation explained by the model is not due to chance, but to the factors considered. The coefficient of determination ($R^2=0.110$; Standard error of the estimate=1.229) indicates that 11% of the variance of students' overall satisfaction with education is explained by the satisfaction with the instructional process, while the rest of the variance is due to other factors.

5. Conclusions

The objectives of this study were firstly oriented to determine the expectations and students satisfaction with the content of teaching activities as a key dimension of the relevance of higher education to the society and in particular to the business environment. The results revealed students' concern to acquire practical knowledge, identified by their interest in "the valuable content of the courses", receiving "up to date information" and "opportunity for internships". Another result of this study shows that students may experience high levels of satisfaction both in the case of factors considered very important ("the valuable content of the courses") and in the case of factors considered less important ("practical courses are based on case studies"). The hypothesis of the existence of significant differences between students' expectations and students' satisfaction regarding the quality of the content of teaching activity had been verified. Unfortunately, in case of all factors the performance of institution was negative associated with a number of negative effects described above.

Factors that characterize the instructional process are correlated. Thus, the increase of satisfaction of any factor determines the increase of satisfaction for all other factors in both categories: the content of teaching activities and the quality of professors. Satisfaction with instructional process is most strongly related to satisfaction with the valuable content of the courses and the novelty of information, first one being the factor with the most significant contribution to the satisfaction with the instructional process (best predictor).

Latest findings of the study reveal a positive contribution of the satisfaction with instructional process to the overall satisfaction with education. Another conclusion we can draw is that the economic institutions of higher education should focus in case of recruiting and retaining strategies on different dimensions of the educational experience. Recruitment strategies must focus on the dimensions considered the most important in this case the valuable content of the course and the opportunity of internships. Retention strategies should be focused on ensuring student satisfaction and therefore be focused on improving the performance of the institution with the factors that contribute the most to their satisfaction with the instructional process.

Given the limits of research (the investigated population is not representative for the whole academic economic community) we believe that research objectives have been achieved by identifying some important factors to increase the relevance of higher education for business environment and society and some relationships that allow the improvement of the instructional process.

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SOCIAL RESPONSIBILITY VALUES: A CROSS COUNTRY COMPARISON

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This empirical study aims at finding out how similar and/or different are the future Romanian and Slovenian managers in assessing the importance of organization's social responsibility values. The assumption of the research is that most of most of students in engineering and business will hold middle management position in the near future. The sample consists of 727 undergraduate and graduate students' levels from Romania and Slovenia, two former socialist countries. The data has been collected between 2008 and 2009 in the framework of GLOBE student project³⁹, using a section of GLOBE III questionnaire, about the importance of CSR related values in critical decisions. The findings concern the similarities and significant differences between: 1) whole Romanian and Slovenian samples; 2) Romanian and Slovenian students in engineering; 3) Romanian and Slovenian students in business. Our findings revealed a trend toward convergence in the importance given to decision's effect on contribution to the economic welfare of the nation and local community, as well as on employees' professional growth and development and on environment. The biggest difference between the groups concerns the decisions' effect on firm profitability (the Romanians considering this value as more important in critical decisions than the Slovenians). The students in engineering proved to be a more homogeneous group, showing convergence in assessing the importance of eight out of fifteen social responsibility values. The biggest difference concerns the decisions' effect on firm profitability (Romanians consider it as having higher importance in critical decisions than the Slovenians). Comparison of students in business revealed convergence in assessing the importance of employees' professional growth and development and decision's effect on environment. The biggest positive difference concerns the same value of decisions' effect on firm profitability. The Romanians are well behind Slovenians in realizing the importance of decisions' effect on relationships with important partners of the organization, ethical considerations and decision's effect on long term competitive ability of the organization.

Keywords: Social responsibility, Romania, Slovenia, students

JEL: M14

1. Introduction

The research question the present study tries to answer concerns the convergence and divergence in Romanian and Slovenian students' opinion about the *organization's social responsibility values*.

The importance of the issue is emphasized by the actions taken by international and global decisional institutions, aiming at strengthening a more humane, ethical and more transparent business behavior. Among these actions, a critical importance has the *ISO 26000* which provides guidance to the organizations on how to understand, integrate and communicate the social responsibility, in order to improve its credibility and social image. It deals with definitions, principles, core subjects of social responsibility and guidelines on integrating the social

³⁹ The project is co-ordinated by R. Lang from Chemnitz University of Technology. The data for Slovenia has been collected by D. Pucko and T. Cater (University of Ljubljana)

responsibility in the organization's management and behavior (Discovering ISO 26000). Our attempt offers a general view on the future managers understanding on how an organization should behave/decide while being socially responsible (*doing good for doing well*).

2. Literature review

When approaching the organizations duties and accountability for their global environment constituents, the researchers use a wide spectrum of *concepts* (corporate social responsibility, corporate social accountability, corporate societal responsibility, corporate citizenship, corporate sustainability, sustainable entrepreneurship, social performance, triple bottom line, business ethics etc.) and *theories* (shareholder, stakeholder, societal, philanthropic etc. theories). While at the beginning of the 7th decade, *Friedman* (1970) argued that the only one social responsibility of business is to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, other researchers contributed to defining the *new paradigm* of doing business (tuned with today's society expectations). For instance, *Carroll* (1999) asserts that corporate social responsibility involves the conduct of a business so that it is economically profitable, law abiding, ethical and socially supportive. *Moir*, a partizan of stakeholder theory, defines business social responsibility as its commitment towards ethical behavior, economic development and improvement in the quality of life of its workforce, their families, the local community and the society at large (*Moir* 2001). *Kotler & Lee* (2005) argue that "corporate social responsibility is a commitment to improve community well-being through discretionary business practices and contributions of corporate resources" (*Kotler, Lee, 2005, p.3*). They provide a matrix of six options for social responsible activities of a company: cause promotions; cause related marketing; corporate social marketing; corporate philanthropy; community volunteering and socially responsible business practices (*Ibid.*, p.23-24). There is also a recent view on the need to reframe corporate social responsibility (CRS) into corporate social responsibilities (CSRs), positioning "against the common academic practice of aggregating CSR behaviors into some overall umbrella construct such as CSR, corporate social performance (CSP), or business citizenship" (*Godfrey et al, p. 317*).

Obviously, there is no one definition of what *it takes* to be a responsible organization (corporation). The key is to have a rigorous process for *identifying* those responsibilities and fulfilling them (*Blyth* 2005, p. 30). This is why, in our approach we do not aim to build a special *construct* ("umbrella") of organizational social responsibilities, or to empirically discover the socially responsible *practices* of the organizations, but rather focus on the *importance* should be given to social *responsibility values* in managerial decision making.

3. Methodology

The students' involvement in the research is based upon the assumption that most of them will hold middle management position in the near future. The sample consists of 727 subjects, structured based upon: *field and level of study* (43.47% business/economics; 56.53 % engineering; 68.2 % Bachelor; 31.8 % Master); *gender* (49% female, 51% male), *age groups* (% 18-22 years; % 23-27 years; % \geq 28 years), *interest in management career* (59.6% yes), and *interest in founding a business venture* (65.2% yes). The Romanian sample consists of 427 students (52.7% male, 47.3% female), while the Slovenian sample has 300 subjects (60.3% male, 39.7% female). The surveys were carried out in either 2008 or the first half of 2009.

The data has been collected using a part of GLOBE III questionnaire (about CSR). The subjects were asked to show the *importance* each item should have in making critical decisions, using a seven points scale (1 = no importance; 2 = of minor importance; 3 = some importance, but limited; 4= moderate importance/the item should be frequently considered as important; 5 = high

importance/almost always the item should be considered important; 6= very high importance/the item should always be considered important; 7 = the highest importance/the item should be considered the most important one). Data processing has been performed in SPSS 17. The scale reliability shows a *Cronbach Alpha* coefficient of .827 if two items are deleted from the original 17 scale items (Pleasing, respecting, not offending a Devine being and, respectively, Effects on supernatural forces such as auspicious days, forecast by truth sayers). In testing the *statistical significance* of the differences between the different groups, the *independent samples test* was employed, using the *0.05 significance threshold* (equal variances assumed for *Levene's test*).

4. Findings

Table 1 displays the rank of social responsibility values in critical decisions in students' opinion. Similar rankings are seen for *customer satisfaction* (first place in both samples) and employees' professional growth and development (fifth place). The decision's effect on local community and national welfare, as well as on minority and female employees are considered to be least important in both samples. An important difference concerns the second important social responsibility value: while the Romanians consider it should be the decision's effect on profitability and product quality, the Slovenians see the organization's long term competitive ability as the second important in critical decisions.

Table 1 Importance of social responsibility values

| ROMANIA | | | SLOVENIA | | |
|-------------------------------------|-------------|-------------|-------------------------------------|-------------|-------------|
| <i>SR dimension</i> | <i>Mean</i> | <i>Rank</i> | <i>SR dimension</i> | <i>Mean</i> | <i>Rank</i> |
| Customer satisfaction | 6.18 | 1 | Customer satisfaction | 5.55 | 1 |
| Effect on firm profitability; | 5.76 | 2 | Effect on the long-term | 5.52 | 2 |
| Effect on product quality | 5.76 | 2 | competitive ability of the | | |
| | | | organization | | |
| Effect on sales volume | 5.59 | 3 | Effect on product quality | 5.47 | 3 |
| Employee rel. issues (employee | 5.58 | 4 | Effect on rel. with other org. with | 5.39 | 4 |
| well-being, safety, working | | | which you do serious business | | |
| conditions) | | | (suppliers, government | | |
| | | | agencies, partners in strategic | | |
| | | | alliances) | | |
| Employee professional growth | 5.41 | 5 | Employee professional growth | 5.28 | 5 |
| and development | | | and development | | |
| Effects on the environment | 5.37 | 6 | Employee rel. issues (employee | 5.26 | 6 |
| | | | well-being, safety, working | | |
| | | | conditions) | | |
| Cost control | 5.15 | 7 | Effects on the environment | 5.21 | 7 |
| Effect on the long-term | 5.10 | 8 | Ethnical considerations | 5.18 | 8 |
| competitive ability of the | | | | | |
| organization | | | | | |
| Effect on rel. with other org. with | 5.05 | 9 | Effect on firm profitability | 4.89 | 9 |
| which you do serious business | | | | | |
| (suppliers, government agencies, | | | | | |
| partners in strategic alliances) | | | | | |
| Ethnical considerations | 4.88 | 10 | Effect on sales volume | 4.85 | 10 |
| Welfare of the local community | 4.86 | 11 | Cost control | 4.82 | 11 |
| Contribution to the economic | 4.69 | 12 | Welfare of the local community | 4.69 | 12 |
| welfare of the nation | | | | | |
| Effect on minority employees; | 4.40 | 13 | Contribution to the economic | 4.57 | 13 |
| Effect on female employees | 4.40 | 13 | welfare of the nation | | |
| | | | Effect on female employees | 4.00 | 14 |
| | | | Effect on minority employees | 3.82 | 15 |

Table 2 depicts the significant differences in the mean scores given by the two groups ($p \leq .005$). *T*-test failed to reveal significant reliable differences between the two samples for the following social responsibility values: decision's effect on contribution to the economic welfare of the nation (sig 2-tailed = .243) and local community (sig 2-tailed = .105), as well as on employees' professional growth and development (sig 2-tailed = .152) and on environment (sig 2-tailed = .144). Thus, it could be assumed there is a trend toward convergence in the importance given to these social responsibility values. The biggest difference ($t = 9.117$) concerns the decisions' effect on firm profitability, the Romanians considering this value should be more important in critical decisions than the Slovenians (Romanians mean score = 5.76, Slovenians mean score = 4.89). The negative gaps are recorded for decision's effect on relationships with other organizations with which the company has serious business (-4.674), on long term competitive ability of the organization (- 4.672) and the ethical considerations (- 2.907; equal variances assumed). These gaps show that the Romanians give lower scores for the mentioned social responsibility values than the Slovenians.

Table 2 Importance of organizational social responsibility values: testing the significant differences between Romanian and Slovenian students

| <i>Social responsibility values</i> | Mean diff | <i>t</i> | Sig(2-tailed) |
|--|-----------|----------|---------------|
| Cost control | .33 | 3.631 | .000 |
| Customer satisfaction | .63 | 7.269 | .000 |
| Employee rel. issues (employee well-being, safety, working conditions) | .32 | 3.428 | .001 |
| Contribution to the economic welfare of the nation | .12 | 1.169 | .243 |
| Welfare of the local community | .17 | 1.624 | .105 |
| Employee professional growth and development | .13 | 1.435 | .152 |
| Effects on the environment | .16 | 1.462 | .144 |
| Ethical considerations | -.30 | -2.868* | .004 |
| Effect on the long-term competitive ability of the organization | -.42 | -4.672 | .000 |
| Effect on rel. with other org. with which you do serious business (suppliers, gov. ag., partners in strategic alliances) | -.34 | -4.674 | .000 |
| Effect on firm profitability | .87 | 9.117 | .000 |
| Effect on minority employees | .58 | 4.564 | .000 |
| Effect on female employees | .40 | 3.112 | .002 |
| Effect on product quality | .29 | 3.175 | .002 |
| Effect on sales volume | .74 | 7.638 | .000 |

95%confidence interval; Levene's test for equality of variances; * equal variances assumed

Table 3 displays the significant differences between *students in engineering* (Romanian sample: 261; Slovenian sample: 150).

Table 3 Importance of organizational social responsibility values: testing the significant differences between students in engineering

| <i>Social responsibility values</i> | Mean differ. | <i>t</i> | Sig (2-tailed) |
|---|--------------|----------|----------------|
| Cost control | .16 | 1.414* | .158 |
| Customer satisfaction | .60 | 5.230 | .000 |
| Employees relations issues | .27 | 2.243 | .026 |
| Contribution to the economic welfare of the nation | -.06 | -.377 | .707 |
| The welfare of the local community | 0 | .010 | .992 |
| Employee professional growth and development | .16 | 1.223 | .223 |
| Effects on the environment | .18 | 1.173 | .242 |
| Ethical considerations | -.17 | -1.217* | .224 |
| Effect on the long term competitive ability of the organization | -.50 | -4.178 | .000 |
| Effect on relationships with other organizations with which you do serious business | -.16 | -1.575* | .116 |
| Effect on firm profitability | .80 | 6.362 | .000 |
| Effect on of minority employees | .43 | 2.441 | .015 |
| Effect on female employees | .26 | 1.426 | .155 |
| Effects on product quality | .28 | 2.316 | .021 |
| Effects on sales volume | .58 | 4.559 | .000 |

95%confidence interval; Levene's test for equality of variances; * equal variance assumed

As seen, *t*-test failed to reveal significant reliable differences between the two samples for the following social responsibility values: cost control (sig 2-tailed = .158), contribution to the welfare of the nation (sig 2-tailed = .707) and local community (sig 2-tailed = .992), employees professional growth and development (sig 2-tailed = .223), decision's effect on environment (sig 2-tailed = .242), ethical considerations (sig 2-tailed = .224), decision effect on relationships with other organizations (sig 2-tailed = .116) and on female employees (sig 2-tailed = .155). The biggest positive difference ($t = 6.362$) concerns the decisions' effect on firm profitability, the Romanian students this value should be more important in critical decisions than the Slovenians (Romanians mean score = 5.82, Slovenian students mean score = 5.02). The only one negative gap (-4.178) concerns the decisions' effect on long time competitive ability of the organization, with the Slovenian group of engineering students considering this value as being more important than the Romanian group (Slovenian mean score = 5.59; Romanian mean score = 5.09).

Table 4 shows the significant differences between Romanian and Slovenian students attending *business studies* (Romanian sample: 166 Slovenian sample: 150).

Table 4 Importance of organizational social responsibility values: testing the significant differences between students in business

| <i>Social responsibility values</i> | Mean differ. | <i>t</i> | Sig. (2-tailed) |
|---|--------------|----------|-----------------|
| Cost control | .49 | 3.621 | .000 |
| Customer satisfaction | .66 | 4.921 | .000 |
| Employees relations issues | .39 | 2.836 | .005 |
| Contribution to the economic welfare of the nation | .39 | 2.651 | .008 |
| The welfare of the local community | .39 | 2.632 | .009 |
| Employee professional growth and development | .12 | .892 | .373 |
| Effects on the environment | .13 | .893 | .373 |
| Ethical considerations | -.40 | -2.671 | .008 |
| Effect on the long term competitive ability of the organization | -.32 | -2.401 | .017 |
| Effect on relationships with other organizations with which you do serious business | -.49 | -4.892* | .000 |
| Effect on firm profitability | .91 | 6.288 | .000 |
| Effect on of minority employees | .84 | 4.632 | .000 |
| Effect on female employees | .65 | 3.528 | .001 |
| Effects on product quality | .27 | 2.018 | .045 |
| Effects on sales volume | .84 | 5.907 | .000 |

95% confidence interval; Levene's test for equality of variances; * equal variances assumed

T-test failed to reveal significant reliable differences between the two samples for the following social responsibility values: employees' professional growth and development (sig 2-tailed = .373) and decision's effect on environment (sig 2-tailed = .373). The biggest positive difference ($t = 6.288$) concerns the decisions' effect on firm profitability, Romanians considering this value should be more important in critical decisions than the Slovenians (Romanians mean score = 5.66, Slovenians mean score = 4.75). The smallest positive gap (favoring the Romanian group) is recorded for decisions' effect on product quality (2018), with 5.70 mean score for Romanians and 5.43 for Slovenians business students' group. Negative gaps are recorded for the following dimensions: decisions' effect on relationships with important partners of the organization (-4.887- the highest gap), ethical considerations (-2.671) and decision's effect on long term competitive ability of the organization (-2.401). For these dimensions, the Slovenian business students gave higher importance than their Romanian counterpart (Slovenians mean scores for mentioned dimensions = 5.61; 5.35 and, respectively, 5.44; the Romanians mean score = 5.12; 4.95 and 5.12 respectively).

5. Conclusions

Our findings show that the new generation of managers share the (average) opinion that decision's effect on *customer satisfaction* comes first, while on local and national welfare, on female and minority employees the least. These might be taken as signs of convergence in the future managers' attitude in decisional process. The most significant differences between Romanians and Slovenians (at all levels of comparison) is recorded for decision's effect on

profitability, long term competitive ability of the organization and on serious business partners. Romanians tend to be interested more in money related issues and short term effects of their decisions, while Slovenians have a more strategic vision. Perhaps these significant differences have *cultural* explanations (for instance, future orientation, in group collectivism, institutional collectivism, human orientation, gender equality etc.), thus, it seems rational to direct our future research towards such topics.

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THE PREMISES OF STRATEGIC MARKETING PLANNING IMPLEMENTATION WITHIN SMALL AND MEDIUM SIZED ENTERPRISES

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The main purpose of the present paper is to identify the framework and the necessary conditions for the small and medium sized enterprises (SMEs) to be able to adopt the strategic marketing planning. Also, the paper aims to underline the importance of the strategic marketing planning and the manner in which the SMEs can adopt, implement and operationalize the strategic marketing planning instruments, whose correct understanding and usage ensure the capacity to generate competitive advantage, the key element both from the perspective of the fierce competition and the perspective of the future development of the SMEs. Within SMEs the implementation of marketing becomes an evident requirement, mostly due to the relationship that these have with the market, thus, leading towards market orientation of the activities, a new approach developed by the marketing vision on managing the activities from these types of organizations. Regarded upon, from the marketing perspective, the activities from the SMEs, especially the marketing activities, cannot take place randomly. Resource allocation, a characteristic of these types of organizations, and the objectives with regards to superior customer needs satisfaction and economic efficiency maximization, claim thorough planning and deployment of the activities in a sequence that represents the implementation of a strategy previously assumed. Within this framework, the strategic marketing planning appears as a complex process employing all scientific instruments that comprise segmentation, positioning and marketing mix. Utilizing the strategic marketing planning within SMEs depends to further extend on marketing integration; process directly related with a series of factors such as the nature of the market, development stage, product type, management quality and the influences of the marketing department of the SME. The implications onto the marketing activities from SMEs are reflected upon each strategic marketing planning instrument, where we can find, under correct understanding and application, objectives and market and penetration strategies as product, price, distribution and promotion strategies.

Keywords: marketing, SMEs, segmentation, positioning, marketing mix.

JEL Classification: M31

Introduction

Small and medium sized enterprises (SMEs), the main factor of development of the present economy, represent, for the modern marketing, a challenge that needs to be addressed by adapting all scientific instruments to the features of these types of organizations. The methods, techniques and marketing instruments dynamically connect the SMEs to the *market*, characterized within the last decades by multiple changes, evolutions that have as premises within marketing development the social-economical dynamism (Florescu 1992: 12). The development of SMEs depends more and more on their capacity to place the general, strategic and tactic planning

(Olteanu 2007: 45) in the center of the activities, position that can ensure the fulfilment of both marketing and general objectives of these types of organizations. The SMEs have a special role in the present economy. They represent a permanent source of innovation, creation of new working places, which in turn create the framework for the development of entrepreneurship abilities. The marketing activities must take into consideration all these elements as being the main features of SMEs, both from the perspective of market relations that can be found in the marketing environment and from the perspective of planning the marketing activities.

As a requisite in the strategic marketing planning the features of the SMEs must be taken into consideration and valorized to an extent that permits the economic efficiency maximization.

The importance of strategic marketing planning within SMEs

Strategic marketing planning, like many of the marketing concepts with which we operate today, have undergone numerous changes, thus leading to an enrichment of its content due to the social and economic evolutions. All the changes led to the repositioning of marketing within SMEs and to the changement in status of the marketing activities, which became marketing function (Olteanu 2007: 113). The marketing function ensures within SMEs (Walsh and Lipinski 2009: 569) the success through the determination and satisfaction of target clients' needs, wants and aspirations, in utilizing the scientific marketing instruments, and represents the base for the accomplishment of the marketing objectives.

Taking all these elements into consideration it is only natural for the strategic marketing planning to be part of a more complex process having as base component strategic planning, that defines the place of marketing activities within the structure and different strategic level of the organization (Pop and Dumitru 2001: 203). In understanding the marketing role within SMEs the managers must also take into consideration the strategic planning.

Strategic marketing planning must be regarded as a complex process, whose dimension appears within the vertical succession as having as components strategic planning oriented towards the market, strategic planning of the activities and strategic marketing planning (Olteanu 2007: 155). Within the process of strategic marketing planning it is necessary that the segmentation, positioning, marketing mix elaboration and the methods and techniques used to be properly adapted to the specific limitations of the SMEs.

From the large variety of limitations of the SMEs in connection with the marketing characteristics can be mentioned (Gilmore, Carson and Grant 2001: 6):

- limited resources – such as finance, time, marketing knowledge;
- lack of specialist expertise – owners-manager tend to be generalists rather than specialists;
- limited impact in the marketplace.

It is also important to mention that there is a direct connection between the influence factors onto SMEs and marketing characteristics (Figure 1). According the marketing experts (O'Dwyer, Gilmore and Carson 2009: 48) the influence factors act unitary and simultaneously so that they reflect the process character of the full components assembly, which mirorr the importance of adapting the marketing activities and of the strategic marketing planning instruments.

Among the factors that influence SMEs competitiveness can be included, as having a high impact, innovation that must be regarded from the perspective of strategic marketing planning as central element in segmentation, positioning and mix marketing dimensioning.

Thus the main objectives of all marketing activities become the increase of innovation rate, which can be achieved by introducing new products, goods and services or/and technologies onto the market, and superior demand satisfaction both from a quantitative but also from a quantitative point of view.

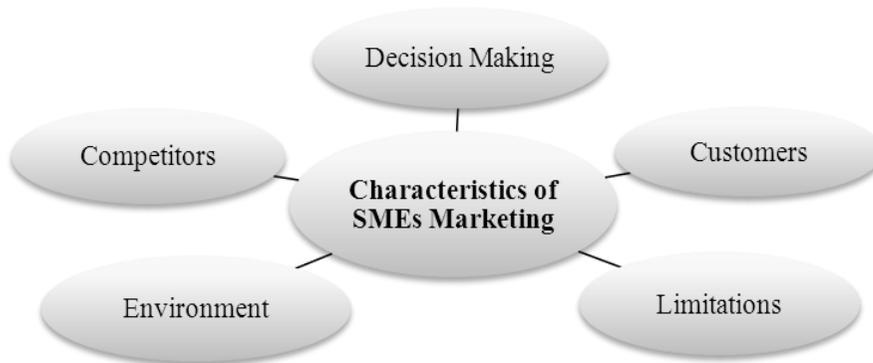


Figure 1. Characteristics of SMEs marketing

Source: Adapted from O’Dwyer, Michele, Gilmore, Audrey and Carson, David. “Innovative marketing in SMEs”, *European Journal of Marketing* 43(2009): 48

Strategic marketing planning – instruments to be used within SMEs

The strategic marketing planning process that operates within SMEs has as starting point strategic planning itself, which can be found within entrepreneurial organization (Mintzberg 2008: 377). According to this valuable classification this type of organization has a simple and flexible structure where the owner/manager coordinates and controls directly the activity. There can be found important differences from the point of view of strategic structure and decisional process between SMEs and large enterprises (LSEs) mostly related to a different point of view regarding planning, where the former are characterized by an emergent strategy (Hollensen 2007: 10), and direct and personal implication of the owner/manager, dominating, thus, the decisional process. The strategic marketing planning instruments must be regarded as part of a complex process of strategic planning of the organization, where at a superior level, can be found four planning activities, included in the three processes of the strategic cycle (planning, implementation, control). These activities are (Kotler and Keller 2008: 41): defining the corporate mission; establishing strategic business units; assigning resources to each SBU; assessing growth opportunities. Strategic marketing planning integrates (McDonald and Wilson 2011: 50) the objectives of the company and reflects the objectives specific to each functional level (Figure 2).



Figure 2. Hierarchy of planning within SMEs

Source: Adapted from McDonald, Malcom and Wilson, Hugh. *Marketing plans: how to prepare them, how to use them*, 7th Edition, Chichester: John Wiley and Sons, 2011: 50

Segmentation as an instrument of strategic marketing planning has an increased importance within SMEs because of the limited resources, thus, ensuring a better financial efficiency and a better understanding of the market, whose division leads to the identification of different groups of buyers with different needs, characteristics and behaviors (Kotler and Armstrong 2008: 63), which in turn create the premises of a correct employment of positioning and marketing mix. Furthermore, it becomes evident that different groups of buyers need different policies and an adaptation from the point of view of product, price, and distribution and promotion mode.

The complex character of segmentation becomes evident in the following stages (Etzel, Waker and Stanton 2007: 144):

- identify the current and potential wants that exist within a market;
- identify characteristics that distinguish among the segments;
- determine the potential of the segments and how well they are being satisfied.

The correct understanding and employment of segmentation establishes the premises of a correct application of the analysis methods and techniques that are used within the strategic marketing planning process. Also, relevant for the identification of the structure of the market is the utilization of the concept of market orientation.

We can mention that we find segmentation from a different perspective as an instrument, which helps in the identification of market structure, and is made operational in the framework of the concept of market orientation, where the variables of segmentation are mostly quantitative (age, income). The new approach for segmentation as marketing instrument employs it both in clients/consumers segment identification and supplier segmentation. Thus, the process implies the division of suppliers in distinct groups with different needs, characteristics and behaviors, that claim different approaches for the relations established between organizations (Day, Magnan and Moeller 2010: 626).

In a logical sequence positioning, as instrument of strategic marketing planning, can only follow segmentation and identification of the segment or segments onto which the company will operate. In the process of identification of the position that the company intends to occupy on these segments must be underlined that positioning refers to the position that the organization or its product has in the mind of the consumer (Kotler and Armstrong 2008: 64), the marketers having the role to differentiate the offer of the organization from that of the concurrence, creating the motivation of acquiring the products and accomplishing another objective at this level to have "the most advantageous position" (Trout 2005: 24).

In the complex process of positioning, the effort to create a distinct image of the organization and a differentiation of the offer in the mind of different customer categories whose needs, wants, demands the organization wants to satisfy, must be accompanied by the identification of the points-of-difference and points-of-parity (Kotler and Keller 2008: 456).

Taking into consideration the previous aspects it can be identified the idea that the purpose of positioning is not the creation of a new and different product, but the modification of the existing relationships with the consumers with relevant influences onto the product, price, distribution and promotion, which reflects the remarkable value of this instrument of strategic marketing planning.

The main objective of the whole strategic marketing planning process and the main reason to concentrate on target segments of clients is to gain the competitive advantage (Perreault and McCarthy 2000: 40), by developing a marketing mix that leads to the superior satisfaction of customers needs in the context of economic efficiency maximization, fulfilling, thus, the two objective functions of marketing.

Furthermore, in the marketing literature are underlined contradictory points of view with regards to strategic marketing and, especially, with regards to strategic marketing planning instruments, which place, for example, mix development in different situations at strategic or tactic level (Varadarajan 2010: 121).

In our opinion the frequent confusions arisen are not necessary the result of an incorrect understanding of the concepts of strategy or marketing tactics, but the result of an incorrect application of the marketing instruments reported to different levels of management.

In conclusion, the strategic marketing planning integrates the processes employed at functional level of the organization, processes that appear in sequence generating objectives and strategies (Figure 3) associated with each employed instrument (Olteanu 2007: 102), whose ranking is not aleatory and can be presented as follows: segmentation, positioning, marketing mix elaboration.

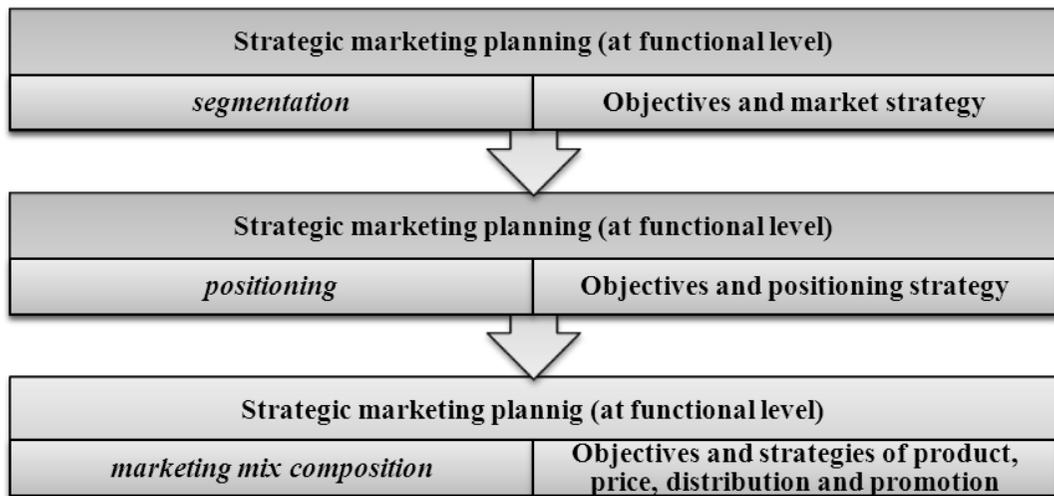


Figure 3. The phases of strategic planning at functional level within SMEs

Source: Adapted from Olteanu, Valerică. *Management- Marketing*, București: Editura Ecomar, 2007: 102

With regards to strategic marketing planning and the specific scientific instruments we can say that a series of experts have appealed, as a result of quantitative and qualitative marketing audit undergone in different SMEs, the lack of strategic planning at SMEs level (Parrott, Roomi and Holliman 2010: 196).

Conclusions

The way in which the strategic marketing planning is employed within SMEs depends, to great extent, on the marketing integration, process directly related to a series of factors such as the nature of the market, growth stage, type of product, good or/and service, quality of management (Reijonen 2010: 279), and, also, the influence of the marketing department from the organization (Verhoef and Leeflang 2009: 26).

As a conclusion, we can mention that at the level of each strategic marketing planning instrument can be found, having as requisite a correct understanding and employment, market, positioning, product, price and distribution objectives and strategies that ensure the market orientation, which, together with entrepreneurial orientation (Baker and Sinkula 2009: 443) influence the success of the SMEs and their long term development.

Regarded from a perspective that cannot ignore the future, but plan it, the SMEs are the seeds of the future large organizations.

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EDUCATIONAL INOVATION AND CONSUMER BEHAVIOUR. A STUDY OF STUDENTS' PERCEPTIONS ON THE USE OF E-LEARNING IN CLASS.

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In European and international context of a knowledge-based society, education becomes a strategic element of sustainable economic growth. Developing human capital and adapt its training to the present requirements of the labor market requires major investments both in the formal education system and in individual study. In his position as a promoter of change, the educational environment must actively respond to external challenges, demonstrating a strong flexibility and openness to new.

Implementing the concepts and marketing strategies in the educational environment have gradually led to the development of educational services and improvement of their quality. Focusing on student, the mainstream of marketing, brings in front his requirements and expectations, and the development of the educational strategies aim to satisfy his information and intellectual development needs. School success is reflected in its students achievement as a successful commercial product is observed by analyzing sales figures recorded.

Frequent changes occurring in society as a result of accelerated evolution of technique and technology have made their mark on education. The assimilation of innovations in the traditional educational processes imposed and behavioral changes and adaptations to all education stakeholders. Thus knowing the consumer behavior, the influencing factors and the psychological processes decision making, becomes essential in creating an effective education system.

The emergence of e-learning platforms as a result of the growing importance of lifelong learning and integrating them in the traditional educational environment was a crucial moment in the evolution of educational practices. Focusing on computer, Internet and intranets, e-learning brings education a surplus of interactivity, interaction, responsibility and collaborative learning. Considered as innovative solutions, initially, complementary to the classical teaching techniques, e-learning technologies gradually penetrate the traditional classroom learning environment.

Introducing innovation in the educational environment causes changes in the behavior of all actors confronted with it. Hence, knowing the perceptions of the main consumers of knowledge is a key element in the implementation process of innovation and assessing its effectiveness. This paper aims to develop major behavioral theories on e-learning environments, seeking to establish and explain the attitude of students, the main consumers of educational services, in terms of their perceptions about the introduction and use of these technologies in the classroom.

Considering the results of the presented study may be the starting point in developing a complex behavioral pattern specific of the educational market by integrating behavioral aspects of all actors involved in providing education and confronting them with the main factors of influence.

KEY WORDS: *education, consumer behavior, innovation, e-learning*

JEL CLASSIFICATION: *M31, I25*

INTRODUCTION

In the context of contemporary society, education becomes an activity centered on the development of intellectual capacities of the individual, and highly influenced throughout the life by his desire for knowledge and by his practical experiences. Educational process is seen as a continuous and evolving one, depending on the age and level of preparedness of the individual.

According to the report of the European Commission, European Union countries were to develop by the end of 2010 the most competitive and dynamic knowledge based society (European Commission, 2004: 5). This directions are long –term maintained. Knowledge-based economy becomes a reality of contemporary society and education its main mobile.

New knowledge-based economy considers human capital as the main factor of economic progress and social event. Therefore contemporary society is becoming increasingly linked to the quality of the educational system, the primary creator and distributor of knowledge. The complex process of knowledge consists of three phases: transfer, assimilation and interpretation, and dissemination of information. All these are based on the individual's intellectual capacity, able to provide added value to the information received through an internal process of interpretation of the meaning of objects and events. In this conditions the role of education is not just the mere transmission of information but also providing the necessary specific dissemination through the socialization process. Through education the individual can provide himself with superior adaptation to the environment in order to enhance his welfare and that of the whole community.

The social transformations caused by the emergence, development and direction of the new knowledge-based economy have led to multiple changes in the educational system. Although the general structure of education has remained constant, the attempt to identify the best learning and evaluation option lead to a progressive change in the content of the mandatory superior education system and especially in the compulsory education. Most of them concern the introduction of IT technology in the educational environment as the main agent of transmission, dissemination and evaluation of information and their level of assimilation.

Lisbon Strategy reaffirms the need to integrate technology into the educational environment in order to promote innovation. Information and communications technology is considered “the backbone of the knowledge economy, the main engine of economic growth” and social development. (European Commission, 2005: 20-23).

The European quality standards and the need to adapt to specific requirements of the labor market have forced both the resizing and reshaping of the educational processes in terms of curriculum and teaching techniques used in formal education and also at the level of the continuing education. Now the boundaries of this two types of educational activities are undetectable, thus ensuring the continuity of the formal education through informal education. The specific forms of the educational products change from an unidirectional process to a bidirectional one. The role of student’s feedback grows, emphasizing the importance of interactive, proactive and anticipatory learning. Integrating e-learning technologies in the formal education and their widespread use in continuing education is the solution to the requirements of a modern and effective student - centered educational system.

LITERATURE REVIEW

XXI century education involves the identification and proliferation of three essential elements: professionalism and quality in lifelong learning, creating and developing knowledge and its dissemination. At the base of these three elements is situated innovation, a major importance being achieved by the IT innovation (Weert, 2006: 217). The need to develop collaborative learning contributed to the emergence and widespread use of virtual environments as a social

communication support and educational interactive learning. E-learning becomes an important driver of educational change and of its adaptation to the requirements of European integration. Ever since the first e-learning technologies, many researchers have attempted to define the typology of these educational resources based on specific tools and processes which underpin their functionality in order to identify the degree of efficiency in the acts of teaching and learning. Derek Stockley defines e-learning as "the delivery of instruction or training program through electronic means. E-learning involves the use of computer or electronic media to ensure the transfer of educational material" (Stockley, 2003: 32). The definition identifies the main characteristic of e-learning environment (use of computer or electronic media), but only indicates the transfer function of the systems presented, neglecting their contribution in the reception, detention and interpretation of materials delivered and interactive feedback results.

Considering the main objective of the e-learning platforms – to facilitate the transfer of information and their assimilation with maximum efficiency, such systems have been designed and developed based on the mental processes taking place in the minds of the learner.

Sigal, M. (Sigal, 2002: 31) explains the typology of e-learning systems starting from the four processes of knowledge identified by Piaget: assimilation, accommodation, balance and imbalance. Knowledge creation process involves interpreting the information received from others and dissemination of new information (feed-back) to the external environment. Through learning, individuals develop their memory and acquire the capacity to analyze information received from the environment and to produce knowledge.

"Today we are facing a paradigm shift in the development of the learning support systems: in recent years, their development was mainly focused on technology and now it focuses on applying specific concepts of human behavior in using new learning, communication and business technologies. Recent neuroscience research highlights together with the cognitive elements, the predominant role of emotions, intentions and social factors in learning. " (op.cit. Trausan - Matu, Cristea and Udrea, 2005 : 22). This requires a deep knowledge of students' perceptions on the use of such innovative technologies in the classroom, and so explaining student's attitude (acceptance or rejection).

The main behavioral approaches concerning e-learning placed the student in the center of its interests. Integrating e-learning platforms in daily life especially in education cause major changes in how people learn, "concentrating on the needs of students rather than on those of teachers or educational institutions" (Cross, op. Cit. Aldhafeeri, 2006: 711). Students are parts of a whole – the e-learning community, therefore their involvement in the evolution of the entire community is essential to its existence.

Given the development of e-learning based on a pedagogical model that assumes students' responsibility for their study, Porras - Hernandez (Porras - Hernandez, H., 2000: 385-392) speaks about the theory of self - regulation in the study of students, considering this to be a very important feature in increasing academic achievement through e-learning environments. Motivation and individual self – control are also relevant factors in ensuring a coherent community.

"In the area of e-learning, students are considered consumers who should receive quality services" (Rossett, op. Cit. Aldhafeeri, 2006: 711). Providing high quality educational products by adapting them to specific consumer requirements is one of the objectives of the educational e-learning systems.

Studies carried out in order to identify students' perceptions on the use of e-learning highlighted the advantages and disadvantages of these environments. Patricia Borstorff and Keith Lowe (Borstoff, Lowe, 2007:19) reflects through their research the main benefits perceived by students: flexibility and the convenience offered by these technologies during individual study and also in

formal education. Most of those questioned also identified as the main disadvantage of e-learning environments the limited communication with the teacher.

Based on the study of perceptions developed by Lowe and Borstoff but taking into account all the other research on consumer behavior within the e-learning communities and the premise of student – centered activities, this paper aims to identify students' perceptions on the use of the e-learning platforms in classroom.

RESEARCH METHODOLOGY

The present research aims to identify the perceptions of students on the use of e-learning platforms and on the integration of e-learning in Romanian education system. To achieve this goal were used specific tools and techniques of qualitative research. Through in-depth interviews was identified the general perception of secondary school pupils on e-learning and also the causes that led to it. The semi-guided interviews were made based on a conversation guide shaped around three main objectives: to determine students' perceptions on e-learning platforms, determining the perception of quality in educational environment and to identify the main advantages and disadvantages of e-learning environments. The sample includes a total of 24 people, high school students, with an equal gender distribution. 60% of respondents go to an urban area school and are aged between 16 and 18. Group selection was not guided by the use of these technologies in schools because it aims to identify general perceptions of e-learning environments and not that which refer to a specific use.

RESULTS

The research reveals an overall positive perception of the students interviewed, regardless the use or the environment in which they entered in contact with e-learning. Most of those interviewed (80%) reported personal use of e-learning platforms during individual study and denied the use of innovative technologies within the school to which they belong.

Asked to define an e-learning platform in three words, many respondents were hesitant and late in providing the answer. Mostly the e-learning platform was defined by terms such as "Internet", "Programs", "projections", "interaction", "PC", "image". Very often the term used is "team" which outlines the students perceived contribution of e-learning in creating a collaborative learning environment. The terms used by the subjects of the study are correct, most components or features delimiting basic e-learning platforms.

In the case of the assisted associations students have designated e-learning platforms by linking their characteristics with the attributes of an animal. Over 70% of students have associated e-learning systems with a cheetah, based on speed as the main attribute. 15% of the students participating in the study believe that an e-learning platform is "friendly and nice" like a Koala Bear, and only 2% associate it with a repulsive rat. Even if the subjects have never used an e-learning platform, they associate positive characteristics with it.

Regarding the advantages and disadvantages of e-learning, students have identified as main advantages interactivity, the evaluation methods used and the mix of images and audio elements and video presentations within the e-learning lessons. Most of the respondents believe that e-learning classes are more interesting and helps them better retain the information transmitted by the teacher. The agreement of students is expressed also on the question of obtaining superior results by using teaching technics based on multimedia technologies. Although consider the lessons taught in e-learning laboratories to be more interesting than traditional lectures, students participated in the study do not consider that their level of attention would be increased.

CONCLUSIONS

In Romania, although the formal education area remains mostly public, the growing importance of lifelong learning based on the use of online environments, and also the actual pressure of the labor market changes, enabled the penetration of computer-assisted teaching systems in classrooms.

The requirements of the new economy and the state of the Romanian education require increasing investments in education in order to align the local education system to European standards and global education. To function effectively, educational institutions, regardless their level, must know and consistently measure the quality of educational services and products provided by comparing them with their students' requirements.

Their quality is the main competitive advantage it may hold the existing competitive educational market. Providing quality service should start from the knowledge of demand, consumer needs and expectations, as they participate in development of a product or service and therefore can decisively influence the final performance and quality.

Identifying students perceptions on the use of e-learning platforms in the classroom allows shaping a current image on the quality of the education environment and the guidance that it should follow to meet the requirements of the main consumers. The recognition and appreciation by the students of the main advantages of e-learning platforms and their contribution in improving the education system are premises for continuing innovative actions within Romanian education sector. The receptivity manifested among children about the use of innovative technology is based on two underlying principles: interactivity and collaboration in teaching – learning processes. Developing an e-learning community and its integration not only in continuing education but also in compulsory education facilitate the adaptation of the Romanian education system at the European and international standards in quality and efficiency.

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WIRELESS ADVERTISING: A STUDY OF MOBILE PHONE USERS

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Topic: Using a qualitative methodology, this study attempts to provide a general framework of the functions of mobile communication, and to identify the specific preferences of mobile phone users regarding the commercial messages received on their personal devices.

Research objectives: (1) To identify the specific characteristics of mobile communication as perceived by mobile users; (2) to define and analyze the functions of wireless communication as perceived by mobile phone users; and (3) to investigate users' preference regarding the content of commercial wireless communication.

Previous research: Bauer et al. (2002) identified time, location, information and personalization as relevant acceptance factors for mobile advertising. Barwise and Strong (2002) developed a conceptual model, arguing that social norms, user's motives, mode, time, location and personal characteristics will affect the processing of mobile information by consumers. Tsang et al. (2004) evidenced the influence of entertainment, informativeness and irritation, while Bauer et al. (2005) argued that consumer attitudes are influenced by perceived information, entertainment, and social utility. In a similar study, Xu and Gutierrez (2006) tested the effect of entertainment, irritation, informativeness, credibility and personalization on the attitudes of Chinese consumers.

Research methodology: First, a series of academic and practical articles and reports have been accessed in order to assess the existing knowledge on this topic. Second, five focus groups have been organized with six mobile phone users, aged between 20 and 40 years old. Each focus group comprised an equal number of male and female participants. The focus groups lasted between 45 and 60 minutes and addressed three main issues: the specific characteristics of the mobile phones as a commercial communication media, the functions of mobile phone communication, and the specific preferences of mobile phones users regarding the content of commercial messages.

Findings: The participants demonstrated an active attitude regarding mobile advertising, which they think it has the potential to revolutionize the practice of commercial communication, by focusing more on consumer's personal needs and circumstances.

Implications: This transformation cannot be realized without increasing the interactive control of mobile phone users' over the functionality and content advertising messages. Although the required technology already exists, it seems necessary to create new applications that can combine the advantages of customer-, product- and location- centered communication.

Original contribution: Previous studies often used an analytical approach, highlighting specific variables regarding consumer perception or technology adoption. Using a qualitative methodology, this study provides a general framework of the functions of mobile communication, and identifies the specific preferences of mobile phone users regarding the commercial messages received on their personal devices.

Keywords: wireless advertising, mobile phones, functionality, content, users' opinions

Cod JEL: M37

I. Introduction

Wireless communication evolves constantly, determined by the introduction of new technologies and the apparition of new customer demands (Park et al. 2008). However, despite the potential of wireless advertising, marketers have quickly understood that the specific characteristics of mobile

devices and communication require an adaptation of the style, type and content of advertising messages. For example, considering the personal nature of the mobile phone, commercial messages should be tailored in accordance to customer needs and preferences (Haghirian et al. 2005).

However, in comparison with internet advertising, mobile advertising is still insufficiently understood. Existing studies are often using an analytical approach, which highlights only specific variables regarding consumer perception or technology adoption. Using a qualitative methodology, this study attempts to provide a general framework of the functions of mobile communication, and to identify the specific preferences of mobile phone users regarding the commercial messages received on their personal devices.

II. Literature review

Mobile advertising was defined as “advertising or marketing messages delivered to portable devices, either via synchronized download or wirelessly over the air” (Laszlo 2009: 29). The main advertising methods/formats that were described in the literature were the SMS and the MMS (Park et al. 2008; Samanta et al. 2009), although the development of mobile internet creates a new possibility of mobile interactive advertising (Laszlo 2009).

The potential of mobile advertising has attracted many researchers who attempted to identify its success or adoption factors (Park et al. 2008). Bauer et al. (2002) identified time, location, information and personalization as relevant acceptance factors for mobile advertising. Barwise and Strong (2002) developed a conceptual model based on the information processing theory, arguing that social norms, user’s motives, mode, time, location and personal characteristics will affect the processing of mobile information by consumers. Studying the consumer attitudes toward wireless advertising, Tsang et al. (2004) evidenced the influence of entertainment, informativeness and irritation, while Bauer et al. (2005) argued that consumer attitudes are influenced by perceived information, entertainment, and social utility. In a similar study, Xu and Gutierrez (2006) tested the effect of entertainment, irritation, informativeness, credibility and personalization on the attitudes of Chinese consumers.

A qualitative study by Peters et al. (2007) identified several categories of motives that determine customers’ adoption of wireless advertising: process motives, social needs and content needs. On the other hand, Jun and Lee (2007) tested seven factors that may influence consumers’ attitudes: mobility/convenience, fashion, information, entertainment/relaxation, functional service, multimedia service and sociality, but only the impact of convenience and multimedia service were statistically significant. Using a quantitative approach, Ma et al. (2009) attempted to identify the factors determining consumers’ acceptance of mobile advertising. Their findings indicate that perceived message credibility has an important impact on the adoption intention, and the consumers’ ability to adopt high technology, inertia, and their motivation also affects their personal attitudes. Recently, Vatanparast and Butt (2010) investigated the factors affecting the use of mobile advertising, considering four categories of factors: (a) consumer factors: privacy, purpose and performance, (b) message factors: content, credibility and customization, (c) device factors: interface, interactivity and intelligence, and (d) media factor: price, process and policy.

Despite the importance of the existing research, it is easy to notice the existing contradictions between various research findings. This limitation might be due to the specific definition, conceptualization and measurement of various variables, or by a variation in the empirical setting. The identification and statistical validation of quantitative variables is certainly important, but quantitative studies cannot fully describe the personal attitudes and opinions of specific consumers, and cannot take into account their specific circumstances. In order to further

develop the understanding concerning the perceptions and attitudes of users towards commercial wireless communication, this study applied a qualitative approach.

III. Research methodology

In order to investigate mobile phone users' preferences regarding commercial wireless communication, the following research objectives have been defined:

1. To identify the specific characteristics of mobile communication as perceived by mobile users.
2. To define and analyze the functions of wireless communication as perceived by mobile phone users.
3. To investigate users' preference regarding the content of commercial wireless communication.

In the first stage of the research process, a series of academic and practical articles and reports have been accessed in order to assess the existing knowledge on the topic of commercial wireless communication and to develop a theoretical research framework. Then, in the second stage, five focus groups have been organized with six mobile phone users, aged between 20 and 40 years old. Each focus group comprised an equal number of male and female participants. The focus groups lasted between 45 and 60 minutes and the moderated discussion addressed three main issues: the specific characteristics of the mobile phones as a commercial communication media, the functions of mobile phone communication, and the specific preferences of mobile phones users regarding the content of commercial messages.

The discussions have been recorded, and then transcribed. The collected texts have been evaluated using qualitative thematic analysis based on indentifying and interpreting the convergent themes expressed by the participants in the focus group.

IV. Presentation and discussion of findings

The specific characteristic of wireless communication and advertising

The participants to the focus groups outlined that the most striking features of mobile communication, are, in order, mobility, personalization and immediacy.

"Mobility is the essence of mobile communication, and the most important relative advantage in comparison with traditional communication media" [S.V., 37 years, male]. In addition, mobility is pushed at extremes with mobile phones and other wireless devices, since the user is carrying the communication devices with him/her, and can be contacted anywhere and anytime. When mobility is reduced or eliminated, either because the user has lost/forgot the mobile phone, or because of limited network coverage, the user feels isolated and unsatisfied: "If my mobile phone is not working and I need to call my husband it can be very dramatic, since now it is much more difficult to find public fixed phones. Everybody has mobile phones and expects you to use them as well" [A.T., 34 years, female].

Personalization was the second most important feature of mobile communication identified by respondents: "A mobile phone is a very personal tool. When I call the number of my mother I do not expect anybody else to answer the phone. Sometimes it is my father who picks up the call, and then for several seconds I feel lost – did I call the wrong number?" [F.B., 22 years, female].

On the other hand, the expanded functionalities of mobile phone have increased their personalized utility, sometimes creating a sense of dependency: "I do not know what I would do if I would loose again my mobile phone. It happened to me once, a year ago, and for two weeks I felt completely helpless" [A.L., 26 years, male].

Immediacy is related with the facility to exchange information over mobile phones: "When using the mobile phone, the communication is like real-time, and you can solve immediately any existing problem" [A.J., 21 years, female]. Immediacy can also be perceived sometimes as a burden by some mobile phone users: "It happens to me quite often to receive a phone call and to

think ‘oh my god, here we go again, I wish they would live me alone for a while’. You can say that I am quite a private person and too many unexpected intrusions in my personal life irritate me” [S.B., 28 years, female].

As it can be clearly seen, there is a clear connection between the functional and social characteristics of mobile phones and the specificity of mobile communication, both in a positive and in a negative sense. Another interesting element is the complexity of the expressed views – mobile communication is not idealized, the participants outlining both its positive and negative aspects. The negative aspects appear especially when the user lacks control over the flow and the frequency of communication: “Although I consider the mobile phone as a highly useful device, I do not like to be harassed by anyone who wants to call me. I take great care to give my mobile phone number only to close friends, and I always emphasize that I expect them to exercise restraint in using it”. [M.G., 37 years, male]. This tendency towards increased control that was evidenced by some participants indicates an important limitation in the way in which the mobile marketing campaigns should be designed and implemented. The complexity of the situation is increased by the fact that the personal threshold of tolerability (or irritability) is different from one person to another, depending on their personal history and personality.

The main functions of mobile communication

The respondents have identified four main functions of mobile communication: information, entertainment, advertising, and personal communication. In two of the focus groups, the personal communication function was considered as the main feature, which, in some respect, incorporates the three other ‘secondary’ functions. However, in the other three groups the participants reached the conclusion that the concept of personal communication is too vague and too general to represent a function, indicating in priority information, entertainment and advertising: “These three functions are really the core of mobile communication. Personal communication can be considered as the general method of communication, because the mobile phone is so personal... , so you can say that any mobile communication in which you participate represents a form of personal communication” [D.J., 25 years, male].

Many participants indicated however, that at the level of mobile messages, it is often difficult to identify only one of these three classical communication functions, the tendency being to create communication with a hybrid functionality (Alcatel 2002; Apostolou 2007; Westerink et al. 2000): advertainment (advertising + entertainment), infotainment (information + entertainment), and infortising (information + advertising). The main reason for the use of these hybrid functionalities is their increased efficiency at communication level: “Pure advertising is often not attractive enough on the mobile phone, because the user is immersed in other various activities, so to increase motivation it has to include a high dose of entertainment” [M.B., 34 years, male].

Among these three hybrid forms, infortising was not yet defined by the academic or practical literature. However, the participants outlined the necessity of the concept, and their preference for infortising messages in commercial mobile communication: “Infortising represents an advert that is manly informing you about a specific product or service instead of attempting to persuade you using humour, sex or subliminal images. Personally I would like to have more of these, especially on the mobile phone, since I do not have the time to watch an advert which does not tell me something clear about the product, its benefits or its location.” [L.D., 35 years, female].

Ultimately the main problem in using these communication functions for marketing is the lack of interactivity and consumer control: “They [the marketers] are still using the old advertising techniques, forgetting the characteristics of the new technology. A message is designed and sent to several thousand people without attempting any real targeting or interaction ... Because of this the success is so low: you receive a message that you don’t want, about the wrong product, at the

wrong moment ... They should use some filters defined by consumers; for example, sometimes I'm in the mood to watch advertainment application, like playing and advergaming or something, yet other times I'm more in the infotainment mood, looking for factual, precise information." [B.S., 24 years, male].

Other respondents specifically addressed the problem of permission marketing: "Asking for your permission to send you messages just does not work ..., not in the way they use it. You agree for a type of message and you're suddenly flooded by useless information sent anywhere, anytime." [D.J., 25 years, male]. The solution proposed was a customer-controlled system: "It would be ideal to have an application that gives you the possibility to ask for specific messages: you are hungry, you ask for restaurant offers and adverts, you want to see a movie, you get promotional coupons from the nearby cinemas. But it should be ultimately controlled by consumers ..." [M.V., 31 years, male].

The content of commercial mobile communication

The respondents identified three main content categories:

- Customer-centered messages: represents advertising that is highly personalized. To receive this kind of content, customers should usually develop a long-term relationship with a specific brand or company – their repeated interaction provides a wealth of information that can be intelligently used by the firm to customize the offers and the advertising messages.
- Product/service-centered messages: are the classical advertising messages that present more or less directly the characteristics and benefits of a specific product or service. The efficiency of these messages is better when the company is able to segment the market and target potentially interested consumers.
- Location-centered messages: are connected with a specific commercial location visited by the consumer. The use of these messages is made possible by the capacity of modern mobile technology to track the location of the mobile phone user, although this capability can raise personal privacy issues (Xu and Teo 2004). Another commercial application of location-track technologies is Bluetooth marketing (Haase and Martin 2008).

However, the participants indicated that an ideal mobile advertising message should include a combination of these three types of content: "Mobile advertising has the potential to combine customer, product and location-based content for the first time in advertising history. This is because mobile phones are highly personal devices and permit location tracking. If companies can identify the right product, for the right customer at the right location – they really hit the target." [J.-C.B., 27 years, male]. Other respondents were more skeptical about this possibility: "You should also introduce in the equation the customer attitude or mood ... If I am near a restaurant at lunch time, it does not necessarily mean that I am hungry, so if I receive an advert from that restaurant it can really annoy me." [F.J., 38 years, female].

Many people considered an increase of customer control and interactivity as a possible solution to enhance the effectiveness of mobile advertising: "Let's say that I am looking for a travel agency ... If I could just open my mobile phone, touch a key and say 'travel agency, holiday', and then some sort of intelligent agents recognizes my voice, identifies my location, and sends me on my mobile phone screen a map or a list of the closest travel agencies, with specific promotional offers – this is what I would call a good commercial communication." [P.M., 28 years, male].

V. Conclusions

This study attempted to investigate the mobile phone users' perceptions regarding the existing practices of wireless advertising. Its importance stems from the danger of taking for granted the traditional forms of advertising and applying them automatically to new media channels, without any functional or content adaptations. The negative effects of this superficial application of advertising principles was repeatedly emphasized by the respondents: "You have the impression that very few people really think about how to communicate with you. They think that sending a commercial offer to anybody is called marketing, but for me this is just a waste of time and money" [L.D. 35 years, female].

The findings demonstrate the necessity of a qualitative approach in investigating mobile communication principles and application. Although previous studies have identified important variables that determine the attitude of mobile phone users' towards wireless advertising, there is still a lack of understanding of the specific needs and reactions of consumers to mobile commercial messages in real-life situations. The participants demonstrated an active attitude regarding mobile advertising, which they think it has the potential to revolutionize the practice of commercial communication, by focusing more on consumer's personal needs and circumstances. However, this cannot be realized without increasing the interactive control of mobile phone users' over the functionality and content advertising messages. Although the required technology already exists, it seems necessary to create new applications that can combine the advantages of customer-, product- and location- centered communication.

This study has a number of limitations determined by the choice and application of a specific research methodology. The findings are purely qualitative in nature, and the number of participants to the focus groups was relatively small to permit a valid generalization of findings, at national or international level. Future studies should attempt to develop this qualitative investigation and define the bases for a value co-creation strategy in which consumers are directly involved in the process of mobile communication development and application.

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THE IMAGE OF INVESTMENT AND FINANCIAL SERVICES COMPANIES IN WWW LANDSCAPE (WORLD WIDE WEB)

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In a world where the internet and its image are becoming more and more important, this study is about the importance of Investment and Financial Services Companies web sites. Market competition, creates the need of studies, focused on assessing and analyzing the websites of companies who are active in this sector.

Our study wants to respond at several questions related to Romanian Investment and Financial Services Companies web sites through four dimensions: content, layout, handling and interactivity. Which web sites are best and from what point of view? Where should financial services companies direct their investments to differentiate themselves and their sites? In fact we want to rank the 58 Investment and Financial Services Companies web sites based on 127 criteria.

There are numerous methods for evaluating web pages. The evaluation methods are similar from the structural point of view and the most popular are: Serqual, Sitequal, Webqual / Equal EtailQ, Ewam, e-Serqual, WebQEM (Badulescu, 2008:58).

In the paper: "Assessment of Romanian Banks E-Image: A Marketing Perspective" (Catana, Catana and Constantinescu, 2006: 4) the authors point out that there are at least four complex variables: accessibility, functionality, performance and usability. Each of these can be decomposed into simple ones. We used the same method, and we examined from the utility point of view, 58 web sites of Investment and Financial Services Companies based on 127 criteria following a procedure developed by Institut fur ProfNet Internet Marketing, Munster (Germany). The data collection period was 1-30 September 2010.

The results show that there are very large differences between corporate sites; their creators are concentrating on the information required by law and aesthetics, neglecting other aspects as communication and online service.

In the future we want to extend this study at international level, by applying the same methods of research in 5 countries from European Union: Germany, France, Britain, Italy and Spain.

Keywords: Financial Companies websites, Content, Layout, Handling and Interactivity of Websites.

JEL classification: G29

Introduction

Increasing use of Internet in Romania from 23.9% in 2007 to 35.5% in 2010 according to Internet World Stats, and market competition between Intermediaries of Investments and Financial Companies, creates the need of studies focused on assessing and analyzing the websites of companies which are active in this sector. Due to the relatively low cost and power of information and communication technologies, companies are using web pages to improve their image or to gain competitive advantages (Bonson and Escobar, 2002:2).

We emphasize that the Companies of Investments and Financial Services and investors are both winners in this competition between intermediaries. The investors have become more demanding,

knowing what can be provided to them, have higher expectations and want personalized service (Maver, 2002: 5)

We study four dimensions of every web page: content, interactivity, handling and layout. Everyone has received a number of points so that a page full score is 91.5. The most important part of the test was content with 33.5 points, the rest scoring: 18 points for interactivity, 17 points for handling and 23 points for layout.

The paper will be a chapter of the dissertation: "MARKETING IN THE FINANCIAL SERVICES AND INVESTMENT COMPANIES. An empirical study". In the future we want an expansion of the international study, by applying the same methods of research. Finally, we will make a comparison between web pages from at least five other EU countries (Germany, France, Britain, Italy and Spain).

Methods for evaluating Web pages

In the literature there are numerous methods for evaluating web pages. As examples we mention the paper "Assessment of Romanian Banks E-Image: A Marketing Perspective" (Catana, Catana and Constantinescu, 2006: 4) in which the authors point out that there are at least four complex variables: *accessibility, functionality, performance and usability*. Each of these can be decomposed into simple ones. However there are differences from author to author.

In the book "Evaluation methods of on-line quality services" (Badulescu, 2008:58) the author discusses methods of assessing and measuring quality of the sites which are divided into two major categories: *methods developed from a behavioral perspective and methods developed from an attitudinal perspective*. The same paper says that the evaluation methods are similar from the structural point of view and the most popular are: Servqual, Sitequal, Webqual / Equal EtailQ, Ewam, e-Servqual, WebQEM (Badulescu, 2008:58).

Enrique Bonson, Tomas Escobar and Virginia Cortijo - Gallego (Bonson, Escobar and Gallego, 2008: 33) describe how to measure the quality of a website from three points of view: *content* – where the amount of information the user finds is analyzed, *presentation* - the way the site appears and *browsing* – the ease the information is accessed.

To make transactions online, the Intermediaries must prove the existence of three components: *strategic flexibility, the ability to be reliable and information technology* (Saini and Johnson, 2005:360). Companies in this field face a tough competition when it comes to service delivery, and therefore they must learn to combine the complex, customized, dynamic stock market data (Poepsel, 2010). Trading online is extremely important in Companies of Investments and Financial Services and must be approached as an integral part of it. From the collected data we observe that 26 companies are able to trade online, but a quarter of trades on the Bucharest Stock Exchange are online (ZF, 2010)

Molich and Nielsen (Molich and Nielsen, 1990:249) describe four ways to evaluate a web page: *formally* - with specific techniques, automatically by a computerized procedure, *empirically* and *heuristically*. Further, the authors developed a list of principles, called heuristic principles: the dialog must be simple and natural, the language must be usual, a site must be consistent, must provide answers and feedback, have clearly marked exits, shortcuts and good error messages. The main benefit of this method of assessment would be that it is cheap, intuitive and requires no advance planning. Specifically, on evaluation of Investment Financial Services Companies web pages, we find few references. A notable one would be the article of Matthew Poepsel (Poepsel, 2010) which describes the challenges that such a company would have to overcome in order to optimize the performance of web pages. The author describes three challenges: **greater web complexity, unrelenting customer expectations and expanding diversity in customer access.**

Research methodology and data collection

This study attempts to examine from the utility point of view, Investments and Financial Services Companies web sites, following a procedure developed by Institut fur ProfNet Internet Marketing, Munster (Germany).

In Romania there are 58 Companies of Investments and Financial Services according to Bucharest Stock Exchange. All, with the exception of seven, have websites, and each web page was analyzed according to 125 criteria.

The four dimensions of the test: content, interactivity, handling and layout have been awarded points so that a page is full scoring 91.5 points. The most important part of the test was content with 33.5 points, and the rest: 18 points for interactivity, 17 points for handling and 23 points for layout.

The dates were collected by two evaluators in September 2010. The names of all Companies of Investments and Financial Services were acquired from the official website of BSE.

It is important to note that there are at least two companies (BT Capital Securities and Target Capital) which provide much more information, but only once the user passes the login. Some of the most important criteria are found in Table 1.

Table 1. Criteria of evaluating websites

| Content | Interactivity | Handling | Layout |
|--------------------------|-------------------------------------|--|---------------------|
| Slogan | Contact - E-Mail- Browser window | Top search engine position | Use of Graphics |
| Privacy Statement | Contact - E-Mail Form | Company Domain | Use of Image Map |
| Address | Online Activities | Search - Index | Use of Live stream |
| History | Market Research | Using of https | Use of Text |
| Business hours | Online tour | Navigation path | Use of Video |
| List of Phone Numbers | Chat | Jump to the Homepage | Textual Layout |
| Names of CEO, Board. | Forum | Jump Backward | Aesthetic Layout |
| Job Offers | Guestbook | Pages "not found/ under construction" | Use of Audio |
| Glossary | Call-Back-Service | Help Function | Use of Photos |
| Press Releases | SMS-Letter | Way Description - Branches | Use of 3D-animation |
| FAQ | Send it to a friend | | |
| Exchange rates | Quality of Interactivity | | |

Results and discussions

The criteria on which all companies had the maximum score is "Top search engine position". This notes whether the company site appears on the first page of the national search engine motor (e.g.: Google.ro). Another observation is that all companies had high scores to the information required by law through Regulation 3 from 2002 from official site of National Securities Commission regarding advertising: - Addresses of the registered office and secondary offices (96.08% of companies with web sites)

- Identification attributes such as telephone, fax or e-mail (96.08% of companies with web sites)
- The names of Board and Executive Manager Members (92.20% of companies with Web sites),

- Name of shareholders (92.20% of companies with Web sites)
- Description of services (96.08% of companies with Web sites)
- At least the last annual balance (74.50% of companies with Web sites).

Looking at the data collected we can make a top of the most complex web pages. The first place is taken by Intercapital Invest with 58 point from 91.5 possible, followed by KD Capital Management, KBC Securities Romania SSIF (both 51 points), Estinvest and Tradeville (50 points).

Content

Websites cannot - and neither would it be wise to - include all possible content of attributes. Each company must select only the major components (Debreceeny, Gray and Mock, 2001:4).

However, the websites of Financial Intermediaries in Romania have many of the assessments, scored with 0 points. For example, none of the companies surveyed have a “children’s corner”, a page with answers to press or cannot save “screensavers” or images.

Many web sites of American financial companies like Broadway Federal Bank or Florence State Bank have “kid’s corner” with the aim of teaching financial responsibility from earliest ages.

Few points are accumulated on criteria as: photographs of the company, working hours, photos of the Board members, interactive games and campaigns waged by the Company.

Websites from this field must provide complete information so investors can make decisions in their interests (Singer and Cacia, 2009:11).

Top of the best websites in terms of content are: SSIF Broker and KD Capital Management (26 points), Intercapital Invest (24 points) Target Capital and KBC Securities Romania SSIF (23 points from 33.5 points possible).

Handling

In terms of handling, things are better. Out of 51 companies that have web pages, the author could open without problems 48. There are small problems here too: many companies do not have thumbnails or a previous page button.

The winners in handling field are: Fairwind Securities, IFB Invest and Tradeville with 13 points each, Alpha Finance Romania, KBC Securities Romania SSIF and KD Capital Management with 12 points each (23 being the higher score for this feature).

Interactivity

We discover that interactivity is the most neglected by the creators of Investments and Financial Services Companies web sites. There are nine criteria out of a total of 24 (e.g. callback service, e-card, chat, forum, guest book, available online company brochure) that didn’t obtain any points in the analysis of assessors. This proves the lack of interest in creating a link with investors.

Some readers may be interested in how the company is engaged in social activities or how working in such a company is like. The fact that there are no Financial and Investment Services Companies able to offer callback service or financial news via SMS makes them seem obsolete.

There is more than one study which demonstrates their usefulness (Balasubraman, Peterson and Jarvenpaa, 2002:350). The Investments and Financial Services Companies, which were the best at interactivity, are: Intercapital Invest (8 points), Raiffeisen Capital & Investment, Estinvest, Tradeville (6 points, 18 being the higher score)

Layout

Unfortunately, layout is not very well represented in the companies' websites. Criteria like the text version of pages, live broadcast cameras, or use of Web phone are completely neglected.

Indeed, we can argue that excessive use of graphics can have the adversely result. An undesirable aspect of a web page full with images may cause disorientation because the user may be lost in a forest of links and images.

The best web sites in terms of layout scored 14 points, 23 being the higher score. Forward we can make a top: Romcapital and Intercapital Invest (14 points), Interfinbrok Corporation, Interdealer Capital Invest, IFB Finwest, Alpha Finance Romania and Estinvest (13 points)

Conclusions

This paper has followed the classification of the 58 Companies Financial Services and Investment in four ways: content, navigability, layout and interaction, using a procedure developed by Institut fuer ProfNet Internet Marketing, Munster (Germany).

Conclusions are not encouraging. The company that is on the first place, in terms of complexity is Intercapital Invest with a score of 58 points, from 91.5 possible.

One way to be truly competitive and to attract investors, both Romanian and foreign, Financial and Investment Services Companies should improve their web pages in terms of content and interactivity.

Future research

A future research could show the position of Romanian web sites compared to those from Germany, France, Great Britain, Spain and Italy. The final study could show the weaknesses and strengths of companies in Romania.

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PRODUCT PORTFOLIO ANALYSIS - ARTHUR D. LITTLE MATRIX

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In recent decades we have witnessed an unseen dynamism among companies, which is explained by their desire to engage in more activities that provide a high level of development and diversification. Thus, as companies are diversifying more and more, their managers confront a number of challenges arising from the management of resources for the product portfolio and the low level of resources with which companies can identify, at a time. Responding to these challenges, over time were developed a series of analytical product portfolio methods through which managers can balance the sources of cash flows from the multiple products and also can identify the place and role of products, in strategic terms, within the product portfolio. In order to identify these methods the authors of the present paper have conducted a desk research in order to analyze the strategic marketing and management literature of the last 2 decades. Widely were studied a series of methods that are presented in the marketing and management literature as the main instruments used within the product portfolio strategic planning process. Among these methods we focused on the Arthur D. Little matrix. Thus the present paper has the purpose to outline the characteristics and strategic implications of the ADL matrix within a company's product portfolio. After conducting this analysis we have found that restricting the product portfolio analysis to the A.D.L. matrix is not a very wise decision. The A.D.L. matrix among with other marketing tools of product portfolio analysis have some advantages and disadvantages and is trying to provide, at a time, a specific diagnosis of a company's product portfolio. Therefore, the recommendation for the Romanian managers consists in a combined use of a wide range of tools and techniques for product portfolio analysis. This leads to a better understanding of the whole mix of product markets, included in portfolio analysis, the strategic position held by each product within a market, the performance potential of product portfolio and the financial aspects related to the resource allocation process for the products within the portfolio. It should also be noted that the tools and techniques specific to product portfolio analysis do not give accurate answers, despite the appearances created by the analysis stage, where the products are plotted rigorously. However, their main virtue is simplicity, as these highlight the managers' need for further investigations.

Keywords: product portfolio, ADL matrix, life cycle, competitive position, strategic analysis

JEL classification: M31

Introduction

A fundamental question that managers must answer each time is: In what direction must the company go? The strategy implemented by a company must be elaborated so that it considers all market opportunities and neutralizes current threats or foreseen threats. At the same time the company must value its strong points, by referring to the competition (Căescu 2011:98). On the basis of these features specific to an ideal strategy and by considering current options that companies may resort to, one may assert that the salient features of the strategy selection process are its difficulty and complexity. Over time, a series of methods have been created with a view to

support the strategy assessment and selection process. Of these, the methods corresponding to product portfolio analysis stands out.

Product portfolio analysis is an analytical approach, whereby a company manager can view the company as a sum of products that must be managed in a profitable manner. However, taking into account the specific characteristics of the marketplace, the competitive advantage and the resource allocation process, it can be point out the fact that the product portfolio analysis gives the manager an opportunity to address his company from a different perspective and to provide in the future, more attention to all actions to be undertaken. This product portfolio analysis must become routine activity undertaken by the company, through its carrying out on a regular basis, so that decisions of earmarking of financial resources may be monitored, updated and modified with a view to accomplishing corporate objectives, correlated to the process of generation thereof carried out in an efficient way by each product (Armstrong and Brodie 1994:2).

The basic decisions, that involve the earmarking of corporate resources together with the general approach, by means of which a product will be managed, does not complete the strategic analysis process and the selection of the viable strategic alternative. Consequently, for each product must be examined and selected a certain type of strategy that in the end should lead to the meeting of long-term strategic objectives (Wensley 1994:86).

Within the list of significant contributions to the product portfolio analysis domain, must be disclosed the one made by Arthur D. Little consulting company. This consulting company was founded in 1886 by Arthur D. Little, a 23 year old student from Massachusetts Institute of Technology (MIT), who was trying to help paper factories from New England in order to find new chemicals substances for the paper processing. One of his first major consultancy projects was the establishment of an advisory research and development department within the General Motors Company. By the early '70s, MIT was the main shareholder. Then Arthur D. Little has quickly become a public company before being bought by its own employees. The Arthur D. Little consulting company, which has research facilities in Cambridge – USA and in Cambridge - UK, has acquired in the market, some prestige in the '70s by developing a strategic analysis model. Thus the ADL consultants wanted to improve the analytical product portfolio models, by taking into consideration the analysis of product life cycle and a more analytical approach of competitive position.

This model of strategic analysis of the product portfolio is called ADL (abbreviation for Arthur D. Little) and is structured like a matrix with five rows and four columns (5 x 4) resulting from combining two performance indicators: industry life-cycle stage and market competitive position (Florescu and Mâlcomete and Pop 2003:473).

With reference to the specific market characteristics, the present method, which considers the life cycle stage of a product, points out that a market, in a certain period of time, may be in one of the following four stages: introduction, growth, maturity and decline. Each specific stage within the product life cycle can be identified, assessed, quantified and characterized by a system of indicators.

The performance indicator represented by market competitive position is valued by reference to competition, using qualitative and quantitative variables, which make up a set of determinants factors of success.

Thus, in comparison with other methods of analyzing the product portfolio, Arthur D. Little model focuses on factors that must be taken into account in order to assess the competitive position held by a company that operates in a given market. The following list is not exhaustive and may be supplemented with other factors (Florescu and Mâlcomete and Pop 2003:474):

- **supply factors:** long-term contracts, labor costs and payment terms;

- **production factors:** production flexibility and capacity, experience, technical skills, environmental protection, quality of management, skill or expertise, labor productivity and production cost;

- **commercialization factors:** the power and quality of distribution network, credit conditions, the image of the product, product range, market share, sales force and price;

- **financial factors:** profitability, financial stability, cash flow and technological protection;

Further, based on these factors and using a method of weighting and scoring, competitive position can record several states, according to company forces in relation to competitors on a given market. (Popa 2004:155). In other words Arthur D. Little matrix argues that as these factors change over time, the products gain or lose ground in terms of competitive advantage, and eventually they will identify with one of the following five potential competitive positions:

- **Dominant** - this position is very rare and most often is due to the posture of a monopoly company or market dominance exerted strong, from a technological point of view. The implications of this position mean that the company is able to influence the behavior of other organizations and has a wide range of strategic options.

- **Strong** - the company has a high level of freedom in terms of strategic options and can act without its market position to be threatened by competitors.

- **Favorable** - this position is found in fragmented markets, where no competitor has a very clear market position and the most important companies have a high degree of freedom. The companies with a favorable market position often possess strengths that can be exploited through specific strategies and are facing opportunities that may generate market share growth.

- **Tenable** - companies within this category are generally vulnerable to fierce competition exerted by organizations with proactive and strong market positions. However, they survive and are able to justify their existence on the market. Also in this category are limited opportunities for an organization that wants to strengthen its market position. Thus, the profitability for a company with a good position is best achieved and supported through specialization.

- **Poor** - the company performance is generally unsatisfactory, even if market opportunities exist, through which it can be improved. However, often, the company is too big and inefficient in terms of competitiveness or is either too small to cope with competitive pressure. As such, if a company sees no action to change the future is likely to be removed from the market or even to voluntarily leave the market.

In the marketing literature some authors consider that the list, which identifies and characterizes the competitive positions of a specific product, it may also be considered a sixth position, which is suggestively called "**Unsustainable**" or "**Very Poor**". A product is located in this position when performance is unsatisfactory and there are very few market opportunities that can improve the situation. In conclusion, in an unfavorable conjuncture it is recommended an immediate withdrawal from the market, with less expensive costs.

Another basic attribute that made the ADL model to assert in strategic consulting and distinguish itself from all other methods of evaluation of the product portfolio is that it establishes a close relationship between the company's competitive position and profitability levels, within different phases of the product life cycle, on a given market.

Thus it can be said that the profitability raises and the risk of change of competitive position diminishes as it tends to a dominant position and financial needs and risk of unplanned changes decline as it records an evolution within the market life cycle. **Table nr.1** summarizes the profitability, the risk and the financial needs of products according to the competitive position and market life cycle stage.

Strategic implications

Following the establishment of product position within the Arthur D. Little matrix, we can move to the next phase of identification and selection of strategic steps.

At corporate level, the resources are normally allocated to products, based on the degree of their competitiveness.

Thus products are classified based on criteria such as: desirability of reaching the maturity stage, strength of competitive position, ability to generate positive cash flows on long term and short-term, the level of risk and the return on investment. This classification provides to higher-level management the skills to decide which products from the product portfolio will receive financial resources and which will not.

Table nr. 1 – The profitability, the risk and the needs of financial flux depending on the competitive position and industry life cycle stage

| Market life cycle stage Competitive position | Introduction | Growth | Maturity | Decline |
|---|---|--------|--|---------|
| Dominant | <ul style="list-style-type: none"> • Good profitability • Cash flow = 0 • High investments | | <ul style="list-style-type: none"> • Good profitability • Cash flow = + + • Low investments | |
| Strong | <ul style="list-style-type: none"> • Medium risk • High investments | | <ul style="list-style-type: none"> • Low risk • Low investments | |
| Favorable | <ul style="list-style-type: none"> • High cash flow needs • Medium profitability | | <ul style="list-style-type: none"> • Low cash flow needs • Medium profitability | |
| Tenable | <ul style="list-style-type: none"> • Cash flow = - - - - • High risk • Low profitability | | <ul style="list-style-type: none"> • Cash flow = 0 • Medium risk • Low profitability | |
| Weak | <ul style="list-style-type: none"> • Low profitability | | <ul style="list-style-type: none"> • Low profitability | |

Source: Bărbulescu, Constantin. “Sistemele Strategice ale Întreprinderii”, București: Editura Economică, 1999, p.140.

As such, the combination of the two performance indicators of the present matrix, represented by the competitive position and industry life cycle stage, contribute on the one hand to the diagnosis of products included in the product portfolio and on the other hand to the identification and evaluation of strategic options. **Table nr.2** shows the specific strategic options corresponding to the 20 quadrants of the ADL matrix. The ADL matrix speculate the idea that when it comes to choosing and implementing a strategy, a company will select, in most cases, one or more options from the following list, which presents a set of general strategies (Wind and Mahajan and Swire 1983:59):

- investing in order to maintain or even improve their competitive position in the marketplace;
- spending in order to maintain the status quo;
- harvesting;
- exiting the market;

However, the ADL consulting company highlights a number of guiding principles that should be considered in the selection of strategic options, of which the most important points out that the selection of a strategy should be based on actual situation of products and not on the facts and the subjectivity of managers. Thus the ADL matrix advocates realism in the strategic planning

process. In conclusion we can say that the ADL matrix facilitates the choosing of a marketing strategy, but it is insufficient to define a global strategy (Florescu și Mălcomețe și Pop 2003:474).

The advantages and disadvantages of the ADL matrix

Unlike other models of product portfolio analysis the ADL matrix is based on an enhanced applicability because it fits to all situations of competition encountered in a marketplace.

Also the ADL matrix can be applied to the fragmented industries, holding a small competitive advantage but with a large number of ways of obtaining it (provides multiple ways of differentiation). As such we can say that the ADL matrix has a high degree of adaptability to situations of a qualitative nature.

A first disadvantage is that the matrix does not take into account a number of phenomena that can generate long-term involution in the products life cycle of a company. Another weakness is related to the high level of difficulty in terms of objective evaluation of the ADL model variables. This is often the case for the competitive position indicator. In other words, the difficulty lies in the fact that some factors are qualitative in nature and there is a high risk of bias in their use.

In conclusion, we can say that the ADL matrix provides clearer results as a company is more diversified and enable synchronization on decisions relating to competition.

Table nr.2 - A.D.L. Matrix Strategies

| | | INDUSTRY LIFE CYCLE STAGE | | | |
|----------------------|-----------|--|--|--|--|
| | | INTRODUCTION | GROWTH | MATURITY | DECLINE |
| COMPETITIVE POSITION | DOMINANT | - Rapid development - Act offensive | - Rapid development - Defend position - Act offensive - Cost leadership | - Defend position - Act offensive | - Defend position - Focus - Consider retreat |
| | STRONG | - Rapid development - Differentiation | - Cut costs - Differentiation - Attack small competitors | - Cut costs - Differentiation - Focus | - Harvest |
| | FAVORABLE | - Rapid development - Differentiation | - Cut costs - Differentiation - Attack small competitors | - Focus - Differentiation - Attack small competitors | - Harvest |
| | TENABLE | - Market development - Focus | - Maintain or retreat - Identify a niche - Aim growth | - Maintain or retreat - Identify a niche | - Retreat |
| | WEAK | - Identify a niche - Follow the competitors | - Identify a niche - Retreat | - Retreat | - Retreat |

Source: Wilson, Richard M.S and Gilligan, Colin. “Strategic Marketing Management – Planning, Implementation and Control”, 3rd Edition, Elsevier Butterworth-Heinemann, 2005, p. 378

Conclusions

The product portfolio strategic planning offers three potential benefits for a company. The first is that it encourages the promotion of competitive analysis among the products, through comparative assessments, resulting in a number of sustainable strategies.

The second benefit claims selective allocation of financial resources by identifying issues of a strategic nature and by adopting a standardized and unbiased process of negotiating. Thus, the mix of forces within the company will be better focused.

The third benefit derives from the experts' points of view who argue that this way of approaching the product portfolio, which focuses on a number of tools and techniques, helps the company to reduce risk, to increase the concentration and also the involvement, regarding the identification and implementation of the strategies.

Correlated with visual approach, which is based on a series of graphics, the company's product portfolio analysis is strengthened by the comparative analysis process of the market shares, market growth rates, market attractiveness, competitive position and the market life cycle, specific to each product.

According to the information mentioned above, it must be highlighted that limiting the product portfolio analysis to the A.D.L. matrix is not a very wise decision. The A.D.L. matrix with other marketing tools of product portfolio analysis has some advantages and disadvantages and is trying to provide, at a time, a specific diagnosis of a company product portfolio.

The tools and techniques of product portfolio analysis facilitate discussion and shape the competitive position of a company, generating at the same time questions related to the contribution of the current allocation of resources to the success and long-term vitality. Since resources are limited, the managers must carefully manage these strategic decisions in terms of effort invested in each market and the expected profit level for each case (Căescu 2011:101). However, besides the fact that these tools and techniques help managers to control the allocation of resources and to suggest realistic goals for each product, they also offer the possibility of using the products, as vital resources within the process of fulfilling the objectives established at corporate level. Therefore, the recommendation for the Romanian managers consists in a combined use of a wide range of tools and techniques for product portfolio analysis. This leads to a better understanding of: the whole mix of product markets, included in portfolio analysis, the strategic position held by each product within a market, the performance potential of product portfolio and the financial aspects related to the resources allocation process for the products within the portfolio. It should also be noted that the tools and techniques specific to product portfolio analysis do not give accurate answers, despite the appearances created by the analysis stage, where the products are plotted rigorously. However, their main virtue is simplicity, as these highlight the managers' need for further investigations.

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DEVELOPMENT OF THE E-GOVERNMENT MARKET IN THE EUROPEAN UNION: AN ANALYSIS OF THE SUPPLY VERSUS DEMAND SIDES

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E-government represents one of the most palpable results of the dynamic development of the information and communication technology. Defined mostly as an intensive use of information technologies to provide public services, e-government has been approached in the literature rather from a technological perspective, with a significant importance given to the supply and a lower attention paid to the demand side. The increasing interest in taking into consideration the demand side in the development of the e-government initiatives and projects has created the foundation for a shift in the way the conceptual framework for e-government planning and implementation is defined, from the technology infrastructure and costs to the customer-centric character of all the efforts done.

The European Union put e-government on its agenda aiming to improve access to the public information and services, increase transparency of public administration, exploit effectively the information technology within public administration, and establishing e-procurement. The development of the e-government services in the Member States, as it is expressed by the data regarding the supply and demand side, has been conducted in a more or less different manner that led, at the Union's level, to a relatively high availability but a rather low usage of the specific services.

The paper explores the relationship between the e-government supply and demand based on the secondary data referring to the public services available to the citizens (as these are defined by the Eurostat methodology) and the usage of these services by the individuals, integrating them through an analytical matrix inspired by the BCG model. Probably the most important conclusion of this analysis states that development of the e-government services has not been accompanied by measures meant to stimulate their usage in the most of the European Union Member States. The analytical matrix allowed also the identification of the question mark, star, cash cow and dog Member States in terms of the e-government market development.

Keywords: e-government market, demand, supply, European Union

JEL Classification: M31

Introduction

The recent dynamic development of new information and communication technologies have changed significantly the everyday life of all the members of the society and offered the government new possibilities for providing citizens and businesses with better, more efficient services (Verdegem and Verleye 2009: 487). As the consumers throughout the world expect twenty-four hours a day, seven days a week availability in their commercial interactions, citizens, in their role of consumers of democracy, tend to expect the same from their government (Evans and Yen 2006: 207-208).

Encapsulating a wide variety of meanings ranging from policies that foster the development of information infrastructures to particular measures for combating the “digital divide”, e-government is defined as the use of technology, particularly the Internet, as a means to deliver

services to citizens, businesses, and other entities (Akman et al. 2005: 240). In a broader sense, e-government has been defined as the intensive use of information technologies for the provision of public services, the improvement of managerial effectiveness and the promotion of democratic values and mechanisms (Gil-Garcia and Pardo 2005: 187-188).

A significant part of the literature on e-government assumes that once the correct technology is implemented and accessible to the citizens, benefits will be delivered in terms of reduced costs, technical efficiency, greater access, accountability and transparency, and even greater 'e-participation' and 'e-democracy. Yet, even technically successful, systems fail if intended recipients simply do not use them (Gauld, Goldfinch and Horsburgh 2010: 184).

A study conducted in the Netherlands has found that the majority of the respondents perceives rather positive the usefulness, tend to trust and intend to adopt government e-services (Horst, Kuttschreuter, and Gutteling 2007: 1850). Another study, conducted in Australia and New Zealand, addressing the human demand-side of the e-government, has found that the majority of respondents are reluctant to use some of the more sophisticated transactional e-government measures, the high users of information and communication technology are more likely to use e-government measures, and are more positive towards e-government in general (Gauld, Goldfinch and Horsburgh 2010: 184).

Successful implementation of e-government imposes changes in business processes that are performed inside governmental institutions, despite of many limitations such as the rigid structures and political reasons (Indihar Stemberger and Jaklic 2007: 229). Understanding the e-government processes of policy making is critical for the evaluation of the e-government initiatives and enablement of the appropriate technical, managerial, and political adjustments to be done by the public managers (Yildiz 2007: 661).

The conceptual framework for e-government planning and implementation surrounds the traditional marketing mix components – product, price, place, and promotion, with the customer focus perspective of customer relationship management, encompassed in the discipline and rigor of program management (Rose and Grant 2010: 32).

Promoting the use of e-government among citizens and businesses, suppose accomplishment of two interrelated actions: first, customers must be educated with respect to the scope of services and utility of the e-Government initiatives; secondly, customers must be convinced that use of the e-government applications will provide value to them (Rose and Grant 2010: 30).

The European Summits at Lisbon and Feira put e-government on the European agenda aiming the development of Internet-based services to improve access to public information and services, the improvement of transparency of public administration by using the Internet, full exploitation of information technology within public administration, and establishing e-procurement (Strejcek and Theil 2002: 305).

Methodological Notes

Data referring to the e-government availability (supply side) and, respectively, individuals using the Internet for interacting with public authorities (demand side) in the European Union countries between 2001 and 2010 have been collected from the Eurostat database.

E-government availability (supply side) measures the online availability of 20 elementary public services based on a sample of public authorities' web sites (such as central government, regional and local administration, police and social security organizations) agreed with Member States as relevant for each service. The public services for citizens measured are: income taxes, job search services, social security benefits, personal documents, car registration, application for building permission, declaration to the police, public libraries, birth and marriage certificates, enrollment in higher education, announcement of moving, and health-related services. The public

services for businesses measured are social contribution for employees, corporate tax; value added tax, registration of new companies, submission of data to statistical offices, customs declarations, environment-related permits, and public procurement.

E-government usage by individuals (demand side) measures the ratio of the individuals aged 16 to 74 that use the Internet to interact with public authorities, respectively for obtaining information from public authorities web sites, downloading official forms, sending filled in forms.

Percentages expressing the availability and usage of the e-government services at the level of the European Union and each of the Member States have been considered to construct an **analytical matrix of e-government services development and employment** inspired by the BCG matrix, where each of the Member States has been positioned in relationship with the average European performances in one of the four quadrants: (1) **question marks** (e-government supply above and e-government demand below the European average), (2) **stars** (e-government supply and demand both above the European average), (3) **cash cows** (e-government supply below and e-government demand above the European average), and (4) **dogs** (e-government supply and demand both below the European average).

Main Findings

There are two main conclusions that can be drawn assessing the supply side of the e-government market in the European Union: (1) the availability of the e-government services, as it is defined in terms of the Eurostat methodology, is high: as an average, 84.3 % of the elementary public services are available at the EU level; (2) dynamics of the supply side is more than impressive: in just three years, the availability of the elementary public services has increased, at European level, from 58.3 % to 84.3 %.

Table 1. E-government availability (supply side) in the European Union countries 2001–2010

| Countries | Years | | | | | | | |
|----------------|-------|------|------|------|------|------|------|------|
| | 2001 | 2002 | 2003 | 2004 | 2006 | 2007 | 2009 | 2010 |
| Belgium | | 25.0 | 35.0 | 35.0 | 47.4 | 62.5 | 68.7 | 78.7 |
| Bulgaria | - | - | - | - | - | 13.7 | 40.0 | 70.0 |
| Czech Republic | - | - | - | 31.2 | 33.3 | 57.5 | 62.5 | 73.7 |
| Denmark | 31.6 | 61.1 | 72.2 | 60.5 | 65.8 | 60.5 | 84.2 | 94.7 |
| Germany | 20.0 | 35.0 | 40.0 | 47.4 | 48.7 | 71.9 | 73.7 | 94.7 |
| Estonia | - | - | - | 65.8 | 81.6 | 72.5 | 92.5 | 93.7 |
| Ireland | 22.2 | 53.7 | 60.2 | 51.8 | 51.8 | 51.8 | 79.6 | 100 |
| Greece | 10.5 | 31.6 | 31.6 | 31.6 | 30.0 | 45.0 | 45.0 | 47.5 |
| Spain | 30.0 | 40.0 | 40.0 | 55.0 | 56.7 | 68.7 | 80.0 | 95.0 |
| France | 25 | 36.7 | 50.8 | 50.0 | 65.0 | 72.5 | 77.5 | 85.0 |
| Italy | 15.0 | 35.0 | 46.7 | 54.4 | 61.4 | 68.7 | 68.3 | 100 |
| Cyprus | - | - | - | 25.0 | 37.5 | 46.2 | 51.2 | 55.0 |
| Latvia | - | - | - | 6.2 | 10.0 | 27.5 | 66.2 | 93.3 |
| Lithuania | - | - | - | 40.0 | 42.5 | 36.7 | 61.7 | 71.7 |
| Luxembourg | 5.0 | 5.0 | 16.2 | 21.2 | 21.2 | 41.2 | 64.5 | 72.4 |
| Hungary | - | - | - | 15.0 | 50.0 | 42.5 | 52.6 | 65.8 |
| Malta | - | - | - | 40.0 | 78.3 | 91.2 | 100 | 100 |
| Netherlands | 5.3 | 21.0 | 26.3 | 32.9 | 56.1 | 63.2 | 71.0 | 94.7 |
| Austria | 15.0 | 20.0 | 69.7 | 75.9 | 83.3 | 100 | 100 | 100 |

| | | | | | | | | |
|----------------|------|------|------|------|------|-------------|-------------|-------------|
| Poland | - | - | - | 10.0 | 20.0 | 21.2 | 55.3 | 78.7 |
| Portugal | 31.6 | 34.2 | 39.5 | 42.5 | 61.7 | 81.2 | 100 | 100 |
| Romania | - | - | - | - | - | 37.5 | 47.5 | 60.0 |
| Slovenia | - | - | - | 45.0 | 68.7 | 91.2 | 95.0 | 95.0 |
| Slovakia | - | - | - | 15.0 | 20.0 | 30.0 | 56.2 | 62.5 |
| Finland | 33.3 | 50.0 | 61.1 | 69.4 | 63.9 | 65.3 | 86.1 | 95.0 |
| Sweden | 27.8 | 69.4 | 69.4 | 76.3 | 76.3 | 75.0 | 95.0 | 100 |
| United Kingdom | 23.5 | 36.1 | 50.0 | 58.8 | 67.5 | 77.6 | 93.0 | 98.2 |
| EU 27 | - | - | - | - | - | 58.3 | 72.9 | 84.3 |

Source: Eurostat.

In terms of availability, Ireland, Italy, Malta, Austria, Portugal and Sweden have reached the maximum level of 100 %, while United Kingdom, Spain, Slovenia, Finland, Denmark, Germany, Netherlands, Estonia, Latvia, and France are above the European average. The lowest levels of e-government availability have been registered in Greece, Cyprus, and several countries of the Central and Eastern Europe – Romania, Slovakia, Hungary, Bulgaria, Lithuania, and Czech Republic. Somewhat surprisingly, Luxembourg, Belgium and Poland have availability below the European average.

There are two main conclusions that can be drawn assessing the demand side of the e-government market in the European Union: (1) the usage of the e-government services by the individuals is rather low: as an average, only 28.1 % of the individuals are accessing the public services available online at the EU level; (2) dynamics of the supply side is positive but far less impressive by comparison to that of the supply side: from 2004 to 2010, the degree of e-government services usage has increased, at European level, from 19.6 % to 28.1 %.

Table 2. Individuals using the Internet for interacting with public authorities in the European Union countries 2002–2010

| Countries | Years | | | | | | | | |
|----------------|-------|------|------|------|------|------|------|------|------|
| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| Belgium | - | - | - | 15.9 | 25.6 | 20.7 | 14.3 | 27.2 | 27.8 |
| Bulgaria | - | - | 3.9 | - | 5.7 | 4.3 | 6.4 | 7.9 | 12.8 |
| Czech Republic | - | 3.4 | 3.1 | 3.3 | - | 14.0 | 13.1 | 22.8 | 15.3 |
| Denmark | 35.1 | 39.4 | 42.5 | - | 39.3 | 57.7 | 41.3 | 65.4 | 68.2 |
| Germany | 14.0 | 23.3 | 31.3 | - | 27.8 | 39.1 | 31.1 | 35.3 | 34.6 |
| Estonia | - | - | 14.2 | 29.0 | 26.6 | 27.4 | 33.0 | 43.0 | 46.9 |
| Ireland | - | 9.6 | 11.4 | 14.4 | 21.3 | 26.4 | 21.2 | 23.3 | 22.3 |
| Greece | 3.5 | 6.1 | 7.2 | 4.7 | 5.5 | 9.5 | 8.8 | 10.7 | 10.9 |
| Spain | - | 19.5 | 22.0 | 22.5 | 23.7 | 25.1 | 27.8 | 28.6 | 30.9 |
| France | - | - | - | - | 24.4 | 36.6 | 40.5 | 36.0 | 29.7 |
| Italy | - | - | - | 13.0 | 14.8 | 15.2 | 13.8 | 15.1 | 15.9 |
| Cyprus | - | - | 10.4 | 10.9 | 12.0 | 18.4 | 14.9 | 21.1 | 20.6 |
| Latvia | - | - | 12.1 | 12.2 | 22.6 | 17.0 | 14.4 | 22.2 | 30.7 |
| Lithuania | - | 6.0 | 8.9 | 11.3 | 12.6 | 17.6 | 18.2 | 17.7 | 18.0 |
| Luxembourg | 14.9 | 25.0 | 35.6 | 38.2 | 36.3 | 44.2 | 41.6 | 44.4 | 44.9 |
| Hungary | - | - | 14.9 | 15.1 | 13.6 | 21.7 | 22.2 | 22.9 | 26.3 |
| Malta | - | - | - | 18.0 | 14.0 | 21.9 | 18.1 | 22.7 | 25.1 |
| Netherlands | 11.6 | 14.7 | 17.2 | 40.7 | 46.0 | 49.1 | 48.1 | 49.9 | 55.0 |

| | | | | | | | | | |
|----------------|------|------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Austria | 7.9 | 14.4 | 17.6 | 24.9 | 28.9 | 24.0 | 36.2 | 35.4 | 34.9 |
| Poland | - | - | 11.9 | 10.7 | - | 12.1 | 14.0 | 16.3 | 18.0 |
| Portugal | 3.9 | 9.7 | 10.3 | 11.8 | 14.0 | 16.8 | 15.2 | 18.0 | 20.5 |
| Romania | - | - | 2.5 | - | 2.6 | 4.0 | 8.5 | 5.8 | 6.3 |
| Slovenia | - | - | 11.7 | 17.6 | 28.0 | 28.1 | 29.2 | 30.5 | 40.4 |
| Slovakia | - | - | 20.9 | 23.7 | 27.2 | 20.1 | 26.0 | 26.0 | 32.8 |
| Finland | 31.4 | 38.5 | 43.3 | 44.6 | 40.5 | 43.2 | 46.3 | 45.0 | 48.6 |
| Sweden | 40.0 | 41.1 | 35.8 | 48.7 | - | 47.2 | 45.1 | 48.2 | 56.9 |
| United Kingdom | 6.4 | 18.8 | 19.5 | 22.1 | - | 32.9 | 26.1 | 29.7 | 32.8 |
| EU 27 | - | - | 19.6 | 20.7 | 21.5 | 26.9 | 25.5 | 27.5 | 28.1 |

Source: Eurostat.

Countries with percentages far above the European average in terms of the usage of e-government services by individuals were, in 2010, Denmark, Sweden and Netherlands, where more than a half of the population has used e-government applications for interacting with the public authorities. Finland, Estonia, Luxembourg, Slovenia, Austria, Germany, Slovakia, United Kingdom, Spain, Latvia, and France were above the European average. The lowest levels of e-government usage have been registered in Romania, Greece, Bulgaria, Lithuania, Czech Republic, Italy, Poland, Portugal, Ireland, Cyprus, Malta, Hungary, and Belgium.

Assessment of the correlation between the supply and demand sides of the e-government services reveals that a connection of an average intensity, Pearson correlation coefficients calculated for the years 2007, 2009, and 2010 having the following values: 0.4068 (2007), 0.5324 (2009), and 0.4959 (2010). This means that development of the e-government services has not been accompanied by measures meant to stimulate their usage by the individuals: the extensive focus of the public authorities on making available the e-government services has determined them to neglect the communication to the citizens in order to present, explain, and convince them to use on a larger scale these services. Another possible explanation of this disparity is the lack of concordance between the real needs of the citizens in terms of the public services and the range of these services made available online by the public authorities.

Analysis of the e-government market in the European Union in terms of demand and supply using the matrix of e-government services development and employment, leads to the following positioning of the Member States:

-question marks (e-government services supply above and demand below the European average): four Member States – Ireland, Italy, Malta, and Portugal – are positioned in this category. As an interesting fact, all these countries have apparently solved the e-government infrastructure, as the availability of the specific public services is 100%! By contrast, the usage of the e-government services is below the average, which raises at least two questions: first, how opportune was the investment of the public money in developing the e-government services in terms of the society's and citizens' needs for an effective public administration? Secondly, how appropriate was the promotion of the usage of these services among the consumers in terms of the communication effectiveness regarding the usage of these services?

-stars (e-government services both supply and demand above the European average): twelve Member States are positioned in this quadrant – Denmark, Germany, Estonia, Spain, France, Latvia, Netherlands, Austria, Slovenia, Finland, Sweden, and United Kingdom. From these, only Austria and Sweden have managed to reach 100% coverage in terms of the e-government services provided to the public. The development of e-government market in these countries should consider both expanding the range of specific services made available

to the public and increasing the usage of these services, with a different focus from a market to another;

-cash cows (e-government services supply below and demand above the European average): Luxembourg and Slovakia are the only two countries in which citizens are using more intensively the e-government services provided to the public. The development of e-government market in these countries should consider both expanding the range of specific services made available to the public and increasing the usage of these services, with a focus on the range of e-government services. It is rather difficult to conclude that Luxembourg and Slovakia may be viewed as potential models for the development of the e-government market in the European Union, their demographic, economic, and technological profile being atypical, to a certain extent, for the EU Member States;

-dogs (e-government both supply and demand below the European average): nine countries are positioned in the quadrant having the poorest situation, out of which six are from the Central and Eastern Europe – Bulgaria, Czech Republic, Lithuania, Hungary, Poland, Romania, and Belgium, Greece, Cyprus completing the group. These countries should consider in the development of their e-government markets both the significant enlargement of the range of specific services provided to the public and a more consistent effort to increase the usage of these services.

Conclusions and discussion

The current e-government projects conducted in each of the Member States of the European Union do not reveal a harmonized approach, but rather a consistent but somewhat uncoordinated effort (Strejcek and Theil 2002: 312). Although the finality of the e-government development is to facilitate access and provide high quality public services lowering the administrative burden, this target will be difficult to be reached in a context characterized by a relatively high availability but a rather low usage of the specific services. Engaging citizens in using on a more extensive scale the e-government services available in the market could represent the focus of the future of the development strategies implemented in the most of the Member States. In the new context of the government – citizen relationships, created by the Internet, a “willing citizenship” is the most important tool for the successful implementation of e-government (Evans and Yen 2006: 228).

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INVESTIGATING THE PATIENT SATISFACTION WITHIN ROMANIAN PUBLIC AND PRIVATE HOSPITALS

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Although it is not commonly accepted within healthcare services industry, the importance of marketing is more and more recognized nowadays by the organizations activating in the field. Current perception resides in a series of factors as: ethical aspects involved in the delivery process; special characteristics of the market; particular profile and behavior of the consumers of healthcare services and probably because of the inadequate understanding of the marketing role in the life of an organization. A deep analysis in the field of healthcare services will emphasize not only its complexity, but also its interdisciplinary feature under many aspects, as it is an area where many fields of interest are intersecting, both economic and social. It also reveals a particular field of study with many particular features - considered a sensitive field (Popa and Vladoi 2010: 232). Generated using the SERVQUAL model, the data presented in the paper are the result of a quantitative research designed to measure and compare the patient/client satisfaction degree for public and private medical services provided by the Romanian hospitals. The aim of the research is to identify and to measure the gap that appears between the patient/client' expectations and perceptions regarding the delivered services; to identify the potential profile of the private Romanian hospitals' clients regarding the demographic features and also to pin-point correlations between the image created in the mind of the Romanian patients/clients and the type of medical services (public or private) they were using. We consider that the results of this research are valuable for the managers of the medical units in order to initiate series of actions aiming to improve the quality of their services and, as a result the patient/clients' satisfaction degree. Later being one of the most important performance indicators of an organization that activates in a highly competitive business environment. We also consider this research may be useful in the process of improving the quality of the medical services in Romania, which must be a priority for any medical units' management and for the society as a whole. Present paper intends to lay foundation for future research, tailored to correlate the quality culture for the Romanian hospitals and the satisfaction degree of their patients/clients.

Keywords: relationship marketing, patients' satisfaction, public and private medical services, Oradea, Romania.

JEL Classification: M31, I11

1. Introduction

The present paper is mainly focusing on presenting the results of a research whose aim started from the idea that satisfaction represents a major vector that leads to customer retention and loyalty (Chiou and Droge 2006: 613). Details regarding the research aim and methodology were the subject of article entitled *Measuring Patient Satisfaction within Romanian Healthcare*

Services – a Relationship Marketing Approach, included in the program of the 15th IBIMA Conference Cairo, Egypt 6-7 November 2010. Below is the summarized essential features of the research methodology of the above paper.

The purpose of this research was concentrated on analyzing the satisfaction degree as perceived by patients within public and private medical systems from Oradea, Romania; on analyzing discrepancies between levels of expectations and perceptions on the 5 dimensions which were taken into account to measure satisfaction level, and on identifying a potential customer profile for private medical services, starting from key demographic characteristics (Popa et al 2010: 842-846).

The paper objectives are:

- Quantify discrepancy between expectations and perceptions regarding patients' satisfaction;
- Identify customer's profile for private medical services starting from key demographical characteristics;

Referring to the research methodology, in order to measure patients' satisfaction degree regarding quality of medical services, we use SERVQUAL model, developed by Parasuraman et al. in 1985. The five dimensions of the SERVQUAL model, exhibited on a double 22 scale items, are the followings (Parasuraman, Zeithaml and Berry 1988; Parasuraman, Berry and Zeithaml 1991; Bruhn 2001: 82-83): **Tangibles** – physical/tangible environment acceptability: physical facilities, equipment, image/personnel posture; **Reliability** – reliability/trust/honesty: capacity to deliver promised service in a consistent and correct manner; **Responsiveness** - availability/receptivity: willingness to support and offer a prompt service; **Assurance** – competence/certainty: personnel knowledge and skills, degree of inspiring trust and responsibility; **Empathy**: involvement, dedication, care, capacity of giving attention individually to each patient.

By comparing *the ideal profile* – that describes the ideal situations and *the real profile* – that describes the real situations (Bruhn 2001: 83) we will measure discrepancy between expectation and perception levels.

Present research is descriptive and cross-sectional one and has been conducted in May 2010, was focusing on inhabitants of city of Oradea and surrounding areas that have accessed medical services, whether public or private in the last 3 years (during 2007-2010). The research was conducted online using a nonprobability sampling technique, the snowball sampling. From a total of 141 questionnaires applied, 128 were used in final analysis.

This quantitative research has the survey as research method, supported by a structured questionnaire consisting of 57 questions, of which 22 evaluated on a double scale.

2. Data analysis and interpretation

Table 1 exhibits the demographic characteristics of the group of respondents, as follows:

Table 1: Demographics of respondents

| | Number of respondents | % |
|---------------------------|-----------------------|-------|
| Gender (n=128) | | |
| - Female | 84 | 65,6% |
| - Male | 44 | 34,4% |
| Age groups (n=127) | | |
| - under 25 | 35 | 27,6% |
| - between 25 and 34 years | 40 | 31,5% |
| - between 34 and 44 years | 28 | 22,0% |

| | Number of respondents | % |
|---|-----------------------|-------|
| - over 45 years | 24 | 18,9% |
| MissingSystem | 1 | |
| Income (n=128) | | |
| - < 1000 Ron (< 230 Euros) | 48 | 37,5% |
| - Ron 1001 - 2000 (Euros 230-470) | 41 | 32,0% |
| - Ron 2001 - 3000 (Euros 470-700) | 14 | 10,9% |
| - > 3001 Ron (>700 Euros) | 11 | 8,6% |
| - Do not know | 11 | 8,6% |
| - Decline to answer | 3 | 2,3% |
| Studies (n=128) | | |
| - Undergraduate Studies | 59 | 46,1% |
| - University degree | 39 | 30,5% |
| - Postgraduate Studies | 30 | 23,4% |
| Type of medical services (n=128) | | |
| - Private | 68 | 53,1% |
| - Public | 60 | 46,9% |

Source: own research

Overall aim was to identify a possible profile for the people who turn to the private medical services. By correlating the variable **Type of medical services (public/private)** with each of the variables **Gender, Age groups, Income, Studies**, conclusion reached was that out of those who required private medical services:

- 73,5% are women;
- 38,8% are between 25 and 34 years old;
- 45,6% have highschool education;
- 49,1% have the income under 1000RON (about 230Euros).

It is important to mention that there is a significant correlation (Pearson coefficient value being 0,034 < 0,05) only when we have it between *Type of services* and *Gender* variables. Still, the intensity of the link is weak, Cramer coefficient value being of 0,177. From a standpoint of these characteristics, there is not resulting a profile of the private medical services customer, at least at Oradea level.

H1: The discrepancy between expectations and perceptions is bigger in the case of public medical services than in the private ones.

In order to check this hypothesis, for each of the 5 dimensions involved in the satisfaction level calculations we determined the average results both at expectation and perception levels. The discrepancy is calculated as difference between the results on these 2 levels.

Based on the resulted data, it can be concluded that the level of discrepancies between expectations and perceptions related to medical services is a lot less for private services (the values are between 0,40 and 0,79 for private medical services, while they have values between 1,39 and 1,67 for public medical services).

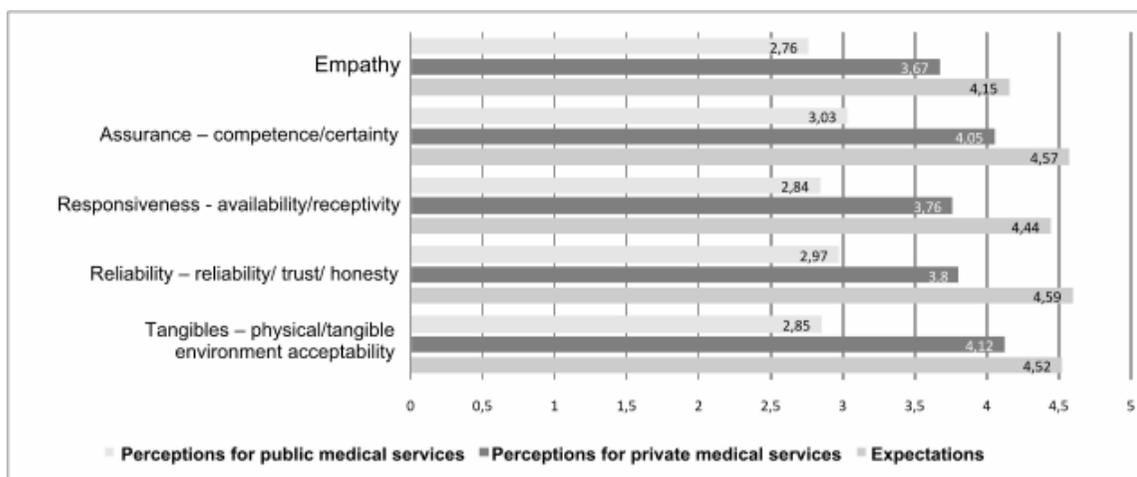


Figure 1: Comparison expectations vs. perceptions for medical services (public vs. private)
Source: own research

According to the above data we can remark that the highest level of expectations from the medical services aims at Reliability followed by that of Assurance. The smallest score regarding expectations refers to Empathy.

Interestingly enough regarding perceptions is that the highest calculated score for the public medical services is lower than the lowest score for the private medical services. It is also worth mentioning that the smallest calculated results concern empathy, for both public and private medical services. Also, even if there is a difference between the scores calculated for the perception of dimensions in the case of private medical services compared with the public ones, the hierarchy is almost the same. The only difference is that the perception of the physical elements has the highest result for the private medical services (see Tables 2 and 3).

Table 2

| Hierarchy perception scores for public medical services | |
|---|-------------|
| Empathy | 2,76 |
| Responsiveness - availability/receptivity | 2,84 |
| <i>Tangibles – physical/tangible environment acceptability</i> | 2,85 |
| Reliability – reliability/ trust/ honesty | 2,97 |
| Assurance – competence/certainty | 3,03 |

Source: own research

Table 3

| Hierarchy perception scores for private medical services | |
|---|-------------|
| Empathy | 3,67 |
| Responsiveness - availability/receptivity | 3,76 |
| Reliability – reliability/ trust/ honesty | 3,8 |
| Assurance – competence/certainty | 4,05 |
| <i>Tangibles – physical/tangible environment acceptability</i> | 4,12 |

Source: own research

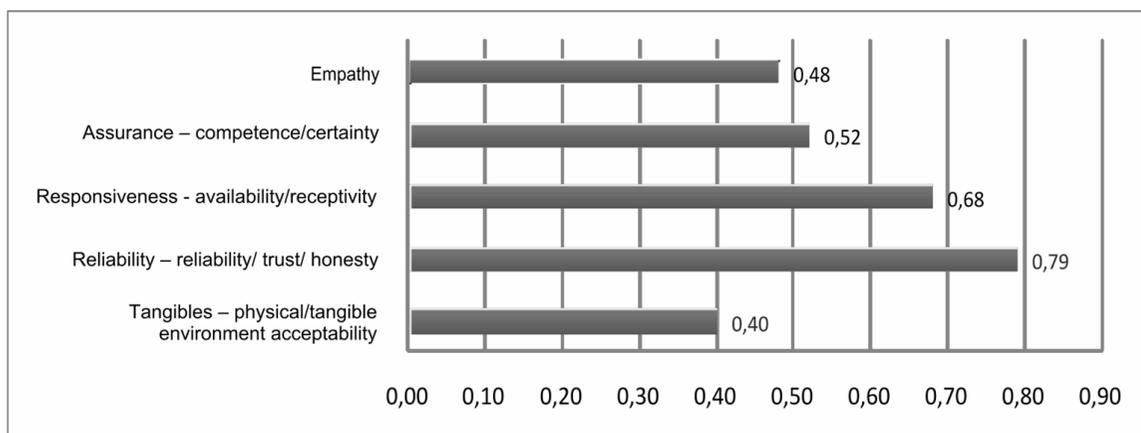


Figure 2: Discrepancy between expectations and perceptions for private medical services
Source: own research

It can be noticed that for the private hospitals, the greatest discrepancy is in Reliability/Trust/Honesty, a dimension that has actually the highest level of expectations. The smallest discrepancy concerns the physical environment, the tangibles. A pretty low value can be noticed for the empathy, this one having also the smallest value regarding expectations.

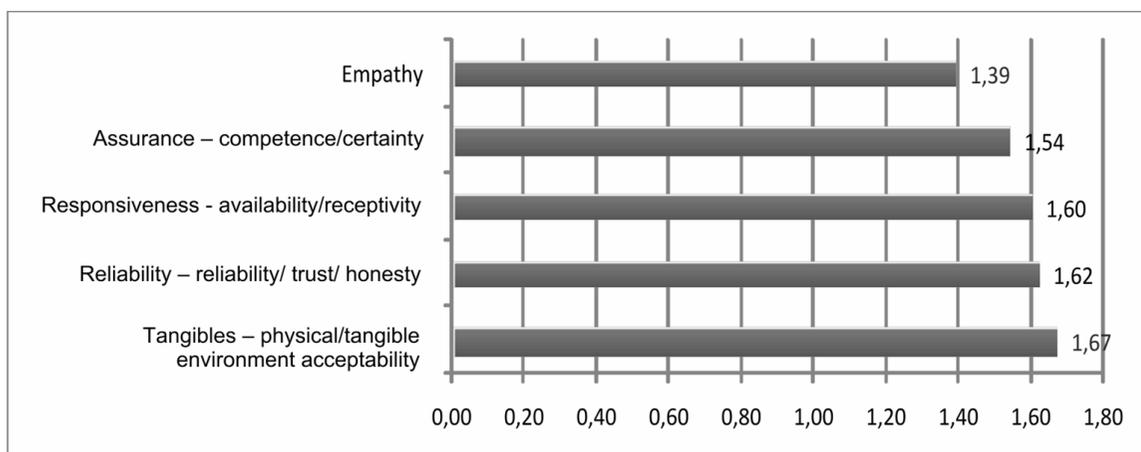


Figure 3: Discrepancy between expectations and perceptions for public medical services
Source: own research

The dimension which reflects the quality of endowment is the one with the biggest value referring the discrepancies between expectations and perceptions for the public medical services. Although the values are close enough, we see that the smallest discrepancy aims at empathy.

3. Conclusions and future research approach

- The hypothesis according to which the discrepancy between expectations and perceptions is bigger for the public medical services than for the private ones is confirmed. The scores calculated for the way in which the 5 analyzed dimensions are perceived from the quality point of view (of the offered satisfaction) are between 2,76-3,03 for the public medical services and between 3,67-4,12 for the private ones, 5 being the maximum value to give.

- The highest score calculated for the public medical services is smaller than the smallest score calculated for the private medical services.
- Another interesting aspect refers to empathy. This has the smallest score for both expectations and perceptions in both private and public medical services. An explanation of the low score regarding the expectations of this dimension could be the way in which it has been perceived in the course of time. The empathy here refers to the involvement, dedication, care, capacity of offering/giving attention to each customer/patient individually.
- There is solid argument, at least for Oradea surveyed area, from the point of view of these characteristics, that a profile of the private medical services customer is still vague and undefined.
- Even if there are discrepancies between the private medical services and the public ones for the calculated scores of the 5 dimensions, the hierarchy is almost the same: Empathy, Responsiveness, Reliability/Trust/Honesty, Competence/Certainty, except for the dimension aiming at the Physical/tangible environment acceptability. This one has the highest score for the private medical services and the third place for the public ones.
- As future research, we intend to measure (using a structured questionnaire) the intensity of the quality culture for the Romanian hospitals. As a consequence of all these results, we seek to validate there is a correlation between quality culture for the Romanian hospitals and the satisfaction degree of their patients/clients.

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STRATEGICALLY REPOSITIONING RUSSIA

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Positioning is a very important marketing concept. Its importance was strongly emphasized and implemented in the case of companies, but is somehow neglected when it comes to states. A country acquires a position in the mind of a person very much like any other product does, which is very important especially when that person exerts an executive role. Nowadays Russia has a poor image or no image at all, both internationally and in Romania. In order to regain an important position in the Balkans region, Russia must set aside any political agenda and reposition itself as a business partner on equal terms. The first goal of this article is to clarify Russia's position in the minds of future Romanian executives. The second goal is to outline a recommended course of actions for Russia's repositioning.

Keywords: marketing, positioning, strategy, Russia, marketing research.

JEL Code: M3.

Conceptual framework

The concept of positioning is strongly linked with the process of trade. Positioning was one of the marketing elements that had been used since the beginnings of trade. However, in those days its meaning was rather limited, focusing on the concept of "reputation". All the merchants were seeking a good reputation and wanted to stand out with something: the best/fresher products, the widest range of goods, the most famous/important clients. Further on, at the beginning of the 20th century, the social and economic progress led to the appearance of marketing as a science. However, we can definitely conclude that this isn't the birthday of positioning. This concept is not typical of the first two stages in marketing's evolution, namely the orientation towards production (1900-1930) and the orientation towards sales (1930-1950). This is due to the fact that the concept of positioning cannot endorse a theory whose primary focus is not the consumer. Therefore, the concept of positioning is typical of the orientation towards marketing.

The word "positioning" was introduced by Jack Trout, an advertising executive, in his 1969 article published by "Industrial Marketing" and "Advertising Age". A few years later, in 1972, he teamed up with Al Ries, another advertising executive, in order to write an article called "Positioning cuts through chaos in marketplace", also published by "Advertising Age" (Enis and Cox 1988: 410-420). This was only the beginning of their lifelong crusade aimed at establishing positioning as one of the most important concepts in marketing.

The first battle that had to be fought was over the content of positioning. As always, when a new concept arises, there is more than one opinion about its meaning. For instance, some authors considered that positioning is the differentiation of brands by studying the ways in which their consumers differ as well as how consumer perceptions of various brands differ (Alpert and Gatty 1969: 65). The flaws of their approach are that positioning is not presented as a process which unfurls in the mind of the consumer and its result is a classification of brands. There are authors

who consider positioning to be a promotional strategy which attempts to place a brand along one or a number of dimensions relative to other brands in the same generic class. No matter what dimensions are employed, positioning is essentially a strategy used by the marketer in an attempt to find a niche for his brand (Houston and Haneski 1976: 38). This is obviously a narrow definition with respect to positioning. This concept has equal importance for product, price, promotion and placement, which means that it cannot be just a promotional strategy. Positioning is very useful not only when looking for a market niche, but especially when confronted with strong competition. From the management standpoint, the author believed that positioning is a decision to serve a particular segment with a program tailored to those specific customer needs (Biggadike 1981: 624). Unfortunately, we can highlight here a confusion between targeting and positioning.

Nevertheless, after a few decades of debate the Ries & Trout definition of positioning prevailed. The story goes like this: a company discovers different needs in the marketplace, segments the market accordingly, targets those needs that it can satisfy in a superior way, and then selects and communicates a position which is relevant, effective and consistent with the company's distinctive offering and image. Positioning is the act of designing the company's offering and image to occupy a distinctive place in the mind of the target market. The result of positioning is the successful creation of a "customer-focused value proposition", a cogent reason why the target market should consider buying the product (Kotler and Keller 2006: 310). If a company does a poor job of positioning, the mind result will be a generalized confusion and a poor classification. On the contrary, if a company does an excellent job of positioning, then the rest of its marketing planning comes along smoothly.

The second battle that had to be fought was over implementing the concept of positioning in the daily business practices of every organization. We are still in the middle of this battle. Any organization should be interested in this concept, as all the successes and failures that were recorded on the for profit and not for profit battlefields can be easily explained using the positioning paradigm. Nowadays, there are still companies which go straight from identifying the need to marketing mix, but there are also many companies which use positioning as a weapon to undermine the competition and hypnotize the consumers. Nonetheless, there is still work to be done in order to clarify the role, ease the implementation and expand the scope of positioning to every human activity on Earth. There is also a need for improved marketing research methodology for positioning studies. A good progress in this area has been made by using the "means-end chains theory" (Vriens and Ter Hofstede 2000: 4-10).

Unfortunately, we face a much greater challenge when it comes to countries. Before embarking in such a difficult endeavor, we must ask ourselves: is really positioning a concept that can be applied to nations? Not only that the answer is yes, but it's very important for a country to make a constant effort regarding its position in the public's mind. Let's examine a few examples which support my theory (Popescu 2010: 119):

A) countries which ignore the concept of positioning:

1) Romania.

After 45 years of communist rule, Romania emerged on the world stage as a country with a very poor international image. For the international public, Romania was the country that shot Ceaușescu (the former communist leader) during Christmas, after the bloodiest and most violent anti-communist uprising in the whole Eastern Europe. The easiest way to see the results of little to no effort concerning positioning is when a conflict arises. In March 1990, Romania was experiencing an interethnic turmoil in Târgu Mureș, a city with a strong Hungarian minority. After a few weeks of rising tensions the Romanians and Hungarians clashed, leaving five dead and tens of others wounded. Romania/Romanians were depicted by the international media as the

aggressor. Why? Let's examine the facts. Romanians were the majority, Hungarians were the minority. Romania had a poor international image, Hungary had a good image, boosted by a very active lobby. Conclusion: the country with a poorer international image is very likely to be depicted as the aggressor and/or the guilty party in any conflict. A further downside is that, in the near future, such a poor image tends to go from bad to worse. In our case, Romania's image was further deteriorated by repeated miner uprisings and the illegal activities of the Romanian émigrés.

2) Serbia during the Yugoslav secession war.

The secession of a few members of the Yugoslav Federation should have been a peaceful process. Unfortunately, Serbia made the mistake of going to war against its neighbors under pretext of protecting the Serbian citizens who lived there. Although all parties were guilty of genocide and ethnic cleansing, Serbia was depicted as the aggressor. Why? Serbia had the advantage of numbers over any of its adversaries. Moreover, the international image of Serbia was damaged by the dictatorship of Slobodan Milosevici. Conclusion: Serbia had a poorer international image than Slovenia and Croatia, and it was immediately designated as the aggressor.

3) Russia during the 2008 Caucasus war.

The Caucasus is a sensitive region for Russia. On the one hand, Russia faces a separatist movement in Chechnya, and so far it has been unable to end this conflict with a negotiated solution. On the other hand, Russia supports two separatist movements in Abkhazia and South Ossetia, at the expense of Georgia. When Georgia tried to regain control over South Ossetia, the Russian troops intervened under the same pretext of protecting its citizens who lived there. This is a fallacious pretext and, as a result, Russia was depicted as the aggressor by the international media. The reasons are more than obvious: Russia has a history of imperial behavior towards smaller nations and it enjoys an overwhelming military advantage over Georgia. Moreover, the other side had a good international image as Mr. Saakasvilli came to power by ridding the wave of the orange revolution.

B) countries that apply the concept of positioning – The United States of America.

They are the classic example of outstanding communication for positioning purposes. Not all the conflicts in which America involved itself were just wars, but they were able to see them through without being labeled as the aggressor. The best example was the 2003 war against Iraq. Saddam Hussein had no weapons of mass destruction, but with tenacious and focused communications they convinced the public that he had. When the facts proved them wrong, they claimed that the morally acceptable reason for having this war was overthrowing Saddam Hussein and bringing democracy to the Iraqi people. This kind of mind juggling is possible only when you have a good international image, and such an image cannot be built overnight. America built its image since World War II by offering financial support to the Western Europe countries, by supplying security to its NATO allies, by exporting the American way of life, by movies in which is depicted as "the land of promise", "the home of the brave" and so on.

Based on the above examples, I believe we can derive a few conclusions (Popescu 2010: 119). First of all, it's obvious that the concept of positioning can be applied and is useful even when it comes to states. The positioning paradigm has helped us to analyze and understand the above examples. Second of all, the international image of a country is the main element which determines the position it occupies in the mind of the public. A country acquires a position in the mind of a person very much like any other product does. During its life, a person uses a multitude of sources (personal experience from visiting the country and/or interacting with its citizens, close relatives, friends, opinion leaders, mass media, other sources) in order to accumulate information about a country. Based on this information flow, a person builds and constantly

updates the image of that country. This image can be summarized in one or a few words which describe the position it occupies in the mind of the person. This position is very important, as it will determine the person's future attitude towards that country and everything related to it. We can further conclude that international media plays a vital role in implementing positioning, but there are also other tools for creating and communicating one's position. Last but not least, we can doubtlessly conclude that the easiest way to see the results of little to no effort regarding positioning is when a conflict or a crisis situation arises.

Our research

Keeping in mind the above conclusions, we can now take a closer look at the case of Russia. Generally speaking Russia has a poor international image, but when it comes to the Eastern European states the image is even poorer. This shouldn't come as a surprise for anybody. When the Soviet Union collapsed, Russia was very eager to inherit most of its assets and very reluctant to inherit most of its liabilities. Willy-nilly, Russia has to accept this burden, as it is considered the rightful heir of the USSR. The research has been conducted in Romania, so the results present only the position of Russia in the minds of my Romanian respondents. A future development on this theme would be to determine Russia's position in every Eastern European country and in Eastern Europe as a whole.

In order to guarantee the validity of our findings, we chose a full research. Thus, all the 3rd year (last year) students were asked to fill in a questionnaire regarding the positioning of Russia. We chose this group of respondents because starting this September they will begin working for Romanian or multinational companies. Their opinion is important because in the long run they are the future executives of those companies and, who knows, maybe the future leaders of the country. The following results were just a confirmation of our previous assumptions.

Our first objective was to determine whether the respondents believed Russia to be an interesting tourism and business destination or not. Previous research (Popescu 2010: 119) has shown a strong correlation between thinking highly of a country and selecting it as a future tourism or business destination. First of all, I compared Russia with other major European tourism destinations, such as France, Spain, Italy, UK and Germany. In this case Russia finished in the last place, having a poor minus 0.64 Likert score. Only 24% of the respondents selected Russia as a possible tourism destination, far behind UK with 80% or France with 79%. Second of all, I tried a regional approach by comparing Russia with all the other Eastern European countries. There were no positive Likert scores, which tells us that the Eastern European countries are far less popular as tourism destinations than their Western counterparts. Russia was indicated by only 23% of the respondents, trailing Croatia with 39%, The Czech Republic with 32%, Bulgaria with 30% and Hungary with 26%. We can now conclude that Russia's results are mediocre. From the tourism standpoint Russia isn't among the market leaders, as it was mentioned as a possible future destination by less than a quarter of our respondents.

The next step was to determine whether the respondents believed Russia to be an interesting business destination or not. First of all, I compared Russia with Germany, UK, France, Spain and Italy as main European business destinations. Again Russia finished in the last place, with a poor Likert score of minus 0.62. Only for 20% of my respondents Russia is a possible future business destination, far behind UK with 59% or Germany with 58%. Second of all, the regional approach compared Russia's business opportunities against the potential of all the other Eastern European countries. This time we had only negative Likert scores, as an indication that the regional business opportunities are either unknown or unattractive for our respondents. Russia was indicated by only 22% of the respondents, trailing Hungary with 30%, Bulgaria with 29%, The

Republic of Moldova with 27% and Poland with 26%. Again Russia is not on the podium. This is a disastrous result if we take into account Russia's abundantly existing business opportunities. Besides the poor international image, the above results are also due to the lack of information about Russia's opportunities. Most of my respondents confessed that they know very little about anything concerning Russia, but they are eager to learn more. 67% of our respondents showed a lot of interest regarding Russia's touristic and business opportunities.

We have shown previously in this article that during its life, a person uses a multitude of sources (personal experience from visiting the country and/or interacting with its citizens, close relatives, friends, opinion leaders, mass media, other sources) in order to accumulate information about a country. Now we can tell for sure which are the sources used by our respondents in order to gather information about Russia. The internet was by far the most widely used source, as it was mentioned by 91% of the respondents. Very popular sources of information are also television (52%), the opinion of friends and relatives (48%) and the press (35%). Lesser used sources include participation to various events (24%), Russian cultural centers/associations (9%) and student organizations (6%).

The above results allow us to derive a few important conclusions. First of all, there is an obvious lack of information about everything concerning Russia, and this situation doesn't lead to a neutral but to a negative image. Russia needs to communicate more and do so in languages of international circulation. Second of all, Russia needs to communicate better, meaning that it should supply the international public with all the information that might be of interest. There is a significant interest for touristic, business and other types of opportunities, but the information available are scarce. Last but not least, Russia needs to take full advantage of the information sources available. If most of the respondents are using the internet, there is a need for better information sites, with at least an English version. If the respondents are using television, we need to support as many news about Russia as possible and we need a Hollywood-like film industry. Russia also needs to organize as many events as possible and to offer educational opportunities in partnership with student organizations.

This is the road ahead. It's a difficult road, but at the same time it's the only road. If Russia doesn't take this road, its image can only go from bad to worse.

VI. Note

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BUSINESS INCUBATORS AND SUSTAINABLE INNOVATION

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Innovative businesses are often the result of collective action of organisations involved in many-sided market structures, which can be found in and around business incubators or technology centres. Within such frame environments, many group interests beyond those of single producers and their immediate clients exist and interfere. Rather generically, important economic outcomes of innovations are sequences of cost reduction events at the level of economic sectors, where the nature of (sector-wise) technology is influencing the pace of these events. At the conceptual level, we describe the social learning and social innovation process which leads to sustainable innovation by means of the influence exerted by firms on each other within constrained environments such as business incubators. These environments need not to be organized according to any sector logic. We propose that the influence exerted between firms is increasing in firm similarity, in the degree of product complementarity, and also to depend on (mutual) trust relations.

Keywords: Innovation, Incubators, Learning, Networks, Sustainability

JEL code: A12, M39, O30, O31

1 Introduction and motivation

Innovation is an important engine of economic development but it also entails a dual nature. While it enables formidable increase in productivity and comfort, occasionally finding solutions to very hard problems, in the longer term it also creates new problems and holds the potential for more and new types of disasters. Most of these features are difficult or impossible to predict in fine detail. However, the awareness of unforeseen risks is growing in various types of consumer and producer populations around the world. A rather vague but increasingly vociferous request is to stick to “sustainable solutions” in technical, economic, and social terms, meaning to find collectively acceptable and commercially viable ways to impose a sense of “expected medium term stability” of societal development. Examples of the dual nature of innovation abound. Some more extreme cases should illustrate this. Satellite telecommunication is revolutionizing entertainment, monitoring and parts of business. Space debris as an inevitable consequence is posing serious future threats and costs. Improved or even personalized medicines cure ever more diseases but they are posing both, huge challenges and costs of care for the aged, possibly also by proliferating later-life complex illnesses. Deep sea drilling taps formidable oil and gas reserves but is also producing hard to handle spills. Alternative energy solutions to fossile fuels can lead to astronomic future decommissioning costs. We note that, very much in symmetry with the role of sustainability in society as a whole, in the world of firms and markets, the incubation process may be viewed as a “moderator,” which attempts to overcome the disadvantages of highly paced, short-term oriented capitalist economies. In sections 2 and 3 a concept for representing the societal forces shaping sustainability and incubation for the innovating firm is described and ways of transforming the concept into concrete tools of assessment and valuation are pointed at.

2 Towards assessing the role of sustainability and incubation

Direct environmental consequences of using processes are already difficult to assess, e.g. think of the large number of variants of bio-fuel processing, which are contained in public science data bases like *Science Daily*. Consequences of using products and services may also be diverse, for

instance by invoking a path dependent mechanism, which may “lock in” earlier but eventually inferior solutions, a point put forward insistently by (Arthur 1989). Given multiple risks, both for the producer and the consumer of innovations, a *branded risk assessment* may be called for. Exactly this may be achieved in a credible way by an incubator network, which allows a multi-party involvement. Brondizio et al. (2009) and Ostrom (2009) teach us – albeit in a more general context – that polycentric systems (implying multi-party involvement) hold the key to sustainable solutions of complex problems involving environmental, social and a series of commercial and economic interests. Following (Ostrom 2009) there are four types of goods, namely [1] *Common pool resources* (example: forests), [2] *Public goods* (example: knowledge), [3] *Private goods* (example: clothing) and [4] *Toll goods* (example: daycare centers), which are mainly characterized by different property or appropriability related considerations. From a perspective which is more concerned with the description of innovation by firms, we stipulate that the new technologies imply multiple and changing roles of goods: Increased *personalization* of private goods may be achieved by heavily drawing on public and private knowledge and commercialization is achieved by different business models, for instance by making use of the role of the toll goods or by means of technology induced zero-price co-offerings as has been put forward by (Anderson 2009).

Apart from these basic considerations, empirical incubation processes assume complex structures and dynamics and are driven by complex motives. In spite of numerous failures, incubation is rather wide-spread today, both within developed and emerging economies. The context based evolution of incubators is leading to situations of “meta-innovation”, as is described for the case of emerging Brazil in (Etzkowitz, de Mello, and Almeida 2005).

In the last twenty years best practices for incubation have also been established as described in (Bergek and Norrman 2008), and the need for multi-criteria evaluation and ranking of business incubators is in high demand, see e.g. (Schwartz and Göthner 2009). However, the difficulty of evaluating incubators is related to the difficulty of measuring and assessing organizational creativity as described in (Sullivan and Ford 2009). Density of technological connectivity between firms has an impact on the inventiveness of science based firms, and somewhat surprisingly, venture capital has less influence on innovation intensity than expected, as is found by (Rickne 2006).

The role of branding incubators during and after the eventual success of technology spin-offs is highlighted in (Salvador 2010), the suggestion being that this somewhat special type of branding should be increased. As in any market, in the market for incubator tenants too, there is a need to educate the consumer, to stimulate demand and to cultivate awareness of the competition as is put forward by (Patton et al. 2009), and whenever possible, a “pipeline” for new business ideas should be sustained. This leads us to the domain of Knowledge Management (KM). Following Palacios et al. (2009), obstacles exist to effective KM introduction. Important reasons are named in (Yu 2002): (1) absence of a culture to share knowledge; (2) employees do not know much about KM; (3) no knowledge diffusion and learning; (4) insufficient internal knowledge transfer; (5) obsolete or over-complex technology; being the most important. (1)-(4) relate to insufficient networking and (5) to a narrow minded technology policy, e.g. the best technology from a network neighbourhood is not adopted. Gilsing et al. (2009) are stressing the fact that across different incubation environments, more radical innovations seem to be less often pursued than incremental ones, leading to *under-innovation*. Raymond and St-Pierre (2010) draw our attention towards a frequent situation, where “... the impact of R&D on product innovation is mediated by process innovation.”

3 A concept for a process-combining computational approach

In the sequel we will nevertheless attempt to draw up a concept, which is capable, in principle, to assess the role of sustainability and incubation and to evaluate networks of firms within such structures. If appropriate, we also indicate which method can be used to solve the resulting optimization and data analysis sub-problems. Figure 1 collects the items and sub-processes involved in the incubation of firms, which posses the option to produce in a sustainable manner. An incubator may be regarded as a kind of super-firm, with less stringent short terms goals but with complex, and multiple, long term objectives. Both, a single firm and an incubator are subjected to competition but also face aspects of potential cooperation. Both must decide which markets to enter. For some hints of how to model such decisions see (Wawrzyniak and Wislicki 2008). While a mature or a non-incubated firm will focus more forcefully on price competition and product-line differentiation, an incubator may be thought of enabling more technological competition by its tenants, postponing "classical" competitive activities. Sustainability considerations are not within the shot term commercial goals of the single firm. Entry points for sustainability issues into the incubation-market process depicted by figure 1 may be created by long term actions of organizations within polycentric societal power systems as considered by (Ostrom et al. 2009). Eventually, they may impinge on all market participants to reflect about the outcomes, the private and the collective image effects of producing more sustainable products and by employing more sustainable technologies.

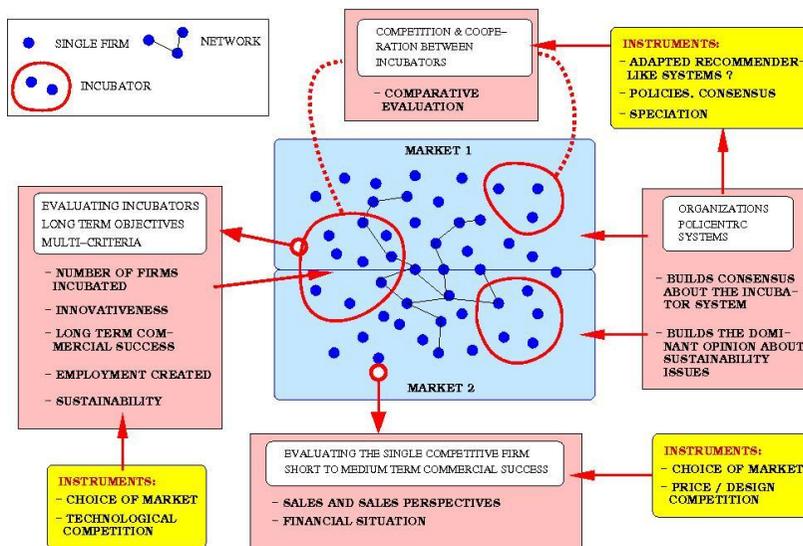


Figure 1: The incubation process and the entry points of sustainability issues and commitments.

At the level of incubator competition and cooperation there is room for designing instruments which for instance propose speciation of incubation services for certain markets and regions in a more principled manner. As described in (Schebesch et al. 2010), more adapted recommender systems proposed for computational marketing may be constructed. In order to finally arrive at a problem representation which more directly allows the derivation of computable models and the derivations of more concrete evaluation procedures for incubators and firms, we next focus on the innovation process, which seems to be central to both incubation and sustainability issues. In figure 2 we represent several sub-processes of innovation. The single firm is attempting to innovate in order to enhance its competitiveness. Innovation can be the result of "classical" in-

house research and development, with costly exploration of new technological and product design solutions. The risk of in-house research can be temporarily lowered by incubation. Cost reduction of processes can eventually induce product innovation. Hence, evaluating the design complexity of technologies and its influence on cost reductions over time, and especially so over past cumulated production as in (McNerney et al. 2009), will be most important in order to assess the pace and regularity of innovation events as a function of its underlying "engineering design". A new technology is represented by the introduction of a new interconnection matrix between process components. Sustainable technology solutions may be characterized by certain types of "recognizable" interconnection matrices. In more recent times, other important aspects of innovation processes such as innovation contests and social innovation are increasingly considered. Two premises lead to the growing relevance of this type of innovation procedures:

- In certain product classes and markets it becomes increasingly difficult to "forecast by expert opinion" what consumers really like.
- Organizational setup and transaction costs decrease dramatically with the spread of the internet and of different types of social forum subnets.

While in general such approaches are clearly useful for automated marketing and forecasting procedures (Schebesch et al. 2010), there is evidence that they can be applied (with adaptations) for innovation processes too, as is outlined in (Terwiesch and Xu 2008).

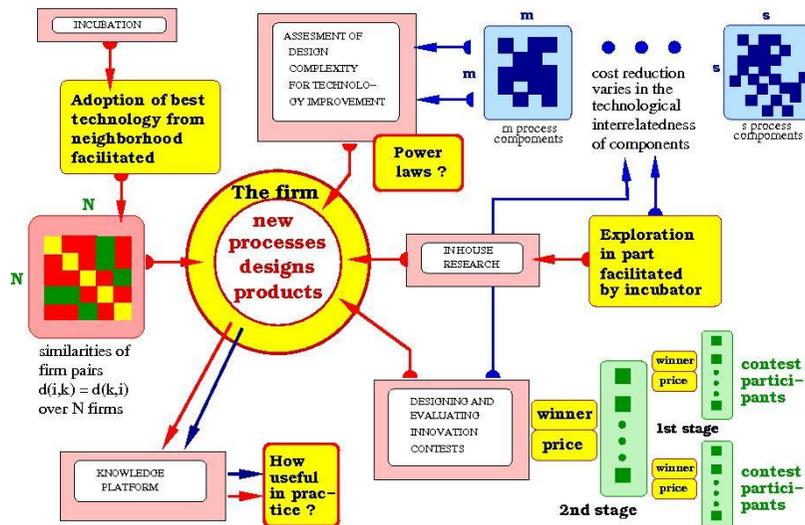


Figure 2: Innovation processes: innovation contests and technological interrelatedness.

The results of an innovation contest may be a process or a product innovation (figure 2, lower rhs process components). The innovation contest requires designing and evaluating a competition for new solutions of posted problems amongst a large number of participants originating from a larger societal context. In order to make these contests more efficient and more credible (i.e. to enhance serious participation), such innovation contests have to be designed to encompass two or more stages, with appropriate mechanisms for picking winners and for paying out prices for attractive or promising solutions. The outcomes of such innovation contests may contain also additional information, for instance with regard to acquaintance with and challenges caused by using sustainable processes and products, i.e. information about the degree of empathy and goodwill present in a wider population with regard to *sustainability commitment*.

A final item of figure 2 is the process item called "knowledge platform". While it would be certainly desirable to evolve such a knowledge platform (especially for incubators), there is to

this day no compelling procedure concerning the collection and handling of information about all the mentioned sub-processes of innovation, their variants and success rates, and their relation to sustainability issues. In empirical practice all these sub-processes function separately and different modelling attempts also tend to concentrate on single aspects, for instance on how to best design innovation contests.

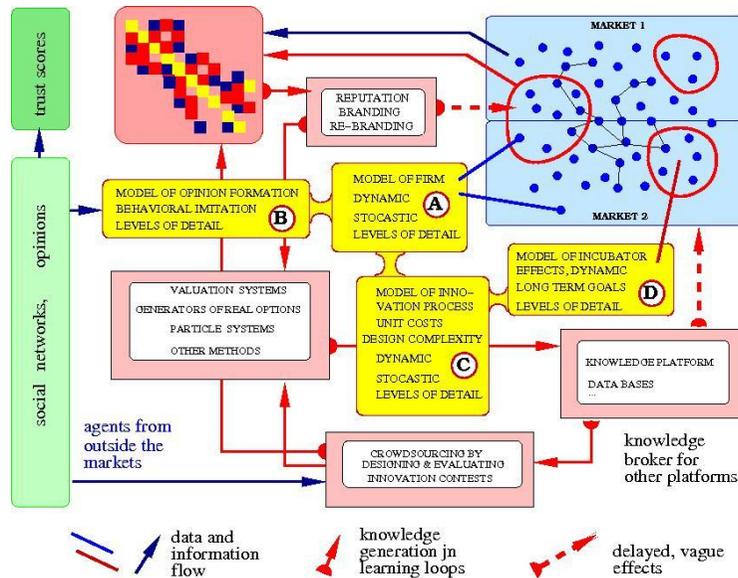


Figure 3: Real-life feedback loops in social learning connected to aspects of innovation, incubation and branding, and behavioural imitation central to sustainability issues.

In figure 3 finally we consider the real-life feedback loops within the process of social learning, entailing innovation (from figure 2), incubation, behavioural imitation and opinion formation, which are central to sustainability issues. These are real life processes occurring by means of more or less formalized mechanisms, differing in composition and, from industry to industry, coming in varying degrees of relative importance.

The figure distinguishes two contexts, namely the two markets with both independent and incubated firms, and, a more general, non-specific, “background” of social networks with agents which may belong to the markets. As innovation processes unfold, incubators and firms start a process of (mutual) trust formation, which results in trust scores (to what extent should firm i trust firm j ?), which may also help to evaluate firm j , for instance concerning for the stage of maturity it has reached within an incubation process. The evolution of trust scores is using information from the markets but also from the “background” social networks of firms. Trust scores are important in order to guide a behavioural imitation or a technological adaptation process. As incubators function like a kind of super-firms, but with a broader and more long-term oriented set of goals (see also figure 1), they are competing and cooperating with each other. The resulting reputation is an example of *social capital*, which may enter a more general assessment and valuation process indicated by the box “Valuation systems” of figure 3. This box contains an entrance named “generators of real options”, which highlights the fact that option models for many different scenarios of the stochastic innovation-incubation process may have to be created. Both, the reputation mechanism and the evolving knowledge platform (see also figure 2) do not exert an unconditional influence on market agents, and any possible effect may also be strongly delayed in time. Finally, crowd-sourcing by innovation contests, using agents from outside the

markets, is also inherited from figure 2. The boxes from figure 3 named by encircled letters A,B,C, and D describe processes which can be modelled separately by using dedicated dynamic models. An evaluation would be done by way of (1) massively collecting data about past market-incubation interactions (about firms, incubators, sustainable technology projects, etc.) and (2) attempting to cluster and classify the data by using technological or other constraints, as is described in general approaches to constrained clustering (Basu et al. 2009). A cluster would contain sustainable technology projects with favourable outcomes and another those projects with unfavourable outcomes for the involved firms.

4 Conclusions

We contributed to the conceptual discussion of a complex situation from economic reality, namely the innovation process in the presence of incubation while coping with the implicit societal pressure of adopting sustainable technology, without the latter being of short term commercial advantage to the single firm. We developed a concept for integrating incubation and sustainability issues into real-world process models but, simultaneously, also into a computational concept concerned with the question of how to assess and to value the complex stochastic process resulting from the incubation-sustainability relation.

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THE IMPACT OF THE 21ST CENTURY FOOD MARKETING ON CHILDREN'S BEHAVIOUR

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This paper aims to raise a question mark regarding children's food habits in the last decades in Romania, and how globalization, marketing and advertising influenced and changed our old romanian food preferences. We will highlight that children spent a lot of time watching TV, choosing a cartoon character, or an advertising star on the same age as him/her as a model, and then copying their behaviour, and acting like them. So, they have the idea that they will gain their parents' love and their colleagues appreciation.

The rise of obesity is one of today's biggest societal challenges. Thus, to halt obesity has become a goal in several political sustainability strategies. The focus is on children since their health behaviour is expected to have a strong impact on consumers in adulthood. To fight childhood obesity, the challenge is to develop the 'right' policy toolbox. One complicating aspect amongst others is the numerousness of actors involved. To find a policy mix and assess its consequences for all actors, it is essential to understand the underlying mechanisms – the impact of external and internal factors on children's health behaviour. Tools such as regulation, information and education appear to be insufficient to curb this unsustainable consumption behaviour.

Keywords: food marketing, advertising, children, gatekeepers, ethic code

Jel code: M31

1. Introduction

Marketing and advertising to children has been growing exponentially in Romania during the last two decades, and corporations spend billions each year trying to influence children's brand and product preferences. After the *Ethic Code for Advertising Adressed to Children Referring to Food Products* signed in 2008, marketers have aggressively targeted children although the code is not in favour of using children for promotional purposes.

World Health Organization (WHO) figures show that worldwide, over 1 billion adults are overweight and around 300 million are obese (Obesity is assessed using body mass index (BMI) above 30 kg/m² and represents the upper tail of the population distribution of BMI). Over the past 30 years, the frequency of overweight children has tripled (Miller, J., Rosenbloom, A. & Silverstein, J., 2004). While governments' influence on changing individual consumption behaviour is limited and needs a long-term commitment, a more promising approach is to actively design the consumption contexts people live in: the food and drinks offered, the marketing and advertisements contents broadcasted, the walkability and bikeability of cities and so forth. Urbanized consumption environments today have been coined as being 'obesogenic', i.e. containing stimuli that encourage obesity (Lobstein, T., Baur, L. & Uauy, R., 2004).

The present paper treats aspects related to the ethical food marketing to children and the social responsibility of food marketers. Based on research, the responsibility of the childhood obesity can be placed on children, parents, schools and food marketers, who all contribute to this problem in some way. Children are consumers today and will be the buyers of tomorrow. Companies are following the idea:

„sell these children on your brand name and they will insist that their parents buy no other”. This is the generation whose children are sicker than their parents. Why? One reason is the excessive consumption of sweets, fast food and lack of exercise.

Advertising and marketing to children is not legal, according to the *Ethic Code for Advertising* and RAC (Romanian Advertising Council) (<http://www.rac.ro/cod>), so the question that arises in this case, food marketing in particular, is: is it ethical? And if it is ethical, are marketers responsible for misleading messages in adverts and what are the responsible ways of selling food products to children? What are the responsible ways of promoting products for adults without influencing the child through television?

Advertising on TV aims to stimulate demand compliance strategy, namely pull strategy. Pull strategy (to attract) involves marketing activities, especially advertising and promotional marketing, targeted end-user (in our case, the student aged 8 to 12 years) and intended to make it apply to products at intermediaries (parents, grandparents), thereby causing the latter to demand services from providers (the company who paid for a TV spot and that is advertising). Attraction strategy is demand-driven, aiming to create or increase them. The goal is to provide enough information to attract consumers.

Having a picture of the current landscape with regard to food advertising to children is essential as the country moves forward in the effort to combat childhood obesity. If we overestimate the presence of food marketing in children’s lives, or its role in their diets, we may place too much faith in marketing-oriented policy solutions; if we underestimate it, we may neglect important policy options.

Government agencies and advisory bodies have faced frustrating obstacles in getting the data they seek to help inform their deliberations; it is the purpose of this paper to help fill at least some of the gaps in their knowledge, and to provide a benchmark from which to measure future changes in the food marketing arena.

The study answers a series of fundamental questions: How many food ads do children see on TV today?, What types of foods do they see advertised most frequently?, What is the nature of the appeals used to market food to children?, What proportion of food ads model promote physical activity?, How often do food ads include a “push” to company websites?, What proportion of food ads use health benefits as a primary appeal, or offer specific health claims?

2. Background / existing international action

Children today watch television more than ever and are therefore they are more bombarded with advertisements. Research has shown that children are capable of storing and remembering many of the ads you see on TV, whether they are for toys, food and cars. Advertising agencies spend billions annually for advertising aimed at children, but in what sense? Studies show that children only need a view of a commercial ad to develop a preference for a particular product and that this preference is reinforced by repeated exposure. It is not just the goods that address their children are remembered, but also products for parents. One study found that children bombarded with junk food ads eat up almost double unhealthy snacks and sweets compared to the amount consumed by a child who has not seen those ads. Those who are already overweight or obese are most sensitive to food advertising. Nutritional choices made by parents and children depend on many factors. Studies show that one of these factors may be advertising to children. These studies reveal that advertising can attract children’s attention, can influence their choices and can encourage them to determine, in turn, their parents to buy certain products. Over the last few years, major international food and drink companies have introduced a number of new policies and pledges covering the marketing of their products to children. This research aimed to look beyond the headlines to see what the companies have actually committed themselves to.

Analysing food and drink company policies on the marketing of food to children is a complicated and, at times, confusing undertaking. Is often what is not said, rather than what is said, that is significant. Brands like Unilever (*Left Wanting More, Food Company Polices on Marketing to Children Report*, part of *Junk Food Generation*, downloaded from www.junkfoodgeneration.org on 6th Aprilie 2011) do not have a global policy and rarely a regional policy, however some of them have signed a commitment (*Ethic Code for Advertising in Romania*) which gives them credibility in front of the parents and teachers that they would not target their products and beverages to children. However, these companies and other just like them use indirect form of advertising to children, teasears as "come to KFC", "I'm loving it" etc, use children in their advertisments and create the idea in the mind of a child between 8 to 12 that the product is nutritional for aparently peculiar reasons.

The European Commission (2007) notes that parents having the main responsibility for their children should be able to make informed choices and transfer their knowledge to their offspring. Obesity prevention actions are undertaken by the Romanian Government Programme "Cornul and milk" and in June 2009 the Romanian Advertising Council (RAC) is the depositary of the Ethic Code for Advertising to children on food. Thus reports of problems treated by this code fall under the RAC and are considered by it. Code of Advertising Practice (hereinafter "the Code") was prepared by the RAC in order to use advertising to inform public opinion in Romania fairly, honestly and decently, respecting both national laws and principles of advertising practice internationally recognized both in form and content made by the International Chamber of Commerce (<http://www.rac.ro/cod-produse-alimentare3>). Companies that signed the code dedicated themselves to responsible advertising of food and non-alcoholic beverages to support parents' efforts to promote healthy lifestyles. As such, the companies agreed not to advertise food to children under 12 years old, except for products that meet specific nutrition criteria based on accepted scientific evidence and / or national and international nutritional guidelines. The purpose of this initiative, "Advertising to children under 12 years old" means advertising in a program with an audience of at least 50% of children aged up to 12 years. Companies also undertook not to carry out communications relating to products in primary schools, unless they are specifically required in setting the school administration or educational purposes.

3. Influencing factors: empirical evidence of determinants of obesity

Children tend to copy the behaviour of somebody they like or somebody they see often. Since they watch TV a lot, as the results of the questionnaire sustain, their role models are chosen from what the TV is offering them to watch. If another child is used in an advertisement on the television for no matter what product, food, toys, beverages and even banking, the child who watches the advertisement will begin to consider the child in the advertisement "cool" because he appears on TV and is enjoying the love of the other characters in the ad or has a disered toy or sings a nice song while advertising a product.

So, marketers are betting on a quick transfer of sympathy, respect and reputation of the company star, unlike the version that these perceptions were done by the power of communication of ideas. The public is emotionally attached to a star / celebrity and credited with credibility. This way to attract audiences by celebrities is successful and subconsciously the child wants to be like them, have more in common with them, have the family in the advert etc. Another aspect for which children tend to remember the advertisements, to desire the product, to ask their parents for it, is related to what the celebrity or the mascot in the ad represents for him. If the children see advertising that promotes a highly criticized product, unhealthy appreciated by parents, teachers, other children and child itself, being recognised for its sports performance, healthy lifestyle and so on, children will desire believing the product gives him / she the features, skills, reputation of

the celebrity. We have identified four influencing factors determining obesity between children of 8 to 12 years old:

Parents as gatekeepers

As far as children are concerned, the major responsibility for obesity lies with their parents and families as well as with secondary socialization agents such as caretakers and teachers; all mentioned act as gatekeepers. Parents are working long hours, spend less and less time with their children, try to involve them in as many activities as possible and therefore nutritional aspects often left aside. The child feels distant or alienated in front of his parent and the parents give them whatever they want to gain the child back.

"Parents say they feel in conflict. They want to say no, but they don't want to have their child upset with them" (Zoll, M.H., 2000).

Spending allowance

Children today experience an increased spending autonomy. Children are free to buy from the school, shop, for example, whatever they want. Our research reveals that children in the third and fourth grade, who already know to calculate, receive money from parents to buy themselves sweets, sodas, chips, candy and so on. Even though, school shops are not supposed to sell unhealthy foods and beverages, such errors occur, so 55,55% prepare their school food at home and 44,44% buy something from the school shop. However, children in the first grade choose to prepare their own school meals at home in proportion of 73% , the rest of 27% buy chips, soda and candy. The preferred acquisitions are chips, gum, popcorn with cheese, candy. Non-structured interviews with parents reveal that most of the children receive every day between 3 and 10 Ron.

A modernized food environment

The food industry, retailers and restaurants are considered as important actors in the matter of childhood obesity. They shape the context in which food choice takes place. For many years, it has been debated whether consumers actually use the nutritional information provided on the package at all and if yes, which of the competing systems is the best. For instance, information about included fat seems to make consumers choose lower fat alternatives. Latest research has shown that consumers do indeed use provided health-related on-pack product information – such as General Daily Allowances – but only if it is easy to understand and eye-catching.

Modernized food marketing

The food industry has increased the number of channels used to advertise their products to children. While television is still an attractive medium for the small children and advertisements are a successful strategy for brand building, online marketing such as 'advergaming', in-school marketing and sponsoring, as well as toys and games produced in association with food producers are increasingly used (Wansink, B., 2005). To increase consumption, marketers create positive attitudes for their products and try to channel social norms of parents and children – i.e. for instance shared beliefs about health behaviour – by strengthening already existing behavioural patterns and convincing consumers of the product's benefits. Experiments suggest that food branding changes children's preferences in favour of the branded food (Branca F., Nikogosian H., Lobstein T., 2007). This is problematic since the majority of advertised foods are snacks, soft drinks and sweets that are high in fat, sugar or salt.

4.Objectives and Methodology / research

According to the study *The Impact of Advertising on Parents and Children* conducted by the IMAS and the Center for Media Studies and New Communication Technologies (CSMNTC)

(published in Jurnalul.ro on 29 June 2010) commercials are viewed by 75% of the 6 years old children. The proportion of those who watch advertisements decreases, however significantly with age (<http://zibo.ro/planeta-blog/alimentatie-sanatoasa-10/Influenta-reclamelor-TV-aupra-alimentatiei-copii-or-55>). It is estimated that the percentage of children viewing TV commercials aged between 8 and 12 years is around 50%. According to CI (*Left Wanting More, Food Company Polices on Marketing to Children Report*, part of *Junk Food Generation*, p. 10, downloaded from www.junkfoodgeneration.org on 6th Aprilie 2011), several companies define a child audience as comprising more than 50% of under 12, meaning that large numbers of children may still be exposed to their marketing.

As their participation in consumer markets has grown, children have become increasingly attractive targets for advertisers. This is partly driven by their high media use. All questioned children watch television and 90% of them do not miss the prime time hours, exposing themselves to a variety of advertising.

We have chosen to focus on what we feel is the most influential culprit of the four factors, food marketers, since we believe food marketing campaigns are harming the lives of children by presenting misleading messages. Within two days we analyzed advertising clips for food and beverages for children aired during prime time. After personal observation we concluded that high in fat and sugar products (dairy, cereals and sweets) are pursued in 30% of the advertisements. While foods such as full grain, fruits, vegetables, vegetable oils, nuts conspicuously missing from the commercials (between 1% and 5%). Therefore, commercials encourage the opposite diet recommended by doctors.

| <i>Tabel no. 1. Children's exposure to food advertising on the TV, on average</i> | | | |
|--|----------------------------------|----------------------------------|-----------------------------------|
| Age | Number of Food Ads Seen per Day* | Number of Food Ads Seen per Year | Hr: Min of Food Ads Seen per Year |
| 8-12 | 90 | 32850 | 30 h |
| *between 07:00-22:00 | | | |

On average children are viewing 90 advertisement regarding food and beverages in a single day (an advertisement is seen more than once), therefore a child watches 32850 commercials per year taking into consideration an advertisement lasts around 01:09 minutes. Given the amount of time they spend watching TV each day and the mix in programming and networks that they view, children ages 8-12 see an average of 98:10 minutes of advertising a day for all products (toys, food, media, and so on).

Appeals used in food ads targeting children or teens

Among all food ads targeting children and teens, the most common primary appeal is taste (34% of all ads), followed by fun (18%), the inclusion of premiums or contests (16%), and the fact that a product is unique or new (10%). Two percent of all food ads targeting children or teens use claims about health or nutrition as a primary or secondary appeal in the ad, while 5% use energy as a primary or secondary appeal.

| <i>Tabel no. 2. Other attributes of food advertising to children 8 to 12 years old</i> |
|---|
| 22% include a disclaimer (e.g., "part of a balanced diet") |
| 20% promote a website |
| 19% offer a premium |
| 15% portray an active lifestyle |
| 13% include at least one specific health claim |
| 11% use a children's TV or movie character |
| 7% feature a contest or sweepstakes |

Children of all ages are exposed to a substantial amount of advertising for food and beverages, but their exposure varies significantly by age. Because children 8–12 watch so much television, and therefore see so many food ads, they may be the group most affected by food marketing. This is also likely to be an especially important age for the development of children’s food habits, since they are likely to have more time away from their parents, have their own money, and have more opportunity to make their own food choices. Therefore, policymakers and industry leaders may want to pay special attention to advertising seen by tweens.

1. Limits of the research

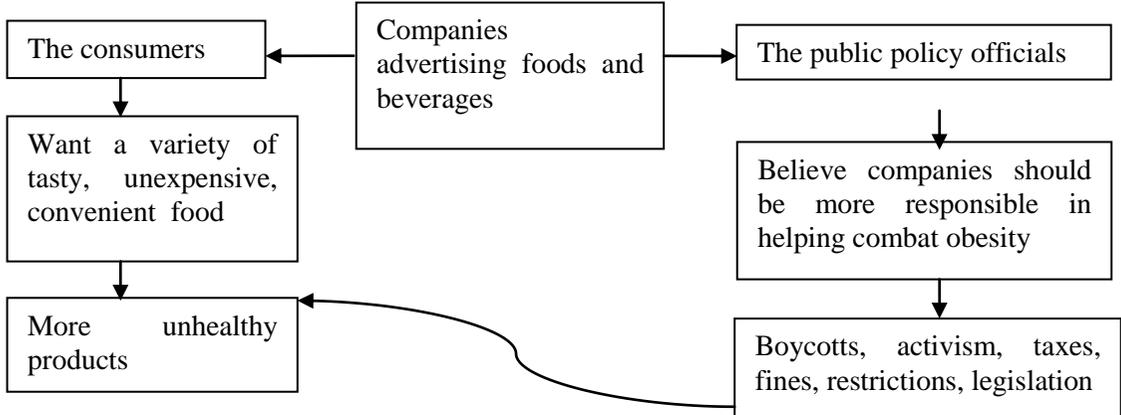


Figure 1. The Vicious Circle of Demarketing Obesity

Although companies say they cater to children’s biological interests, companies have recently been accused of contributing to the growing problem of obesity. The child’s desire for fast-food and other non-nutritious foods, desire induced by the company selling the unhealthy product, leads to the production of more unhealthy products on the market and therefore more promotional actions for unhealthy food, more actions from the public policy officials leading to more taxes, fines, restrictions and so on and so forth, altogether creating a vicious circle.

This study does not address the issue of whether food advertising to children on TV is going up or down, nor does it address the issue of whether such advertising influences what children eat, or should be in any way restricted, either through voluntary industry efforts or through regulatory policy. What it does indicate, however, is that food marketing is a predominant part of the television advertising landscape for children and that young people’s exposure to such messages is substantial, while their exposure to countervailing health messages on TV is minimal.

5. Conclusions

The factors presented above are valuable starting points to change young consumers’ behaviour into a healthier direction. While the goal to reduce obesity is broadly accepted, the motives, strategies, possibilities and dependencies of the various actors in the food system and in food and health politics differ. In the following we argue that policy actions are necessary, but that they can only be effective if all stakeholders support these policies with the means in their reach.

Solutions – developing profile clusters of ideal consumers and by discovering why people like the foods they like, effective dietician can find similarly predisposed people and help them develop the same mental map for that feed.

Although it is easier to target tastes than to change them, there is some opportunity to help consumers learn to like new tastes. People can be fairly suggestible when it comes to food moves. If the name sounds bad, it will bias taste. As long as a food is of at least moderate quality, the

better the description, the better the taste. In general, however, when trying to encourage change in habits, it is easier to encourage small, infrequent substitutions when introducing new foods. It is easier also to target opinion leaders and nutritional gatekeepers, than to target everyone. Good cooks, for example, have a tremendous influence over the eating behaviours of the family.

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SUB-SECTION: ECONOMIC INFORMATICS

MODEL DRIVEN DEVELOPMENT OF ONLINE BANKING SYSTEMS

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In case of online applications the cycle of software development varies from the routine. The online environment, the variety of users, the treatability of the mass of information created by them, the reusability and the accessibility from different devices are all factors of these systems complexity. The use of model drive approach brings several advantages that ease up the development process. Working prototypes that simplify client relationship and serve as the base of model tests can be easily made from models describing the system. These systems make possible for the banks clients to make their desired actions from anywhere. The user has the possibility of accessing information or making transactions.

Keywords: MDA, UML, Online Banking, Class diagram, Platform Independent Model

Cod JEL: C88, M15

1. Introduction

Data intensive web based systems, that in the most of their uptime do data processes have become a part of our everyday life. Several systems of this type appeared on the internet: webshops, online ticket shops, banks, etc. These are used everyday by users around the world.

In case of these systems design the target platform is chosen in the beginning as well as the technology used for the development. These are usually platform dependant application. After the development process, during the implementation process it often occurs that the system exceeds its boundaries and a new platform is needed. Often in this case the whole system needs to be recoded.

The importance of the present research consists of the fact that we can plan a platform independent banking system which can be implemented on any kind of platform. Furthermore offers the opportunity of generating a navigation model from the class diagram for the developers, giving real support to both developers and users. The final model can be applied to mobile applications too.

2. Model Driven Architecture

Model Driven Architecture (MDA) is a new type of view on application development. According to MDA you have to focus on the functionality and behaviour of the studied system, putting aside the technological environment. This way an application has to be modelled only once (Anand et al., 2010).

The starting point is given by the domain model (CIM – Computational Independent Model) which can be expressed by use cases like business objects, activities and tasks. This model is refined with thorough examination; this is how the PIM (Platform Independent Model) is formed. This layer already contains the objects specifications, description of their cooperation and expresses the object states and changes. Taking the environment into consideration the PIM undergoes some more abstraction, this time giving precise specification on the objects, their

behavior, interoperability and reusability (Kennedy, 2006). The model layer that is to be implemented is stated. The Platform Specific Model (PSM) is the base of the components creation and functioning plan. MDA separates application architecture from system architecture. Application architecture contains components and information that specificate the applicatipons functional targets. System architecture contains the low level components and links, that make possible the application architectures axecution. This separation is the base element of MDA. Recoding of the application is not necessary, when a new technology appears, the application is simply regenerated to the new environment. For a lot of popular platforms, like CORBA or .NET; PIM→PSM can be generated. OMG-s standard, MOF (Meta Object Facility), XML (Extensible Markup Language) and CWM (Common Warehouse Metamodel) ensure that MDA is a complete software development method (Raffai, 2005).

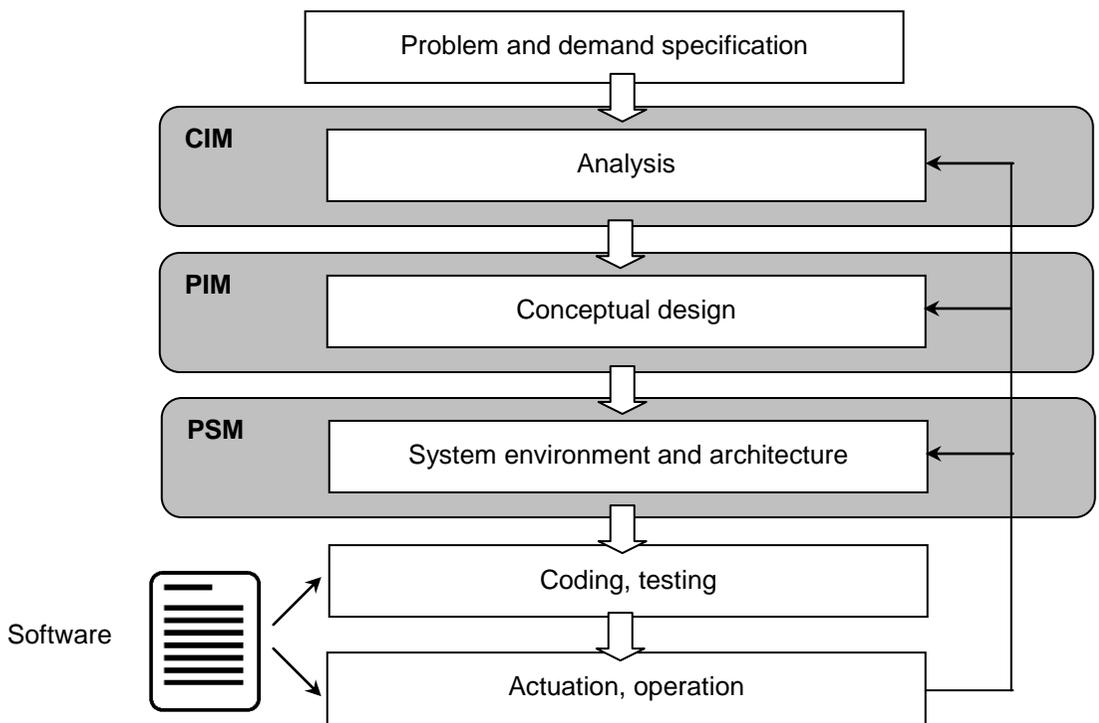


Figure 1: Model driven development

The lifecycle of online system developments base does not vary from the common method. Tasks have to be completed through the same steps, but the theory defines certain principles that define the products of different steps and specificate the models to be made.

MDA can be separated into four parts (Raffai, 2005; Anand et al., 2010):

1. As a first step the system has to be understood and the CIM model developed according to it (Kennedy, 2004). This model's specification is usually a document signed by the user, containing diagrams and tables. So the product is a document that specifies the user's demands from the application.
2. The product of the second step is an abstractization, that is still technology independent. The PIM model contains specifications on the system from the point of view of the most effective solution, it contains metadata from elements of the real system, these connections, structures,

elements behaviour, tasks, interfaces and dependency between elements. The making of the PIM model is an iterative process, elements and their specs are refined continuously, they are tested for their functionality and compatibility with the system.

3. The next step is the definition of the environment and the transformation of the PIM model into PSM. This means that in terms of the environment we associate technology to every PIM element. More PSM models can be made from a PIM model, in condition of the platform that it is realised on.

4. The final step is the realization of the PSM model, the execution of implementation and testing processes, the creation of the whole model of the systems and giving information on its functionality.

In case of classic development, transformation of different models is made manually, while in model driven view these can be automated, speeding up the compilation process. Definition of transformation rules and their coherent use serve the solution of several problems. This way the modification of different applications can be made quick and documented, cooperating software can be attached. Implementation of concept models working on different platforms is more simple.

3. Methodology Proposed

We intend to describe the advanced design of online banking system by using the MDA paradigm. The standard development process consists of 4 steps, as previously presented. The research has been made through a case study, in which we design an online banking system, taking in consideration the next steps:

1. Demand analysis: by which the system's CIM model is designed;

2. Analysis and planning: at this point PIM model is designed conform CIM;

3. Realizing the system: finally PIM model is changed into a platform depended model which refers to the system's implementation;

These steps will be presented in the followings.

4. Case study: Online banking system

The system gives possibility to the banks clients to do their banking from anywhere. When a client opens a bank account he receives a username and a password, so that he can log into the system. This is a web based system; therefore the client can access the system from his home, workplace or anywhere. He has the possibility of interrogating his account or making transfers.

With the password given by the bank the user signs in on the banks website. Other personal information is given, like name, birth date, e-mail, etc. The server checks for credentials and logs the user in. The user can access different services.

It is possible to interrogate information on accounts, traffic for a period or to make transactions and pay bills. The system has to approve every step for security. When the client is done he signs out.

4.1. Demand analysis

Demand analysis is the process throughout which the type of the system to be designed is specified. The demand is a supposed ability that the system has. Demand analysis is not a simple task, especially in case of web applications, because these raise other difficulties:

- An application has to have more entry points;
- Only one detailed information can be offered to the buyer;
- Environment changes quickly;
- There is no predefined development target;

The development process always starts with the demand analysis, which contain functional demands, actors and their tasks (Avornicului et al., 2006). This is the part that is called CIM (Computational Independent Model).

Usage cases help to maintain our demands from the system and to ensure their integrity. Usage case diagrams describe a certain part of a systems behavior from the point of view of external actors. Actors are those who use the system or are responsible for their maintenance.

Actors of online banking systems:

- User: the person that uses the banks online services.
- A bank server: the user accesses his account and registers tasks through it. The server sends the information the user asks for.
- Bank account: the online version of the client’s bank account. It is a separate actor because every information and transaction depends on it.
- Recipient: in case of transfers the amount of money is transferred to the account of the recipient.

The use case diagram is as follows:

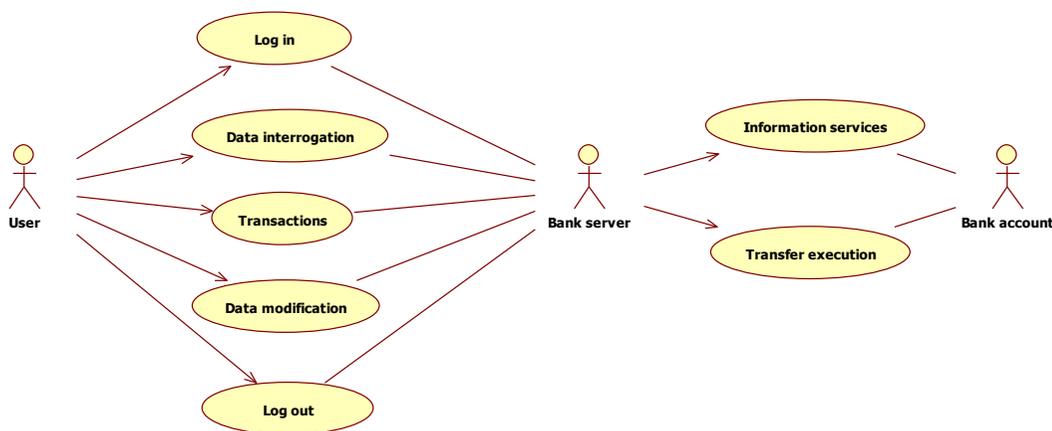


Figure 2: The use case diagram

Usage cases represent a chain of events, every mode that the client can use the system. The main parts of the system are the user and the bank server, executable tasks gather around them. Usage cases show how actors can use the system, what actions they have.

Interrogation and transaction use cases integrate more concepts. To avoid complex diagrams we will use the following keywords instead of drawing every detail separately:

- Sign in / sign out: the user signs in with his username and password into the internet banking system and signs out after he has done his work.
- Interrogations: the system enables the enquiry of information. This information can be: balance, traffic details, account information (date of opening, type, account number). Information is given by the server.
- Change of personal data: the user can change his personal data.
- Transactions: transaction can be made with the help of the server; these transactions can be transfers, payments of public services and other bills.
- Transfers: in case of transaction, the bank puts money from the users account to the recipients account.

4.2. Analysis and planning

The target of the analysis and planning processes is to prepare the plans based on the demand analysis that serves as the base of the web application. Throughout the analysis the non-

functional demands have to be taken into consideration, during the planning functional demands can be dealt with as well.

While planning the wb application, principles of MDA will be followed. The most important is the conceptual planning, while we build a model that contains concepts defining the application. The concept model is made from the CIM model, that contains specifications concerning the professional field. This is considered a PIM (Platform Independent Model) for it does not take into consideration any specific technology (Avornicului et al., 2006).

4.2.1. Class Diagram

The class diagram serves for the static illustration of the system, presenting the classes and their relationships. As a first step the objects are defined and then they are grouped into classes by their behaviour.

In case of an internet banking application the following classes are used:

- User: The users class contains information on the banks clients. The clients can be identified and logged in.
- Account: Contains information on the users accounts.
- BankServer: The Bank Server class contains the detail necessary for the banks operations.
- Transaction: Transactions that the system can handle.
- Verification: Control class validates the users ID and password.
- LogInWindow: The user logs in through it.
- MenuSystem: The menu is an interface between the systems options and the users screen.

After the definition of the classes, their extensions, connections and multiplicity the class diagram is built.

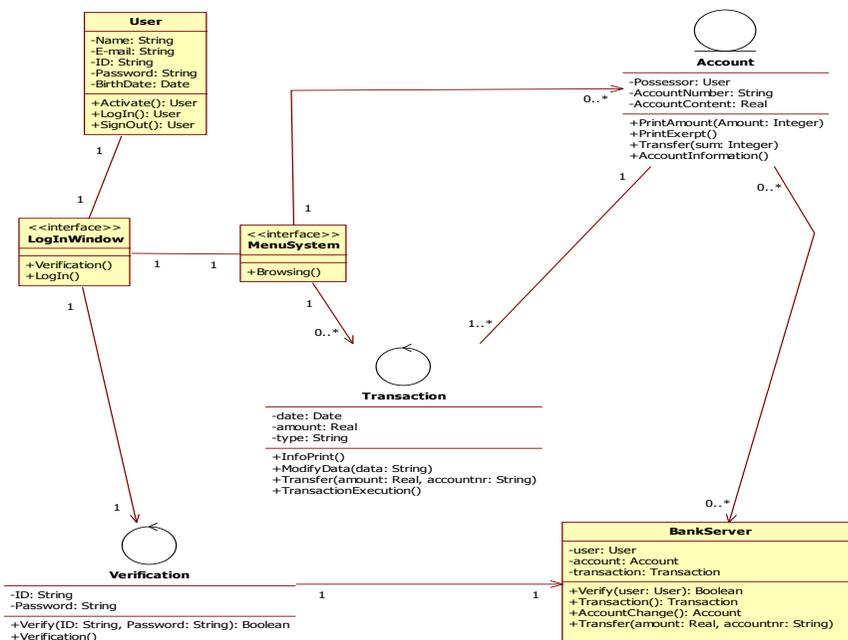


Figure 3: The class diagram

The class diagram shows the building blocks of any object-orientated system. Class diagrams depict a static view of the model, or part of the model, describing what attributes and behavior it has rather than detailing the methods for achieving operations (Anand et al., 2006).

In the conceptual design of a system, a number of classes are identified and grouped together in a class diagram which helps to determine the static relations between those objects (Frankel, 2003).

4.3. Realizing the system

Following the views of MDA this step is the transformation of PIM models into PSM, platform specific models. The transformation of platform independent models has more phases in terms of the point of view from which we analyze the web application. The goal of every transformation is to pair every action of the system with a technology capable of dealing with it. On certain platforms parts can be exchanged without affecting the systems functionality.

5. Conclusion

Designated time for design has been drastically reduced, so new solutions are needed to be capable of keeping up with demands in the world of developing technologies. Model driven architecture delivers tools that simplify the process of application development.

MDA follows and embeds the most technical standards, ensuring the developed systems flexibility and renewability. The most important fact though is that using MDA, software engineers and business professionals can communicate in a common language and reach goals using high end technologies.

The designed system can be implemented on any platform. Moreover every bank can personalize it, if necessary it can be moved on mobile devices.

The model-based development's only problem is that configuration data for example: platform definition data does not differ from modeltransformation because during.

Acknowledgement

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MODELS AND SOLUTIONS FOR THE IMPLEMENTATION OF DISTRIBUTED SYSTEMS

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Software applications may have different degrees of complexity depending on the problems they try to solve and can integrate very complex elements that bring together functionality that sometimes are competing or conflicting. We can take for example a mobile communications system. Functionalities of such a system are difficult to understand, and they add to the non-functional requirements such as the use in practice, performance, cost, durability and security. The transition from local computer networks to cover large networks that allow millions of machines around the world at speeds exceeding one gigabit per second allowed universal access to data and design of applications that require simultaneous use of computing power of several interconnected systems. The result of these technologies has enabled the evolution from centralized to distributed systems that connect a large number of computers. To enable the exploitation of the advantages of distributed systems one had developed software and communications tools that have enabled the implementation of distributed processing of complex solutions. The objective of this document is to present all the hardware, software and communication tools, closely related to the possibility of their application in integrated social and economic level as a result of globalization and the evolution of e-society. These objectives and national priorities are based on current needs and realities of Romanian society, while being consistent with the requirements of Romania's European orientation towards the knowledge society, strengthening the information society, the target goal representing the accomplishment of e-Romania, with its strategic e-government component. Achieving this objective repositions Romania and gives an advantage for sustainable growth, positive international image, rapid convergence in Europe, inclusion and strengthening areas of high competence, in line with Europe 2020, launched by the European Council in June 2010.

Keywords: information society, databases, distributed systems, e-society, implementation of distributed systems

Cod JEL: O33, M15, L86

Introduction

The concept of “information society” is a very generous program that covers all sectors of government. The main goal is to create a society that includes all citizens' access to public services provided in electronic form, by increasing the capacity to use information society services, reforming the government operational models and increasing operational efficiency through appropriate use of information and communication technologies and the increase of competitiveness of the business through advanced use of ICT - Information and communications technologies.

The complexity of software applications is an essential property that derives from: the complexity of the problem domain, managing the development process, the degree of flexibility allowed by the software and problems that characterize the behavior of discrete systems.

Since the last decades of the previous century growth rate has been calculated mainly by tricks, by dividing tasks in the computer system, by introducing devices interrupt requests from the input / output or direct memory access (Lungu, Vătuuiu and Fodor, 2006: 45). Then specialized systems for digital imaging systems appeared that sought to compensate for insufficient speed through parallel processing, allocating each pixel in an image line of each unit of computing - a processor dedicated local operations from the image. This is how the first configurations of parallel computing and the first parallel algorithms appeared. One aspect of distributed processing which has been subject to attention in recent years refers to an environment in which they can engage cycles and spare storage space of the CPU tens, hundreds and thousands of networked systems to work on a specific problem that involves a very high processing capacity. Developing these processing models was limited however by the lack of attractive broadband connections and problems, combined with the real challenges of security, management and standardization. A distributed system can be defined as a group of independent computers that the user perceives as a coherent unit.

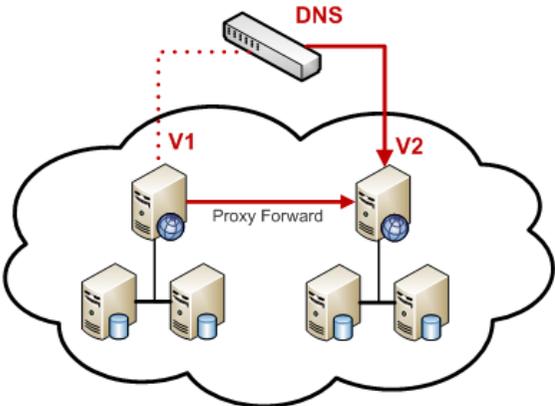


Fig. 1 Distributed storage and query of arbitrary data

A distributed system must not be built only because it can be built. There are many different types of distributed processing systems and there are quite a few challenges to overcome to successfully design such a system. Distributed processing systems aim to connect users and resources in a transparent, open and scalable way (Vătuuiu and Popeangă, 2006: 134). It would be ideal if this system would show more tolerance for errors and also if it would be more powerful than any combination of independent computer systems.

1.Parallel processing systems

Parallel processing is the simultaneous execution of the same instructions (divided and especially adapted) on multiple processors in order to obtain faster results. The idea is based on the fact that the process of solving a problem can usually be divided into smaller instructions that can be achieved simultaneously if they are coordinated. A parallel processing system is a computer that is equipped with more than one processor for parallel processing (Lungu and Ghencea 2011:122). Also new multicore processors are parallel processing systems. There are several types of parallel processing computers. They are differentiated by the type of interconnection between processing (known as "processing elements"), between processors and memory. Besides the classification made by Flynn who consider the type of processor instructions executed, there is a classification that is based on how memory is constructed: parallel processing computers that have distributed memory have multiple processors which access all the available memory like an addressing global space; computers which processes in parallel and have distributed memory with multi-

processors, but each processor can only access local memory - no global space for memory access between them.

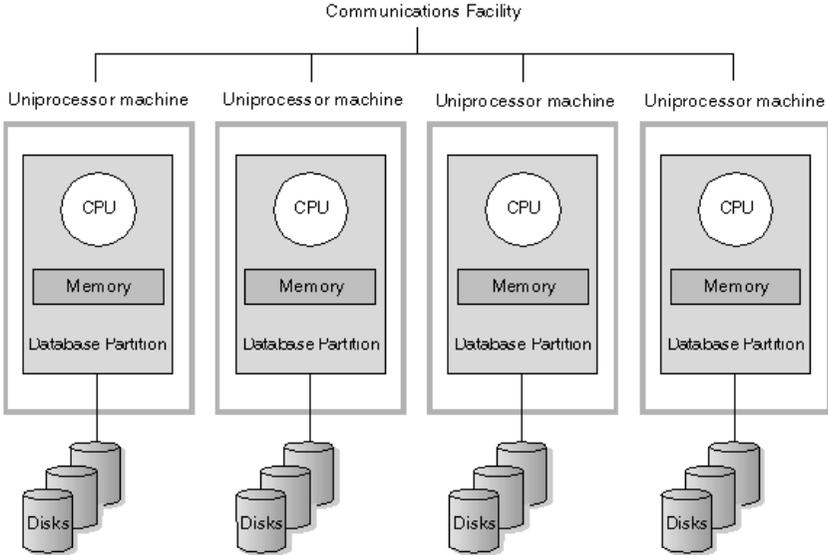


Fig. 2 Parallel processing systems

1.1.Implementation of parallel processing for different computer systems

Parallel processing, defining two or more processors that execute concurrent processes and acts as a single unit, allows one to run complex applications.

Most management systems relational databases are currently being upgraded to take advantage of parallel processing in heterogeneous systems, and to allow complex run of mission-critical applications. The optimal distribution of data is difficult in terms of technology; this process can be strongly dependent on the requirements for ensuring a good response to requests, and ensuring data integrity, continuous availability, interoperability, etc.

Management systems of modern databases use a series of abstract concepts and strategies to meet the requirements associated with current applications. The transaction, for example, can be used in the distributed data network to ensure the passage of groups of data and associated operations from a client post to server or from one server to another. Most of the producers of databases have monitors for the transaction process (TP - Transaction Processing) which represent advanced tools to manage distributed transactions in heterogeneous networks (Cristea 2007:44). The standard method of communication between TP monitors and database systems has been accepted as Protocol X / A as part of a group of standards X / Open. Currently, Sybase System 10 servers and Oracle 7 supports protocol X / A, while indirectly Informix Online adhere to this protocol through an ancillary product, Informix TP / XA.

In terms of ensuring data integrity in systems client / server distributed management software vendors have addressed these databases strategies:

- The "two-phase commit" technique: all changes required by a transaction on a database are either committed (the execution of the transaction is completed) or void, with the return of the database to the previous state. This strategy is not suitable for complex heterogeneous networks in which the probability of failure in any node is large and mission-critical systems. It is used as a way to ensure that all servers hold identical copies of the database at any time;

- The data replication strategy is now a solution adopted by Oracle, Sybase and Informix. Replication is a process in which multiple servers hold many identical copies of a database. The replication strategy differs significantly from the database "two phase commit" in that it guarantees the identity of copies of distributed databases only at certain times or under certain conditions. The data replication technique used by the Oracle Server 7 is called "Table Snapshots" by which the central server (master) copies at certain moments of time only those parts of the database that have changed, then disseminating these changes in the network. The replication mechanism used by the server is Informix database with the method "snapshots" used by Oracle. Informix uses the file "log" to "backup" to yield data from database tables to be replicated.

Replication servers are only the beginning of a whole generation of software that implements the abstract concepts related to data sharing in heterogeneous environments with advanced management and parallel processing, optimizing transactions.

1.2 Distributed Parallel Processing in Neural Networks

This type of processing is done using:

- Processing units: by analogy with the human brain, they correspond to neurons, and collectively to concepts such as character, features of pictures or objects in a PPP scheme. Individual units do not interpret the detailed design; they can be represented only by groups of units. We obtain a robust architecture that is not dependent on the efficiency of individual units and which assigns responsibility;
- Connections and the rule of activation;
- Internal input data (usually spread);
- External input data;
- Results obtained from processing units.

1.3.Open Distributed Processing

Open Distributed Processing (PDD) is the ISO standardization effort in the field of distributed processing. PDD 10 746 is the set of standards produced by ISO / IEC and ITU-T X.900 products (Telecommunication International Union). The notion of distributed processing seems very technical and complicated. However, with the development of large coverage networks, distributed processing is increasingly used. PDD's goal is to facilitate the use of distributed processing in areas as diverse as the wide deployment technology (Tannenbaum and Steen 2006: 241).

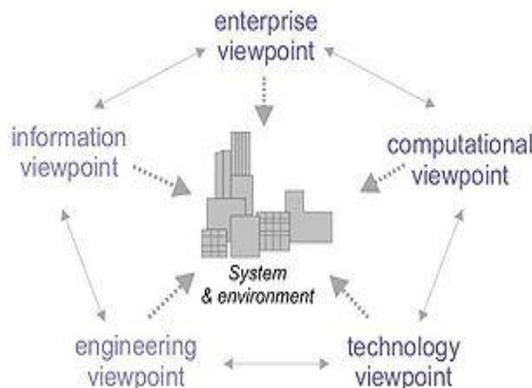


Fig. 3 Open distributed processing model

PDD is easy to use by programmers and operators because of its nature and means of distribution. In other words, both programming and use of distributed applications is presented as if that application would not be distributed. The way to get this perspective is transparent homogeneous PDD. Transparency provides users and developers with a consistent view of the network system as in the case when a message can traverse several different networks, without the user knowing the details of this process; distributed processing may involve different areas controlled by different authorities and equipment heterogeneous with very different hardware and software.

In general, the difference between distributed and network solutions is that when working in a network, the user is aware that the system runs on multiple machines, while in case of distributed processing the system appears as a single entity.

2. Implementation of Distributed Systems Solutions

2.1 Company Informix, symmetric multiprocessing

Informix Company has made a complete redesign of the system or introduced incentives for symmetric multiprocessing (SMP). Informix Online, is a dynamically scalable architecture (DSA). In situations in which the Informix server used version 6.0 of parallel processing, performance increased in comparison with older architectures. Informix Server version 6.0 of parallelism is allowed only on certain operations (create indexes, sorting, backup, data recovery) and runs on some platforms of symmetric multiprocessing (SMP). -Online/DSA Informix server (Dynamic Scalable Architecture). Version 7.0 has a scalable architecture that can manage scans, unification (join) the parallel sorting and querying databases.

2.2. Oracle 2.2 - parallel processing technology

Oracle 7 parallel Server creates a good balance between the need for better management and a multiprocessing system. Both Informix and Sybase disks require special partitioning in parallel processing, unlike Oracle, which is regarded as superior in this regard. The Oracle 7, Version 7.1 automatically maintains multiple copies of the same data on multiple servers, which eliminates the need for intensive disk-partitioning labor. Parallel query options in the Oracle Server 7 allow machinery working in symmetric multiprocessing (SMP), in clustered multiprocessing and massively parallel processing (MP) to execute a single application on multiple processing units, thus providing an almost linear scalability with each processor added to the configuration.

2.3 Sybase - Build Monumentum

Sybase company made a major step in designing database systems from the new generation by launching a product with "multithreading" work features. Sybase Build Monumentum runs in several ways to control the execution on both platforms -Windows NT and UNIX platforms, while adding to the existing architectural features for working with object-oriented database. The multiprocessing on distributed networks is done however only from the "client" point of view. Build Monumentum has an administrator who manages the "multithreading" processes even if the host operating system normally does not support this.

2.4 - IBM DB2 Parallel Edition

IBM developed its system of relational database management, DB2/6000, in a parallel multi-processor architecture with hardware ranging from local networks and systems to single processor RISC System/6000 IBM Power Parallel Systems SPX. Parallel Server DB2 Parallel Edition database can efficiently handle very large databases using strategies of sharing data and applications on their parallel execution.

The DB2/6000 management system extends to support a "shared nothing" architecture selected for two reasons:

- It is a scalable architecture to the level of hundreds of processors;

- Provides high portability because it requires only one communication link between processors, so it can be ported on any platform.

In the "shared nothing" architecture with the parallel implementation of the management system DB2 in a network of machines RISC/6000 IBM, database storage is done in a network of processors that provide buffers, lock structures, files log and separate records for each process. This prevents competition on cache structure resulting from the fact that all processors share the same set of resources.

In the architecture with multiple processing nodes, for large databases, data placement becomes a complex problem and system administration can be difficult. The implementation of parallel systems using a DB2 requires a definition language and management tools necessary for data partitioning. DB2/6000 provides two important features for partitioning large database tables: the use of partitioning keys and groups of nodes for a database that contains several tables; the user who develops the application can define a partitioning key for each table.

Conclusions

The internal administration of distributed databases is demanding and generally difficult, because one has to ensure that:

- Distribution is transparent (invisible and unobtrusive) - users must be able to interact with the system as if it were a non-distributed one (monolithic);
- Transactions must also have a transparent structure (invisible and unobtrusive). The course of each transaction must maintain database integrity, despite the multiplicity of partitions. For this they are usually divided into several transactions, each of them working with only one partition.

These requirements lead to the harmonization of the smart development strategy for Romania, in line with the priorities of "Europe 2020". Europeans should have the chance to use services on networks that are equal to or better than those available in other countries. In this direction have been made following steps:

- In 2010: adoption of a Recommendation to encourage investment in next generation access networks (NGA).
- In 2011: Monitoring of the implementation of the NGA Recommendation by national regulatory authorities and Monitoring of NGA deployment and broadband competition in the Member States.
- In 2012: guidance on pricing and/or costing methodologies in national regulatory measures.

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IT&C AND THE PERSONAL DEVELOPMENT

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In this paper I explore the phenomenon of personal development in an „unconventional” way. The contribution of this paper is to use a different method (i.e. in –depth interviews) to focus on a different unit of analysis (i.e. managerial couples) in a different context. In addition the information and communication technologies (IT&C) are entering all the fields: business, state institutions, education and the day-by-day life. This paper contributes to the field by suggesting a different theoretical approach to personal development conflict as a decision-making problem. I propose using social exchange theory to explain personal development conflict as a complex evaluation of cost and benefits of exchanges between multiple actors on the basis of personal values and beliefs. The critical thinking is one of the most popular learning objects in the English speaking countries and they are also offering most of hopes to distance learning and also the critical thinking is a reflective one. This paper suggests that the field may be overlooking some fundamental variables. Content analysis of the interview transcripts reveals the crucial importance of implicit values and benefits, immanent or tacit actions such as decision-making and learning and communication and mutual understanding. Communication and personal development is essential in this respect. It’s difficult to separate work, family and personal development and communication is fundamental in all directions. To conceptualize personal development conflict as a decision-making problem while taking into account exchanges and interactions between multiple actors and we can draw on equity theory or social exchange theory.

Future research should test whether decision making is central for the understanding of personal conflict only in managers or in other collectives as well. I recommend the couple as the best unit of analysis to address issues such as accommodation within couples and complex decision-making in both individuals and couples. Future research should draw on boarder and different samples to replicate our study and check the generalizability of its findings - because if it can be generalized it may have strong implication for theoretical development.

Keywords: e-learning, critical thinking, IT training

JEL Classification codes: M15, O17

Introduction

The information and communication technologies (IT&C) are entering all the fields: business, state institutions, education and the day-by-day life. Applying the Internet technologies the whole learning concept is changed reducing a lot the costs regarding the preparation and learning, and the costs of displacement of the professors an student as well. The forums and discussions are allowing the fast information exchange between students and between professors and students as well. The possibility to have on-line courses at scheduled days and hours, by multimedia facilities offered by the Internet infrastructure: on-line image (video camera), sound, chat can be done either by an independent treatment of students taking into account their aptitudes and results or by very high audience courses (hundreds/thousands of students simultaneously).

The extremely low costs level of a course is that it's not necessary to have a classroom, the number of students it's not limited because of the classroom's capacity, the teaching materials are virtual (photos, films, sounds, and so on) but also every student's or professor's possibility to customize the used interface to meet his needs of an easy administration at any level of detail and anywhere a computer connected to the Internet is available offers the possibility of the access to use or administrate both in fixed positions (computer, desktop connected to the Internet) and mobile ones.

In this study I will focus on managers because I expect that they are a group that, because of nature of their work, experience high level of personal development conflict. More specifically, I will study managerial couples, i.e. couples of which one or both members have managerial responsibilities. Managers may be expected to experience more time-based personal development conflict because they have to devote more time to work and show a high degree of availability and flexibility in their job. They can also be expected to experience more strain-based work-family conflict because of their responsibility for resources and people.

1.The critical thinking in the field of personal development.

The critical thinking is often associated with the philosophy but it can be closely associated with informal logic. The critical thinking is one of the most popular learning objects in the English speaking countries and they are also offering most of hopes to distance learning. The critical thinking is a reflective one. The one who thinks critically thinking's(interferes, deliberates) reflectively. But what does it mean to be reflective thinking so that it is also critical?

The critical thinking is reflective due to the fact that it follows its own progress, it evaluates each of its steps to decide if it is or not justified then it corrects its own mistakes. The critical thinking is not perfect because the one who thinks critically also makes mistakes. But the process of self-observations and self-correction through which always passes the one who practice the critical thinking makes him to commit fewer mistakes than those who don't think critically. The critical thinking is often erroneously considered to be a negative and destructive thinking. If we look at the relationship between the critical thinking and belief we can notice that the purpose of critical thinking is not to destroy the belief; what is wanted is to get to a reasonable belief. The critical thinking is not the negative thinking opposite to the positive or creative thinking. The one who thinks critically asks questions but it asks them to decide what's reasonable to believe.

Obviously, the critical thinker is not so stupid to believe in all he's told but he's not so skeptical to believe in nothing he's told. What's doing the one who thinks critically is to distinguish between reliable and questionable witness and he weighs the evidence to decide what's reasonable. When we bring evidence and arguments in favor of an opinion or belief, the result is reasoning (an argument). The opinion or conviction is the conclusion of reasoning. The activity to analyze if the conviction is in fact supported by the evidence or the invoked reasons is called the analysis of the argument.

The critical thinking is dealing with reasoning and arguments. On the one hand, it analyzes the already made arguments seeking to discover their mistakes and, by the other hand; it builds reasoning or counterarguments. The model is the Socratic method: to critically think is to primarily learn to listen to the other ones. To listen to what the other says means attention, concentration and also respect. Critical thinking is also to try to understand what the other one is trying to mean. The criticism is not made for the sake of destroying the other one's arguments but for the sake of clarifying them. These arguments are sometimes wrong and that's what critical thinking teaches us to detect. Once again the model is the Socratic conversation. We listen, understand, respond, discover mistakes and, finally, we are building ourselves (or together) the right reasoning.

“To misunderstand”, to make a mistake is not only frequent, is – however paradoxical it may seem – necessary and so the knowledge begins. You cannot start by knowing, only your own ignorance’s achievements can make you look for. If the answer I find to a question is wrong where is the right answer? The true knowledge starts when you realized that the error was an old lesson. Nobody taught it better than Socrates. The Platonic dialogues called “Socratic” are a wonderful example of the essential value for knowledge that has the recognition of own ignorance. Socrates’ demonstration of *Alcibiade* you cannot know a thing unless you have learnt it (it’s about how to become a politician); you haven’t learnt it from others during school because it’s not taught in school; you’ve had no democracy teacher. You haven’t learnt it by yourself because there was no moment when you realized you didn’t know it and so you start looking for it. So you cannot become a politician because you have no skills for that. This is an argument. Socrates shows Alcibiade that he cannot become a politician because he doesn’t know what a politician has to do (or not to do), because he’s unprepared and he has never thought about that. Different ways to express an argument by which not every attempt to convince is an argument. The reasoning or arguments are some special forms of human communication, different by the others by the fact they are organized according to logic rules (or laws). Therefore, we are saying about arguments that they are *correct* (if the persons who formulate them know the rules or laws after which they are formulated) or otherwise *incorrect*. In logic, at this point, the discussion should be ended. If we formulate a wrong reasoning there’s no place for discussions an interpretations. However, in day-by-day life things are more nuanced and there are situations in which the formulation of a wrong argument doesn’t close the discussion. This is happening in almost every dialogue and sometimes the simple incorrectness doesn’t stop to argument but it’s insisting to convince and to eventually have the possibility to repair mistakes which are realized by education and self-learning.

2.E-learning – way to personal development

By promoting a digital image of the information society, in learning subsystems the hardware component is represented by computers and the infrastructure obtained depending on the way of interconnection, the software component is reflected through learning system while firmware will be the impress of the institution providing learning services.

More broadly, by e-learning is represented the totality of learning circumstances in which the means of the information and communication technology are significantly used. The term, took over from Anglo-Saxon literature has been extended from the basic etymological meaning to learn by electronic means and it is now covering the area of intersection of educational activities with modern electronic means. So defined, more that e-educational, the semantic area of e-learning concept interferes with and infinitely variable overlaps a lot of terms that capture the variety of teaching experiences that can benefit from technological support: assisted instruction: computer – mediated, digital/mobile/on-line learning education, training through multimedia and so on.

Known as educational teaching software, a wide range of electronic materials (on digital media) are developed to make easier the procees of learning; maps, dictionaries, encyclopedias, educational films, presentations in different formats, books (e-books), tests, tutorials, software simulations that form skills, software practice, educational games and so on. The computer and the multimedia electronic materials are used as a support in teaching, learning, evaluation or as a mean of communication (to carry out some individual tasks and so on).

Children are increasingly earlier taught to use the computers in ontogenesis. What and how will the computer influence the child’s cognitive and social development? There’s a series of fears of addiction or social isolation, phenomenons influenced by the use of the computer but these ones

can be counteracted by a series of researches whose conclusions can be summarized by the advantages of a more productive and motivational learning.

E-learning represents a kind of distance learning, as a planned and organized teaching-learning experience. The mediation is done by the new information and communication technologies – mainly by the Internet. The Internet represents both the medium of material's distribution and the communication channel between the involve actors. For the time being functional only in the higher education and in adult's education, the systems of Internet training adapt the components of the traditional teaching approach/ face to face: planning, specific content of methodology, interaction support and evaluation. The extensions brought by the technological medium, insufficiently explored and used, refer to:

(a) *student orientation* by custom training course – the different composition of learning objects depending on the needs of each beneficiary – by *training individualization* – non-linear structure of the information, with the possibility of returning to more difficult content following the automatic identification of gaps – *autonomy* by eluding a pace, spatial independence and induction seminars;

(b) distributed resources, using and integrating access to electronic libraries and media by training specialists in student's discussions;

(c) fluidity of roles by the continuous balance of the educated-educator role within the learning group, by the continuous restructuring of learning teams depending on interests or task's efficiency criteria.

The training within the field of information technology and after that the training using this technology is different stages within the process of the information society's development. The development of some specific training solutions led to the foundation of new concepts in this field, which started from the solving of traditional problems with new tools (electronic manual – ebook) getting to the development of some new problems linked to the replacement of the bureaucratic structures with educational organizations and the construction of some specific mediums such as e-learning, promoted as a paradigm of e-learning. An e-learning system (of distance training or virtual education) consists in a planned teaching experience – learning, organized by an institutions that provides materials in sequential and logical order to be assimilated by students in their own way without any constraint on the co-presence or synchronicity activity. Mediation is done by different ways, from media materials (memory sticks, CD/DVD or eventually by classical correspondence) to transmission technologies of the contents via Internet.

The education and training task based on the latest information and communication technologies is not to prove that it has immediate results in a race with other types of educational systems but to substitute a part of the current structures with a new, probably superior performances spectrum in meeting of inherent changes taking place in culture and civilization.

The new medium created by the Internet and supported by current technologies permits the improvement of traditional teaching and learning principles by bringing to them a series of innovations:

- asynchronous learning;
- synchronous learning, where students and professors are learning on their own or in supervised groups;
- learning focused on student or professor, depending on whether the student or the professor occupies a position which determine the pace of progress;
- individual or group learning, benefit of the advantage either of the unidirectional attention or of the benefits and influence of a group;
- informal communication, create opportunities and 'institutions' on the online learning platform in order to exchange information (cafeteria);

- the online library which not only allows books and magazines but also links to internal and external databases, to audio and video flows, and so on;
- online exams similar with extemporals and tests that are created by professors and scheduled either by professor or student, depending on learning system;
- the management of learning is achieved through modern methods of controlling the process of teaching and learning that adapts to a large public.

By the strategy of Lisbon which has as horizons the years 2020 is wanted to be ensured an employment rate of labor of 70%. In terms of global economic crisis the demand for manpower in Romania expressed by the indicator „quarterly rate of job vacancies” continued the downward trend.

The European e-learning market will reach USD 10 billion until 2012. The content market will be the dominant segment for the next period. The next segment as dimension will be the services one which will have the highest growth. Analysts believe that as the market consolidates instruments will become common and they will be a part of end-to-end solutions. European market for IT training services, however, remains fragmented, the number and variety of providers being huge in all the countries. Many alliances and partnerships between companies with complementary skills in e-learning are created -and some of the major providers of e-learning has expanded on the market both geographically and in terms of e-learning offer. It is expected that these trends continue, however pointing out that the market will remain fragmented so that approximately 75% of corporations will have developed platforms LMS (learner management system).

It is believed that these platforms of education will become just as prevalent as CRM and ERP systems are in present. The sectors which most rapidly embraced the e-learning are the industry, healthcare, education, government sector, banking system, followed by transport, telecommunications and media. Economic difficulties stimulate investment in education and IT training. According to analysts annual rate of growth in global revenues from IT education and training will be 55 billion USD in 2012. But growth rates will widely vary depending on region. It's considered that in their tendency to reduce costs some companies, will invest more and more in training IT specialists as having well-trained specialists in the latest technologies is essential for companies to reinvent their business model, make Internet strategy, reorganize their supply chain and try to remove one of the biggest problem of IT departments, the lack of sufficiently trained staff. Worldwide the United States and Western Europe will remain the largest market for IT training. Together, these two regions will represent approximately 75% of revenues from IT training. It is estimated that e-learning will determine much of the market's growth of IT training because the providers develop an ever-growing high-quality offerings and more end users have access to these offerings.

3.Globalization in the Information Society

The information society is the society based on the Internet. Globalization is also a consequence of the Internet as a priority. Then we can say that globalization is a phenomenon specific to information society. Because of the link between information society and globalization, which justifies the claim that globalization is a natural consequence of the information society, whereas the information society is proved to be a process that can not be stopped, globalization is also an inevitable process.

Along with the increased data processing speed and their storage capacity, have led to the development of custom user, and as a key factor, they have been interconnected, ensuring communication between two users, then at the group level and after that between community users developed by Intranet, Extranet or globally, in an open system, resulted as digital a reflection of the social system through the Internet.

The complexity of the information systems and their quite long making timescale are causing a series of problems which have to be taken into account and solved so that, the expected results are finally got.

First, during the development cycle of the information system changes occur within the managerial team of the beneficiary. In case a new managerial team has another vision upon the agreed indicators on which its decisions are based, changes in specifications occur, involving modifications of the information system's structure.

Secondly, the latest information technologies that appear require the ongoing adaptation of the information systems development team. Changes occur in the approach of the assistance tools and in the use of the options. Using the latest resources, a series of components are finally designed. The information system becomes inhomogeneous in terms of technologies of development.

Thirdly, the development of the company by purchasing new equipments, the reorganization of the production flow, the transition to the making of new products, the introduction of the elements of total quality management come to influence the structure and functions of the information system in terms of quality and amount. The problem of data acquisition acquires a new dimension when it comes of tools with programmed command or in case of robotic production lines.

Fourthly, during several years, the team of programmers, web designers, testers and implementers undergoes itself modifications. Different specialists reunify the team. All these fluctuations are reflected in the working system, in the quality of components or stages of the information systems.

Fifthly, the economic environment, the legislation and the dynamics of the processes of the information society leads to evolutions that have to be reflected in the information systems. The modifications of some calculation algorithms, the need to use new coefficients, the appearance of some information exchange between the company and the public institutions of state also have to be reflected in the information systems being designed.

The Internet was also the result of social interaction among experts, institutions, states and an extremely large number of users worldwide, and only in this context it was possible as a technological and social invention, only in this context he acquired today's form. It is natural to think that globalization, as a result of the Internet takes the form at which all the globalization participants are involved. This is the lesson of the Internet, which has proved to be great success in technological and social history of mankind, showing the path to be followed by the globalization process so that all participate in ways that will have to be largely generated by the users of globalization. Like the Internet, globalization cannot be strictly hierarchical to be a success for human being. If the Internet is not hierarchical, the globalization, naturally, will not be hierarchical, ensuring, as with the Internet, general coordination forms to establish rules of conduct acceptable to all, which could only be possible in a knowledge and perhaps consciousness society.

4. Conclusion

The premises of creation of the information society were insured by producing a massive and rapid spread of electronic computers, which allowed the individual, organization, nation and society the processing of a growing volume of data in an increasingly lower time and in an open space.

The globalization process has not found its balance and natural course, although he is driven by the increase of the Internet and its use in the economic, cultural and social life of the world.

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RESPONSIBILITY FOR ETHICS IN IT&C

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In this article the authors aim to create a presentation of the triangle morals-ethics-responsibility with an accent on the current globalized society. Business ethics has to disseminate in all the corners of a company, and first of all it has to be understood. Understanding the moral criteria of behaviour in business is important because the new Organizational structures create new complications, related to information flow and information administration inside various workgroups and in the entire organization, for which there are no traditional precedents.

KEY WORDS: business ethics, corporatist social responsibility, ethical investments, green energies

JEL Classification codes: M15, O17

Introduction

The term ethics has at least three different meanings. First of all ethics refers to the so called manners, customs and traditions specific to different cultures. Business ethics implies introducing in daily decisions and in management strategies more norms than the law requires. P. V. Lewis defines business ethics as „that set of principles or arguments that should govern the business behaviour, individually or collectively”. A company that is socially responsible, that is it takes into account not only the interests of the shareholders but also the interests of all the groups affected by its activity, so business ethics is a cost and implies delegating resources from the trajectory imposed by a strict computation of economic efficiency.

Eudaimonia means happiness, and the first to talk on this theme was the philosopher Aristotel in Nichomahic Ethics where he talks about virtue that is needed by people to lead the best possible life. The main idea of Aristotel is that there are different opinions about what is best for people and these differences have to be resolved. The question is: What is good? Aristotel doesn't look for a list of things that'd be easy to make, Aristotel looks for the highest of the goods and considers that this, no matter what it'd be, has three characteristics: it is desirable in itself, it is not desirable for another thing, and all the other things are desirable for it. Nobody lives for a certain goal except the one of goodness. And all the subordinated aims, as health and wealth are wished for the reason that they promote good and because they are good in themselves.

The problems and the opportunities created by the new technology, by the globalization process, by the privatization of the media raises new ethic and spiritual challenges for those who work in social communications. These challenges can be effectively met by those who accept the fact that, in order to serve a human being, building a community based on solidarity, justice and love, and presenting the truth about the human life are and will remain aspects central to ethics.

The increase in the importance given to business ethics can be explained through the changes suffered by the strategies and the structures of the corporations. Recent currents in the managerial theory and practice, as total quality management, as well as restructuring and redimensioning processes for top companies left to abandoning many traditional practices for managing economic processes. Intricate and rigid managerial hierarchies have been considerably flattened. As a consequence, the authority and the decisional responsibility have been dispersed more and more inside the company: important decisions are taken at lower hierarchical levels and by more

employees. That's why it is required that each employee, not just the management, should understand as well as possible the complexity of the problems and how they should be reflected in the practical behaviour of the company in the economic environment.

Business ethics costs: money, human resources and time, expertise, opportunities, as investments or development. Moreover, business ethics and its most visible form, the social involvement of the companies, are options that are not required by law. In the classical form of the corporatist philanthropy, in the regulated form of donation and sponsorship or in the modern form of corporatist social responsibility integrated in the management strategy, the social involvement of the companies has been perceived for a long time as a less and less necessary cost, a luxury of large corporations.

Business ethics consider businesses from a larger perspective that is all the members of the society have different material needs that they have to satisfy in the economic system, through production activities, services, distribution, repairs etc. Businesses are not the only possible way to satisfy these material needs. They appeared, during the rise of the capitalism, as the most efficient solution to sustain a rapid and constant economic growth (although not lacking in crises and difficult periods), an increase in the economic efficiency, of quality and the variety of products and services, a relative or absolute decrease of prices etc. It is essential that the society doesn't exist for the business people to profit from it, but on the contrary, it exists to support social needs.

1.Social responsibility and the new dimensions of globalization

The social responsibility of an entity means what the society expects from an organization from an economic, legal, ethic and philanthropic point of view at a certain moment.

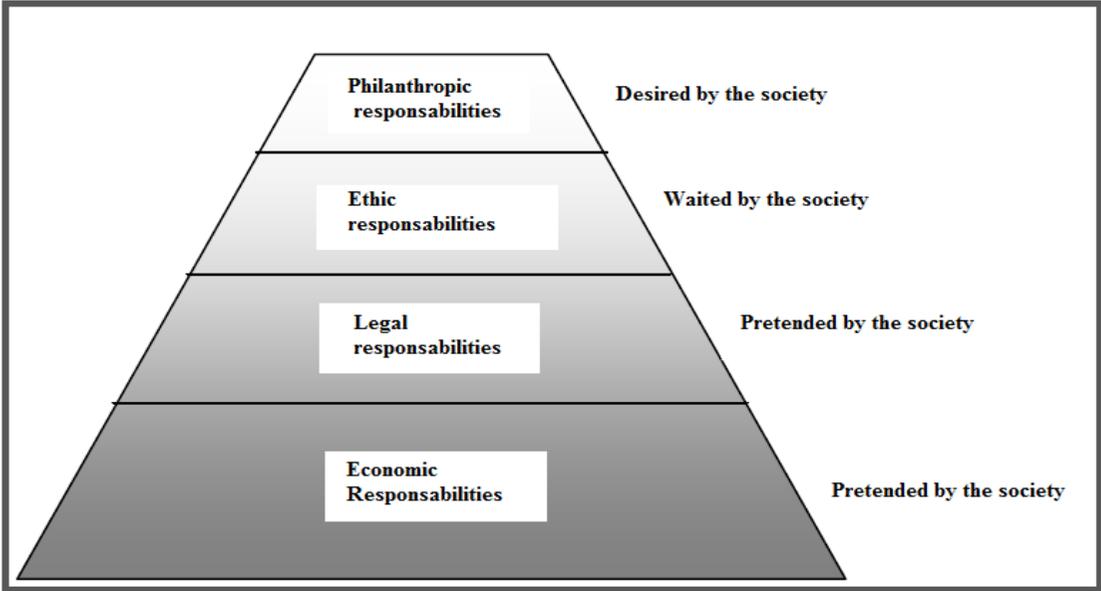


Figure 1 Level of ethic

Social responsibility is a concept regarding the contribution that companies have to have at the development of the modern society, and it is also called *corporate citizenship, corporate philanthropy, corporate societal marketing, community affairs, and community development*.

International states and institutions realized that the assimilation of the principles of social responsibility by the companies serves the objectives of durable development and led to the appearance of international standards for defining what means „desirable corporatist behaviour”.

United Nations, European Union and the Organization of Economic Cooperation and

Development are the most important institutions that committed themselves in creating a framework for defining social responsibility and for establishing indicators through which they can be evaluated in a transparent way. This framework has been accompanied by recommendations and principles to guide the states and the local authorities in formulating public policies that could promote and ensure transparency and support social responsibility initiatives. Without being perceived as a sign of economic power, social responsibility takes now a form of corporatist civics – a way of keeping the business relationships stable and profitable for all the parts involved, a non-aggressive way, a least detrimental functioning way next to a community, a friendly way to communicate with the society. In this form, social responsibility is nothing less than a modern, open and flexible way of management. Social responsibility is often seen wrongly as the exclusive responsibility of the brand manager, rather than a common responsibility of all the top managers in a company. This happens because, indeed, many companies started doing social responsibility after being surprised by the answer of the public to some of the aspects of their activities that they didn't see as part of their business responsibilities. For example NIKE had to stand a mass boycott after the media denounced the abusive work practices of some of their suppliers in Indonesia.

In the business practices from small enterprises, the differentiation between management and shareholders is vague and employees have multiple roles and the main activities aim at solving the daily problems, which is done mainly through informal relationships and communication. Also the interpersonal relationships play a very important role.

The uncertainty generated by the pressures of the large companies, the unstable position on the former traditional markets force the small enterprises to create strong partnerships, personal relationships that can offer trust. It will be noticed a tendency of the small enterprises to compensate the instability on the market with an increase of stability of the interhuman relationships, with the employees, the business partners and the clients. The social involvement of the small enterprises leads to an increase of the reputation in the community, to improving the personal image of the owner and of the administrator, and to increasing the trust in the enterprise, to increasing the loyalty towards the company. All these guarantee the stability of the relationships with the business partners, with the employees and the community.

In order to support companies the General Secretariat of the UN has created a program Global Compact which is a partnership between United Nations and companies for attaining a durable development at global level. Global Compact is a network that comprises agencies of the United Nations, companies, union organizations, business organizations, academic organizations, civil society organizations, governmental/administrative institutions and is oriented towards social responsibility on the basis of universal principles, divided in domains of interest and on dimensions: internal and external.

2. The Ethic Investments In It

As soon as the interest of the public towards corporate responsibility increases, there appears and grows considerably a new category of shareholders, who are interested not only in the profitability of their investment, but also in the moral correctness and the social responsibility of the companies in which they have shares. Unlike militant shareholders, the adepts of ethical investments don't use directly their investments for forcing companies to listen to their opinions and take them into consideration. They look for those investments which are in the same time profitable and compatible with certain ethical standards. In Cowton's definition, ethical investments are those that „use ethical, social and ecological criteria for selecting and administrating investment portfolios when it comes to shares of certain companies”.

The criteria for evaluation and selection of the companies can be negative or positive. Those removed from the list of ethical companies are often the companies that produce or trade alcohol,

tobacco, military equipment and any products that are detrimental to the environment or whose production is pollutant and consumes nonregenerable resources. Companies that support oppressive political regimes exploit cheap work labour from poor countries and employ minors; and finally the companies that violate the rights of animals, that endanger biodiversity and those that promote genetic engineering etc

The companies that meet the positive criteria are those that are involved in conserving and protecting the environment, in improving public transportation and living conditions, repairing and conserving buildings and architectural monuments, those that promote „green” energies and those that ensure the equality of chances when promoting employees, work safety conditions etc.

Besides the normative ethic motivation, the ethic investments can be desirable also from a strictly economic point of view. The risks of having the public boycott some products that are not accepted or the risk of ecologic disasters can influence the dynamics of shares and the ethic companies are less exposed to such risks.

On the other side, the success on the market of ethic products can make the investments they finance very attractive. The majority of ethic investment funds make the selection of companies in whose shares are interested starting from the data offered by the market. For example, many corporations from the electronic industry produce household and medical equipment as well as military equipment. In the same time, the investment in bank shares is not safe enough, because banks can finance companies that don't meet the criteria of ethic investors.

In Romania, far from being an ethic undertaking, social responsibility is a possibility of the companies to move the attention of population to legal obligations they should meet in welfare actions. For example a company that is a big polluter advertises for its action of planting trees that it does with volunteers, calling these actions „corporatist social responsibility” and ethic investment.

The *ethic investment* movement spread considerably, with effects that are not negligible. By aiming at investments towards corporations that meet certain moral standards, investors don't exert an influence just on the policies of a certain company, but also stimulates the other corporations to reconsider their ethic behaviour in order to avoid a possible and predictable decrease of their attractiveness on the capital markets in a short tem perspective.

3. The Ethics Of The It Workforce

The sensitive personnel problems confronting the multinational IT corporations are the following:

1) The *payment of the employees*, who work for multinational companies in countries with a development level sensibly lower than in their home countries. It is imputed to foreign investors that they exploit the labour from underdeveloped countries, paying a couple of times less expensive the same labour done by employees in their home countries with similar qualifications. On the other side the former are disadvantaged by the fact that, by moving the investment and the production units to the third world, there will be an increase in unemployment in the developed countries. Transnational corporations are fiercely criticized for adopting selfish policies, in the pursuit of maximizing profit, and they break that hypothetic social contract with different categories of shareholders, causing prejudices to employees from their home countries – who lose their work and who's union pressure decreases in intensity when the owner can menace with relocation of investments in other countries – and to employees from the third world – who are exposed to an equivalent work load to those in developed countries but are paid worse. The counter arguments are numerous and powerful. First of all the alternative for the employs in the underdeveloped countries is to have a low pay (compared to the employees from the developed world) or to not be paid at all, as long as the main point of interest for the foreign investors is the low cost of the work force. It can be stated, many times rightly, that the salaries offered by

multinational corporations are sensibly higher than the average from the poor countries in which these companies operate.

Besides the work environment offered by these multinationals is more correct, more civilized and some principles when recruiting and promoting labour are being implanted in the countries from the Third World, thus creating more evolved models for the leadership for treating the workforce.

2) *The management of branches* from other countries of multinational corporations raises a lot of ethic problems. Many companies prefer to offer low credit to local managers, and implant managers from their home countries to the management of local branches. These managers sometimes don't know well enough the traditions of the local problems and are not flexible enough towards the wishes and the difficulties of the partners and the employees from the countries where they are implanted. This is the main reason why, in these last years, multinational corporations adopted a policy of managerial adaptation, and promoted more and more actively local leaders, trained professionally in the west, where they can learn the methods and techniques of modern management.

3) *Women discrimination* is a delicate problem; the investor companies are not necessarily culpable of it, because it is not its managers are those who impose it, but the local traditions and religious beliefs. Multinational corporations are criticized by the public opinion from the origin countries that they are not more determined in having an active policy, even aggressive, for eliminating women discrimination from the Third World, where it represents a hard to combat practice. Other, more reasonable critics, refer to the fact that, in some countries where religion doesn't prevent women from playing a role in economic life, the sexual discrimination takes other forms, as employing mainly women because their salaries are lower than those demanded by men.

4) *Employing minors* is, obviously, the most often incriminated aspect and obviously the most criticable, in terms of personnel problems of the multinational corporations. Thus it is deemed that without the material support of the children employed, their families would lack subsistence means, and those kids would have to choose between dying of hunger and begging, stealing and roving. It is certain that education, health and psychosomatic development of the children that work while still young, are affected, and their future is sombre.

5) *The measures taken to protect* the employees constitute a problem for international companies in terms of their public image in the origin countries and less in the weakly developed countries in which they operate, although it is the employees in poor countries that suffer. In the third world the labour legislation is weakly developed or practically inexistent, thus the standards for protecting the personnel at the work place are very low compared to the developed countries. That's why multinational corporations take much fewer measures for protecting the labour in the branches from the third world as they do, forced by the legislation and by the public opinion. In their origin countries, as a consequence there are many accidents, with victims and grave mutilations of the employees at the work place. They don't reject the idea and take some measures, but not much, invoking profitability and competitiveness. If they spent as much as necessary for the safety of the employees, the costs would increase significantly and if some competitive companies don't take these measures, they risk to be pushed out of the market, which should bring back again the old dramatic dilemma of the workers from the poor countries: risks and low salaries, versus no salaries. All that can be achieved through good intentions is a compromise of the two requirements – the economic and the moral ones.

4. Ethic Controversies Over Environment Protection

This is the battlefield of the most disputes concerning global warming and multinational corporations are the first to be incriminated, because environment destruction, which often claims life's, produce grave, often irreversible effects not only in the countries where they take place,

but they also affect the global climate, the quality of water and air on a global scale. The causes of ecologic destructions are the same as in the case of insufficient employee protection at the work place: the legislation is very permissive, the local population has a low degree of technological competence and doesn't understand the dangers to which it is exposed, the high costs of non-polluting technologies etc.

In fact, the case that brought a focus on international business ethics was the disaster from Bhopal, in India, but the earthquake and the tsunami from Japan, from March 2011 and the explosions at the nuclear power plant from Fukushima is enhancing this discussion. Faced to these phenomena, the reaction and the pressure of the international public opinion have been strong enough to force transnational corporations to accept that they have an obligation to take radical measures for ecologic protection in the countries where the local legislation doesn't impose very high standards, by covering the higher costs that are required by non-polluting technologies as well as by advertising and training the personnel and the population.

Due to the variety of cultural values and moral principles around the planet and because the accommodative policies had unacceptable effects, there appeared more and more strongly the idea of elaborating international ethic codes, with the explicit agreement of government or non-government associations, in which the main role goes to the large transnational corporations.

The International Institute for Business Ethics proposes the following three basic principles for companies:

-**INTEGRATION**: Business ethics has to be implemented in all the aspects of the organizational culture and it has to be reflected in managerial systems. Companies have to start by integrating the ethics in fixing the objectives and the practices for recruiting, employing and promoting the personnel.

-**IMPLEMENTATION**: The ethic behaviour is not just an idea; it is also an effort for implementing a plan for changing the attitude in different activity branches of a corporation. Examples: changing the reward and stimulation systems, promoting better practices for protecting the environment, consulting experts whenever it is required.

-**INTERNATIONALIZATION**: The ever more extended opening towards a global market is necessary for any successful business in the 21st century. It can be achieved through international partnerships, commercial blocks and by implementing GATT agreements or other similar agreements. The clarification of a company's definition of the moral integrity, so that it can transcend national borders, is necessary for any corporation that operates on the global market, and has as result an action plan and an ethic code without a specific cultural colour, which doesn't require essential changes when applied in a global context.

Conclusions:

1. The last decade saw an explosion of ethic behaviour codes of multinational corporations in international business. The majority of these codes are created according to the principles established by OECD (Organization of Economic Cooperation and Development) and ICGN (International Corporate Governance Network). Unfortunately, many of these behaviour codes state vague truisms, and top managers and analysts recognize that there is a lot to be done in implementing the principles declared in these codes in the daily activity of companies that operate on a global level.

2. Many problems are still waiting for a solution that is strongly proofed theoretically and verified in practice. It is important that the most pressing problems have already been formulated and accepted by the community of transnational corporations, which is a lot. Once started, the process of evolution of ethics in international business will continue for sure, in an accelerated rhythm, hopefully with positive results, for more and larger categories of interactive groups in the global economy.

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THE USE OF COMPUTER APPLICATIONS IN THE STUDY OF ROMANIA'S PUBLIC DEBT

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Total public debt represents all monetary obligations of the state (government, public institutions, financial, administrative-territorial units) at a time, resulting from internal and external loans (in lei and foreign currencies) contracted on short, medium and long term, and the state treasury and its own obligations for the amounts advanced temporarily to cover the budget deficit. Loans may be contracted by the state through the Ministry of Finance, in his own name or guaranteed by it. Public debt is expressed in local currency or foreign currency, depending on where the contracts and loan conditions. In order to evaluate Romania's public debt, obligations denominated in another currency than the national currency is calculated using the exchange rate of National Bank of Romania. Also, total public debt of a country can be expressed in absolute values (to know the load on that country's economy which is subject to its creditors), the relative values as a percentage of GDP (to allow comparison over time and between countries) and the average size per capita (to allow comparisons and analysis in time and space). Total public debt is calculated and separately manages its two forms, namely domestic public debt and external public debt. Ministry of Finance shall prepare and submit annually to the Government for approval and to Parliament for information, report on public debt, which contains information on government debt portfolio, debt service, public indebtedness indicators and information about primary and secondary market securities state and how to implement the medium-term strategy in managing government debt for the previous year. In order to make comparisons quick and effective on public debt dynamics in Romania, Excel 2010 has new features such as charts and sparkline slicers' features which can help discover trends and statistics in accordance with existing data. The aim of this article is accurate assessment of Romania's public debt and its evolution in the economic crisis in recent years, using computer applications. As a novelty, it is proposed to use charts sparkline (Small diagrams that fit in a cell) to visually summarize data trends in a small space, but in a visual form meaningful and understandable.

Keywords: report on public debt, public debt dynamics, computer applications, professional-looking diagrams, sparkline charts

Cod JEL: H63, L86

Introduction

Public debt is the amount of the debt obligations and local government, which can be expressed in local currency and foreign currency, according to Government Decision no. 132/2011 amending and supplementing the Norms for application of Government Emergency Ordinance no. 64/2007 on public debt, approved by Government Decision no. 1.470/2007 (Popeanga, 2007:

28), and completion of Methodological norms for application of 14 article of no. 64/2007 Government Emergency Ordinance on public debt, approved by Government Decision no. 683/2008 (Dascalu, 2008: 25).

Under pressure from a depleted budget crisis and the need to pay pensions and wages, the Romanian Government came under more and more debt during the previous year. Loans from the IMF, the European Commission and banks on the local market, mostly short term, doubled our debt in the last two years, virtually every government borrowed 1.3 billion per month to cover current expenditure.

Thus, from the public debt of 109.1 billion, equivalent to 21.6% of GDP at the end of 2008, Romania has come to record at the end of 2009, debts of 147.3 billion lei, equivalent to 29.99% of GDP, as on 31 December 2010, the debt reached 193.89 billion lei (37.9% of GDP). If we compare this with the end of October 2010, when public debt was 182.4 billion lei, which accounted for 35.55% of GDP, we conclude that public debt has increased by 2% in just two months, without us entering any loan tranche from the EU.

On 31 January 2011, Romania's total debt decreased by 1.8% from the end of 2010, reaching 190.381 billion lei, which is equivalent to 34.9% of gross domestic product (GDP), estimated at 544, 4 billion. At the same time, 41.9% of total public debt was in lei, 40.8% in euro and the rest in other currencies. Most of the debt was contracted by state loans (38.16%), followed by bonds (18.66%) and Treasury bills (17.9%). Compared to the end of 2010, the share of government debt in total debt declined from 31 January to 1.89 percentage points, from 95.76% to 93.87%, while local government debt represented 6.11% of debt total.

2. Using computer applications in comparative analysis of Romania's public debt in the years 2009-2010

On December 31, 2010, our country's public debt could be characterized by features presented in the table below (Table no. 1):

Table no.1

| Indicator | 31.12.2010 |
|--|-------------------|
| Total Public Debt * (million) | 19389,44 |
| Total Public Debt (% PIB) | 37,9 |
| Government Public Debt (% PIB) | 94,03 |
| Local Public Debt (% PIB) | 5,97 |
| Direct Public Debt (% PIB) | 91,92 |
| Publicly guaranteed debt (% PIB) | 8,08 |
| Negotiable government debt (% PIB) | 41,33 |
| Non-negotiable government debt (% PIB) | 58,67 |
| RON (% PIB) | 46,21 |
| Euro (% PIB) | 42,58 |
| Other currencies (% PIB) | 11,21 |

* includes guaranteed debt of state and local authorities according to GEO 64/2007

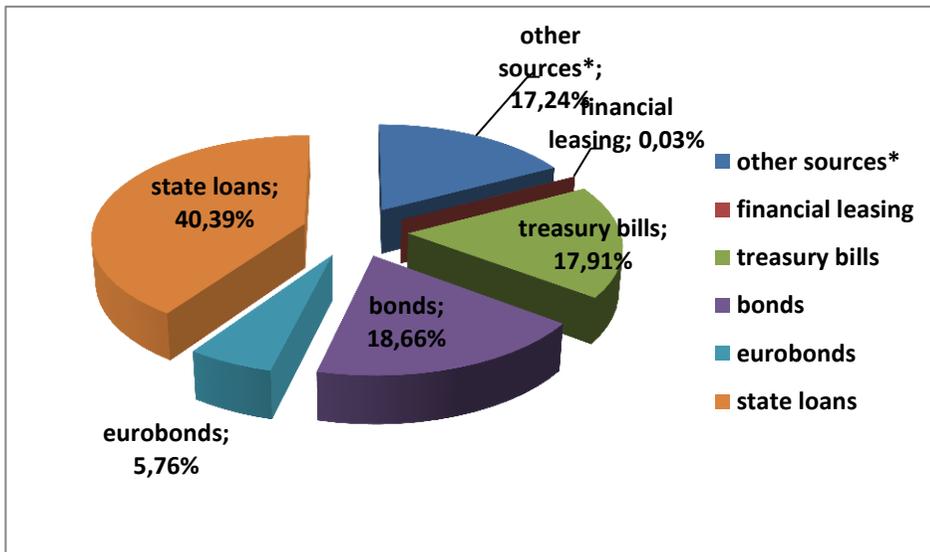
** Updates communicated to the Ministry of Finance

A first analysis shows that public debt maintains a growth trend in both absolute and relative expression. Thus, compared to 31st December 2009, on 31st December 2010 the absolute value of public debt is 565.3 million lei + 46 more or about 11.5 billion euro. And in relative terms there was an increase of + 7.91% of GDP.

In connection with the portfolio of currencies in the basket of public debt, we notice a close ratio between national currency and the euro, but a higher share in total foreign currency than in lei.

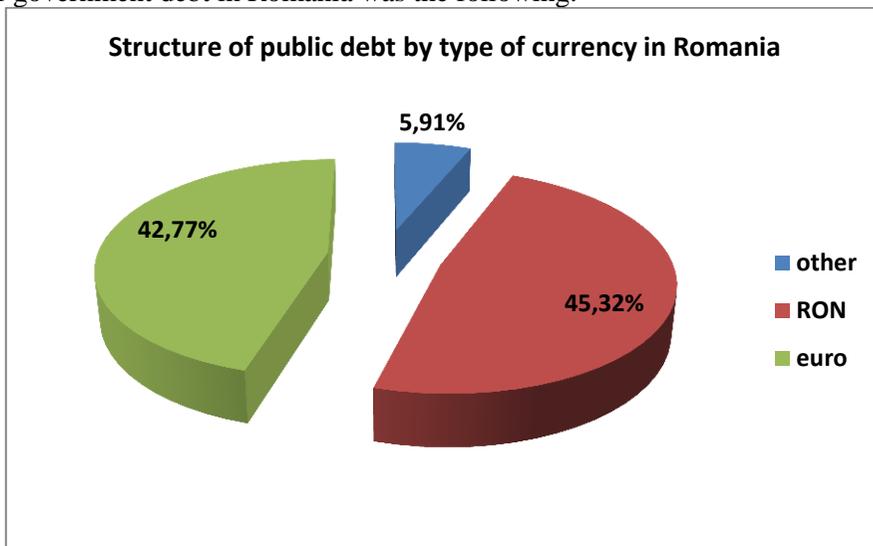
To analyze these data, we can use Excel, creating models for data analysis, while making a presentation of data in several types of professional-looking diagrams (Vătuțiu, 2008: 120). Thus, by types of instruments, on 31st December 2010, the structure of public debt is rendered meaningful by using Excel application:

Public debt structure of Romania on December 31, 2010, by type of instruments

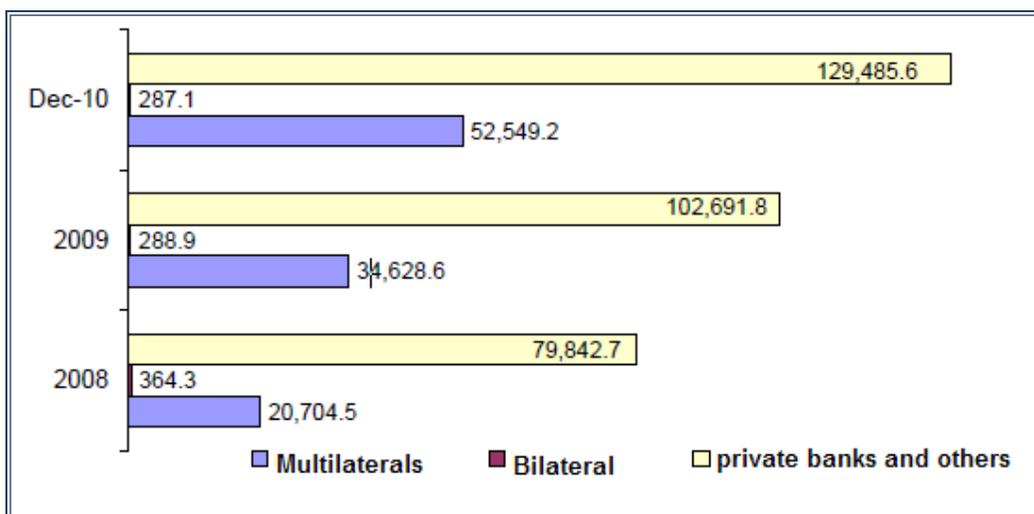


* Availability of loans is the Treasury General Account, used to finance the budget deficit communicated to the Ministry of Finance

One can observe the prevalence of government bonds with a weight of about 40.39% of the total, followed by bonds (18.66%) and T-bills (17.91%). By type of currency at the same time, the structure of government debt in Romania was the following:



By type of holders, the structure of public debt in million, was the following:

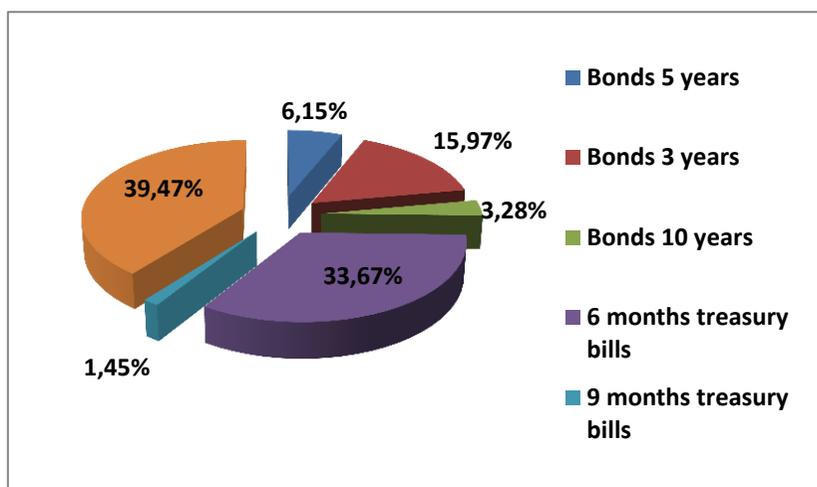


The structure of new public loans contracted during the period January 1, 2010 - December 31, 2010, in million, and is shown in the table below (Table no. 2):

Table no.2

| | |
|----------------------------|-----------------|
| Issuance of domestic bonds | 51 912,4 |
| Cash Management Tools | 3 050 |
| State loans, of which: | 11 347 |
| - contracted directly | 5 977,3 |
| - state guaranteed | 5 369,8 |
| Total | 66 309,5 |

State Securities issued between 1 January -31 December 2010 by type of maturity were:



A quick look shows that Romania contracts most of its new short-term public debt (almost 34% within 6 months and almost 40% within one year), which will significantly increase annual public financial effort generated by this debt in the current budget year (2011). On the primary

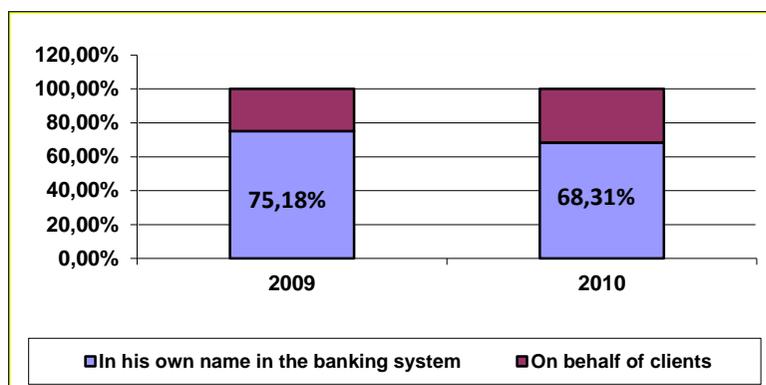
market, in the first half of 2010, issues of public credit instruments (in million) were presented as follows:

Remaining maturity of government securities in ROL million is shown below (Table no. 3):

Table no.3

| | 31 December 2009 | % of total | 31 December 2010 | % of total |
|-----------------------------------|------------------|--------------|------------------|--------------|
| The total amount of which: | 46 134 | 100 | 66 290 | 100 |
| short term | 25 350 | 54,95 | 35 421 | 53,43 |
| medium | 19 489 | 42,24 | 28 142 | 42,45 |
| long term | 1 295 | 2,81 | 2 727 | 4,11 |

Regarding the structure of holders of government securities on the domestic market, on 31st December 2010, the situation was as follows:



Conclusions

Compared to the end of 2009, when it was 147.33 billion lei, which accounted for 30% of GDP, public debt rose by almost 8% of GDP in 2010 (46.6 billion), given that the deficit budget shrank by almost 1% of GDP. This means that public debt has been pressured by loans outstanding in 2010, many of which are rolled in 2011.

In late 2010, government debt represented 94% of public debt, respectively 182.3 billion lei, up by nearly one third (45.8 billion) over the previous end of year.

Government debt contracted by multilateral loans (like the IMF-EU-BM) rose last year with 17.92 billion lei, up to 52.55 billion lei, while the debt contracted through loans from private banks and other lenders increased with 27.9 billion, up to 129.5 billion lei.

Domestic debt has not registered a significant change, increasing with 735 million lei, up to 11.57 billion lei. New loans contracted by the government last year were worth 66.3 billion. In other words, the Romanian Government borrowed on average each month, 5.52 billion lei (1.3 billion euro) to cover current expenses. Romania's debt increased with 46.5 billion during 2010.

As part of the total debt, the government share has increased from 92.65% in 2009 to 94.03% in 2010. Basically, the government debt increased by 45.31 billion lei, to 137 billion lei in 2009 to 182,310,000,000 in 2010. According to the report last year, for 2011 it is scheduled that internal sources will only cover 41.8% of the budget deficit, and below 2% will be covered by privatization receipts and recoveries AVAS. In 2011, the Ministry of Finance expects the government debt service to be 62.7 billion, of which 8.7 billion lei (€ 2 billion) only interest.

However, debt service seems to be much higher than 67 billion (15.8 billion). Most would represent state securities issued in past years that will become due this year, amounting to 42.3

billion lei, which would add to the IMF approved budget deficit - and some 24 billion arrears to be settled. The Government is committed to the foreign creditors not to exceed this year's budget deficit with more than 4.4% of GDP. Loans taken so far by the Romanian State from the IMF and the European Commission will start being returned next year. Until then, one will only pay interest on these loans.

Thus, in 2012 we will refund 124,13 million euro to the IMF, and in 2013 almost 968 million euro, followed by a 1 billion euro refund in 2014.

The year 2015 will be a difficult one, as one will have to refund 157 millions to the IMF, and also a tranche of 1.5 billion euro to the EU. The loan will be repaid to the Commission in 2017 (euro 1.15 billion) and 2019 (EUR 1 billion) too.

To fast track trends and highlight important changes in government debt, you can use new features of visualization and analysis of data from Excel 2010.



The new feature "sparkline Diagrams" provides a compact and clear visual representation of data using small charts assigned to cells on the worksheet. Slicers allow filtering and segmenting PivotTable data in several layers, so that the user can concentrate more on analysis and spend less time on formatting. These new features help one discover patterns or trends in collected data, which could lead to better informed decisions.

In Excel 2010, working on multiple threads helps speed up data retrieval, sorting and filtering rates of PivotTable reports, transforming complexity into clarity with the aid of new visualization tools.

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