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## *SUB-SECTION: INTERNATIONAL BUSINESS*

# REPORTING CORPORATE SOCIAL RESPONSIBILITY ACCORDING TO GRI STANDARDS

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**Abstract:**. *Corporate social responsibility is no longer considered an optional activity by companies. The changes that take place worldwide have determined an increasing number of companies to elaborate instruments of implementing CSR principles into their business strategy. A CSR policy adapted to the specifics of the company's field of activity and to the community in which it is present will bring advantages for both parties. The way through which a company makes their CSR activity results public is by writing a sustainability report which corresponds to international practices in the field. In recent years, an increasing number of companies publish their yearly CSR reports. This reporting originated in the USA, but in the last decade, the number of reports from Europe is increasing. In order to answer to the needs of reporting of the companies, a series of nongovernmental organisms have involved in trying to find the most accessible way that would correspond to the needs of the companies and of the stakeholders. Global Reporting Initiative is a platform that came to the aid of the companies by creating reporting standards which to guide companies through the process of creating the sustainability report. In this paper, we have analysed the evolution in the number of CSR reports worldwide, having then analysed their distribution on continents. We have given attention to the situation in Romania, which in the past ten years, due to multinational companies coming in the market. The presence of multinational companies has helped develop this concept. In the past five years, Romanian companies have submitted CSR reports according to GRI standards. Although the percent of companies of Romanian companies that submit reports according to the GRI standards is small (0.0017%), we believe that it will grow in following years, due to companies realizing the role they have in the society and because the European Commission's 2014/95/EU Directive will enter into force, according to which all companies with more than 500 employees will be forced to report a series of nonfinancial indicators.*

**Keywords:** corporate social responsibility, reporting, GRI Standard.

**JEL classification:** M14, F 23.

## 1. Introduction
During the last decades, the impact of companies in the society and on the environment has increased; nowadays companies have an increasingly greater influence on the societies where they operate.
The concept of CSR has appeared during the last century and developed rapidly, as an efficient proposal according to which companies should voluntarily assume responsibility for certain society problems.
The 70's are marked by the rise of pressure groups focused on environmental issues and

on the impact companies have on it. In the years that followed, the image of the company and its relationship with society become more important.

The World Commission for Environment and Development, through the Brundland Report (1983), draws attention on the environmental problems and on how to solve them in the long term without harming the economy. Freeman (1984) developed the theory of stakeholders, according to which companies need to take the stakeholders interests into account, not only the interests of the shareholders, because the company has relationships with all interested parties, everyone is contributing to its performance.

Once with the expansion of the globalization process, the CSR concept sees a greater development, companies become more aware and involved in the communities where they are present.

At the level of the European Union, after the Lisbon summit, CSR has become a priority. After the initiative of the European Commission, the European Multi-Stakeholder Forum was created. It deals with CSR problems for Europe. It deals with promoting experience exchanges between companies and creating instruments for evaluating standards. (EMS, 2004)

In 2011, through the "*A Renewed EU Strategy 2011-2014 for Corporate Social Responsibility"* Act, the European Commission highlights the economic, social and ecological role a company has in society, in the context of the economic-financial crisis and business globalization.

Steadily, the concept of CSR became a norm for successful companies. They consider CSR to be an integrated part of their culture and image.


## 2. CSR Activity reporting

Due to the increasing number of companies that have implemented CSR policies and strategies, at a worldwide level the need has been felt for a common approach strategy to it.

CSR reporting began 20 years ago and has become a frequently seen business practice. Although the first reports came from some of the great chemical and oil industry companies from North America due to implementing a law that forced companies from this field to publish their data for gas emissions and the impact on the environment, in the last decade, the number of European companies that create CSR reports is steadily increasing.

If in America, the first reports came as an answer to the pressures from environmental organizations which obliged companies to be more transparent and to explain their impact on the environment, the pressure now comes from investors, employees and the local community.

Thus, in recent years, a series of guides, principles and guiding lines have been created for companies that want to report their CSR activity in a formal manner.

Global Reporting Initiative (GRI) is a nongovernmental organization with the purpose of promoting sustainability for companies by combining long-term profitability with an ethic and respectful attitude for the environment.

GRI has developed a reporting system which to coordinate companies in their sustainability reporting activities. The main purpose of the GRI was to harmonize how sustainability reporting was being made, to create a free access to standardization, in order to compare and analyse corporate performances (Brown, 2011)

GRI has been established in 1997. In 1999, it comes up with the first reporting standard: GRI 1. In the years that followed, GRI has adapted its reporting standards according to the reporting needs of the companies so that until today, four generations of reports have been created.

**3. Reporting stages according to the GRI Standards**

Companies have been using GRI standards since 1999. In Romania, companies make reports according to this Standard since 2009.

According to the data made available by the GRI, we can see that from year to year, more and more companies report their activity according to GRI Standards principles and methodology. At present, on the GRI site, there are 22.449 CSR reports belonging to companies from all over the world.
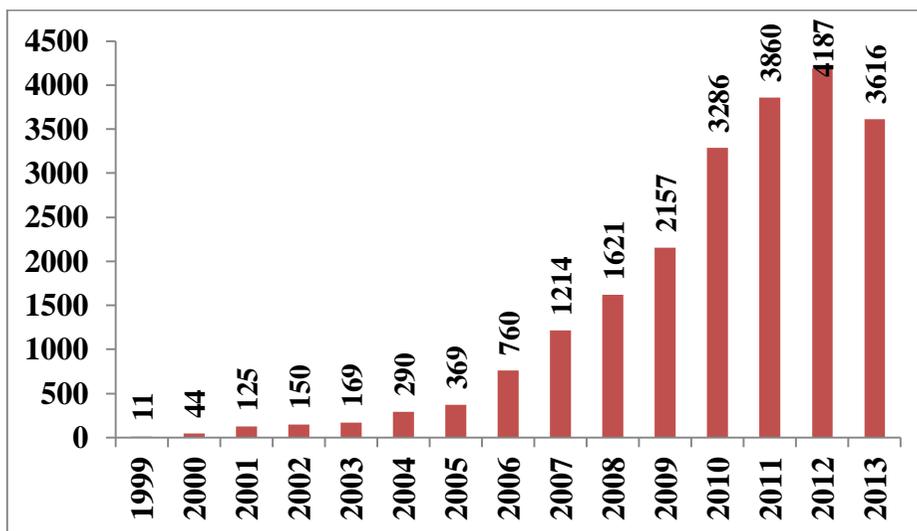


**Figure 1. Evolution of the number of CSR reports**
**Source:** made by the author according to the GRI database.

If in 1999 only eleven companies submitted CSR reports, in the following years their number has increased exponentially.(2000 – 44 reports, 2001 – 125 reports, 2002 – 150 reports etc.) (GRI Database, 2015), and in 2013, a number of 4187 companies have reported their activity, while in 2014 their number was of 3616. (Some companies have not yet published their 2013 reports yet, that is why the recorded number until March 2015 is smaller).

By analysing the repartition on continents of the number of reports, we can see that in Europe reporting has become a major interest factor. Thus, in Europe, a number of 9234 reports have been submitted, which represents 41% out of the total reports from 1999 until today. The repartition on main geographic areas of the reports made by the companies during 1999 – 2014 is such:

Europe                                   9234 reports;
Northen America                   3155 reports;
Asia                                      4542 reports;
Latin America and the Carribean    2799 reports;
Africa                                    1640 reports;
Oceania                               1079 reports.
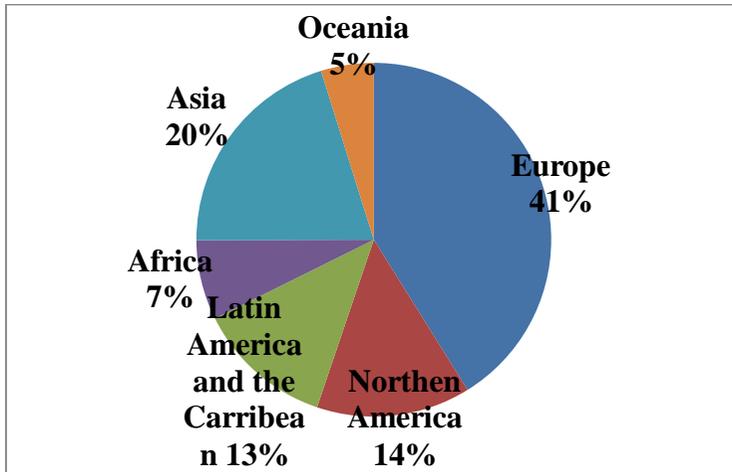
**Figure 2. Continent situation for the number of CSR reports**
**Source:** made by the author according to the GRI database.

It can be seen that European and North American economic operators have submitted 55% of the reports, which proves once again the active role companies play on the two continents and ensuring required transparency according to GRI exigencies.

At the same time, we can see that the Standard has gone through changes to come to the aid of companies and it has tried to level the reporting means so that they become more accessible to stakeholders wanting information about a company's sustainability.

Starting from 1999, when the first series of the Standard – called GRI 1 – appeared, and until 2014 – when GRI 4 has been elaborated – companies have chosen according to the reporting model and have updated this reporting model each time to new requirements.

From the point of view according to which organizations do their reporting, during 1999 – 2014, the number of reports submitted based on the type of the standard is the following:

GRI 1          307 reports;
GRI 2          1454 reports;
GRI 3          10639 reports;
GRI 3.1         4348 reports;
GRI 4           942 reports.
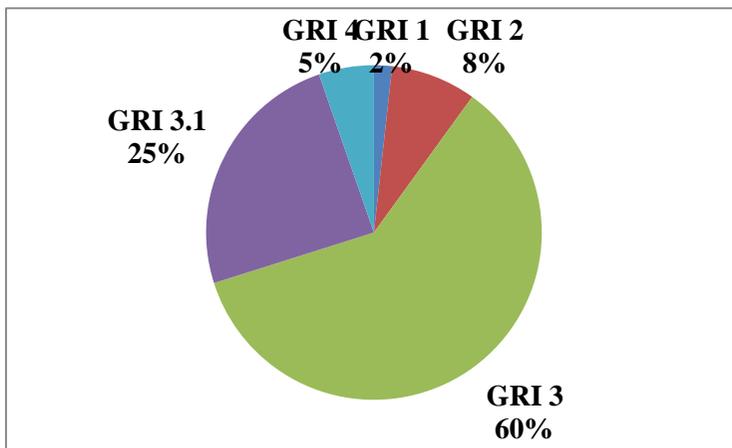
**Figure 3. GRI Standards based on the reports submitted by companies**
**Source:** made by the author according to the GRI database.

According to the chart above, we can see that most sustainability reports have been made according to the GRI 3 and GRI 3.1 Standards – 60% and 25% out of the total number of reports. We consider that this result is due to the high number of reports submitted since 2006. We mention that the GRI 1 Standard has been used by companies during 1999 – 2014, GRI 2 beginning with 2004, GRI 3 since 2006 and GRI 3.1 since 2011. GRI 4 Standard has entered into force in 2014, and until today a number of 942 companies have submitted their reports according to this latest standard, while reporting for 2013 has not been closed yet. (GRI, database) Companies are still using GRI 3 and GRI 3.1, because GRI 4 will be made compulsory only from 2016. Up to that point, companies can chose the reporting model.

Although GRI 4 will be made compulsory only from 2016, companies have already started reporting according to this new standard, because its structure is different from previous generations. Companies can choose their reporting mode according to the specifics of their activities, for the indicators they consider to be relevant. (GRI 4, 2013)

**3. The state of reporting for companies from Romania according to GRI Standards**
In the above pages we have seen the general situation of CRS worldwide company reporting according to reports made and submitted in accordance with GRI Standards. In what follows, we want to analyze the situation of CSR reports submitted by companies from Romania in order to find out the way in which this aspect is accepted in the economy and how it is approached by organization.

We see that in recent years, Romanian companies have given budgets to and started considering CSR as an integrated part of business, betting in the strategic role of social responsibility projects. Thanks to the impulse given by the European Commission through new regulations in the field (2014/95/ EU Directive), social responsibility practices reporting has become more important for companies.

According to the GRI database, from 2009 to 2013, seventeen Romanian companies have submitted their corporate social responsibility reports, with a total of forty reports being submitted. Although the percent of companies of Romanian companies that submit reports according to the GRI standards is small (0.0017%), we believe that it will grow in following years, due to companies realizing the role they have in the society and because the European Commission's 2014/95/EU Directive will enter into force, according to which all companies with more than 500 employees will be forced to report a series of nonfinancial indicators.

**Conclusions**
The importance of CSR programs has increased more and more lately, from reasons regarding the reputation of companies but also from reasons of a stronger involvement in the community where these companies do their business, in order to answer to challenges and changes happening in society in regards to company involvement in communities.

Public authorities define various initiatives for encouraging support through CSR programs, for those projects that answer to the challenges that they, the authorities, need to face in this period.

The differences in approaching business related issues, of the social and environmental issues, have led to outlining some particularities of CSR programs in the USA, as compared to those of the European Union.

Although CSR activity reporting started in the USA, in recent years the European Union has implemented a strong company accountability policy towards the communities and have created European Union-level strategies that create the possibility of a greater

involvement of companies in communities.

In the last decade, companies from Central European countries, under the impulse from multinational companies, promote specific CSR projects and their numbers are increasing. NGOs have actively gotten involved in creating standards and procedures for facilitating company CSR reporting. They have constantly adapted these standards and procedures to the changes that happen globally.

Companies from Romania have implemented CSR programs in the past ten years, and during the last five years, some of them have started reporting this activity according to globally agreed standards.

We consider that the number of companies from Romania that create sustainability reports will grow in the following years, due to legislative changes that will be effective from 2016, but mostly due to the fact that companies become aware of the role they have in the communities where they do their business.

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# THE IMPACT THE COMPETITION POLICY HAS ON THE LIBERALISATION OF INTERANTIONAL TRADE. CASE STUDY: THE CARTEL

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**Abstract:** *The liberalization of international trade is the key when we talk about globalization from an economic aspect, because only when there will be a single global market can we talk about abundance as to what economic globalization is concerned. It is a known fact that market economies can work in free competition conditions. Taking into account the present tendencies of international trade, a decisive role is played by competition authorities. The policy in this field and the commercial policies play complementary roles, because in the absence of one of the two policies, we cannot see economic development and growth. In order to benefit from the full advantages of a free trade, companies must respect the laws of competition. In this context, in this paper, we proposed to study the way in which the existence of a cartel on a certain market can cancel the positive effects of international trade. The working hypothesis from which we started in this study was the following: identifying a cartel that functioned on the European market before and after the Uruguay Round, in order to study the negative effects that this anti-competition practice had. The Uruguay negotiation Round has been chosen, because the best results concerning the liberalization of international trade have been achieved in it. The cartel case was not chosen at random; we have searched to find one that was active in a field which got significant customs tax reductions in the Uruguay Round. We have decided to analyze the impact which a cartel had in the field of industrial products. Following our study, we have managed to empirically demonstrate the way in which a cartel can cancel the benefits of international trade liberalization. The analysis of the way in which the Industrial Tubes cartel acted on the EU market, as well as the analysis of the indicators that led to the undisputable conclusion that this cartel case canceled the positive effects which should have been felt on the European market after the Uruguay Round negotiations. We need to admit and to highlight the very important role that is played by competition policies, in the context of implementing liberalization policies for international trade.*

**Keywords:** competition policy; international trade liberalization; cartel; case study

**JEL classification:** L40; F13

## 1. Introduction
The policy in competition and commercial policy play complementary roles because in lack of one of them, we could not see economic growth or development and in order to fully take advantage of a free trade, companies need to respect the laws of competition.
At present, each state manages its own competition policy, but due to changes that take place globally, the need for a global competition law is necessary. This subject was the negotiation object of the Doha Round, which took place under the guidance of the World Trade Organization.

Because of the tight link between competition, market access and nondiscrimination, it has been agreed that setting common norms regarding global competition in the WTO would be most suitable.

A global competition law implies the harmonization of the competition legislation of all WTO member states.

It must not be forgotten that the members of the World Trade Organization do not have the same level of economic development. Because of this, developing countries could run into difficulties and in order to help them, they would need support. Taking into consideration the level of industries from developing countries, they would prefer a competition policy that would protect and also allow large national companies to benefit from large scale efficiency and economies, so that in the moment when they will act on the international stage, they will be ready. This means that a change in more permissive competition policy. Contradicting interests of developed and developing countries could pose a problem in adopting a global competition policy. To come to the aid of developing countries, the WTO would offer them certain exceptions from the antitrust legislation, as long as this would be transparent and for a well-defined period of time.

Unfortunately, at present, the introduction of certain global norms that deal with competition, under the aegis of the WTO has not yet happened.

During this paper, we propose to analyze the way in which the negative influence of a cartel on the liberalization of international trade is felt.

It is well-known that one of the positive effects of liberalizing international trade which can be felt immediately is price reductions. On the other hand, it is also well-known that the main negative effect felt when a cartel exists on a market is that prices are high.

In literature, the cartel is defined as an understanding made up of independent companies, which belong to the same economic area, having as their objective the control of competition between them, with the purpose of promoting common economic interests (Harding and Joshua, 2010).

As to what the liberalization of international trade is concerned, the factors that have influenced this process are numerous, but the starting point was the creation of GATT. From that moment on, more and more state welcome the idea of free trade and market economy. International trade registers fast growth rates, and developing countries are adopting the policies from developed countries, wanting to have the same level of performances.

The increase in the numbers of regional integration has contributed a lot in the liberalization of international trade. Thus, we cannot talk of international trade liberalization without taking into account the two concepts: economic regionalism and multilateralism (OECD, 2003).

## 2. Case study

During our analysis, we will start from selecting a cartel case that was present on the EU market. As to what the liberalization of international trade is concerned, we will take into account the Uruguay Round of GATT/WTO negotiations, because the best results recorded in time regarding international trade liberalization have been made in this round. The selection criteria for the cartel will have two base elements: firstly, the cartel has to be a long-lasting one – it should have been around before the Uruguay Round and after it, and secondly, the cartel has to be part of a field in which considerable results have been made during the Uruguay Round.

Through the present study we propose an analysis regarding the way in which noncompetition practices, in this case – the cartel, cancel the positive effects of international trade liberalization, in this case – price reduction.

## 2.1. Presenting the cartel – Industrial Tubes

The cartel that was named by the European Commission *Industrial Tubes* had come to the attention of competition authorities in January 2001, by receiving a request that asked for immunity against fines.

According to this request, six companies from Germany, Finland, France and Italy were violating art. 81 from the EC Treaty, at present art. 101 of the TFEU and art. 53 from the EEA Agreement. Following this information, the European Commission through the Directorate General for Competition has decided to open an investigation (Commission Decision of 16 December 2003 relating to a proceeding pursuant to Article 81 of the EC Treaty and Article 53 of the EEA Agreement, 2003).

The products that were the object of the cartel investigation were copper tubes used in industry.

At the beginning of the 1980s, copper tubes for industry were a relatively new product on the European market. They are produced in special conditions and initially there were difficulties regarding quality. To avoid such situations at a European level, the Cuproclima Quality Association was created. In this association, a series of technical standards were settled, so that high quality copper tubes could be produced. This association was founded by the largest European producers in the field. All companies involved in this cartel were members of the Cuproclima Quality Association.

In the EEA area, the market for copper tubes used in industry was held in a 75-85% by companies involved in the cartel. The market value in the EEA in 2000 for these goods was totaling 290 million euros (Commission Decision of 16 December 2003, relating to a proceeding pursuant to Article 81 of the EC Treaty and Article 53 of the EEA Agreement, 2003:74).

The procedure that was applied in this cartel case was according to the legislation. Regular unannounced inspections and hearings took place and finally, on 16 December 2003, the European Commission was able to issue the decision regarding this cartel. According to this decision, it was proven that the member companies of the Cuproclima Quality Association have violated article 81 of the EC Treaty and article 53 of the EES Agreement in this manner: they have fixed the prices for copper tubes; they have agreed on the incremental increase of prices; they have split between them the market shares; they have controlled the delivery and payment conditions; they have permanently watched over the activity of the companies in order to ensure the compliance of the agreement.

The commission settled that the period for violating the legislation was 3 May 1988 – when the first meeting of the Cuproclima Quality Association members took place, until 22 March 2001. We are talking about a large period of 12 years and 10 months (Commission Decision of 16 December 2003 relating to a proceeding pursuant to Article 81 of the EC Treaty and Article 53 of the EEA Agreement, 2003:80).

The total value of the fines imposed for this cartel was 68.320.000 euros.

## 2.2. Price analysis on imports before and after the Uruguay Round

During the negotiations that took place under the aegis of GATT/WTO, the Uruguay Round stood out with the best results in regards to liberalizing international trade. This negotiation round took place during 1986-1994 and had 123 participants. We will resume strictly to the analysis of the results from the field of liberalizing trade for industrial products. They are of interest to us at present, because the products that were the object of the previously studied cartel were part of this category.

Before the Uruguay Round, customs taxes for industrial products were low in developed countries. Still, during the Uruguay Round, as stated in previously signed deals between participant countries, beginning with 1995 it was decided to cut customs taxes for industrial products by another 40%. This deduction was to be made progressively, in equal steps, on

a period of 5 years (International Trade Center, UNCTAD /WTO, The Commonwealth Secretariat, 1996:23).

Starting from this premise, we will analyze the evolution of the import prices for copper tubes, at the EU level, during 1988-2002, to see if the effects of the Uruguay Round were felt in this field too.

Firstly, in order to start our analysis, we needed to identify exactly what products were the objects of the *Industrial Tubes* cartel. According to the Combined Nomenclature, products that were the object of the cartel were identified at the following tariff positions: 74111011 – straight tubes and pipes from refined copper, with a wall thickness > 0.6mm; 74111019 – straight tubes and pipes from refined copper with a wall thickness ≤ 0.6 mm; 74111090 – tubes and pipes of refined copper, in coils or bended in a different way (Eurostat, 2015).

For each product the total volume of imports and the imported quantity for the 1988-2002 period were extracted from the *Eurostat* database of the European Commission, more exactly from the *Traditional international trade database access-ComExt*. In order to simplify the rationing, we have calculated the average of these indicators so that for the duration of our study we could work with only one category of products: tubes and pipes made of copper. Later, based on these indicators, we have calculated the weighted average of the import prices.

The results of this study are synthetized in Figure 1.
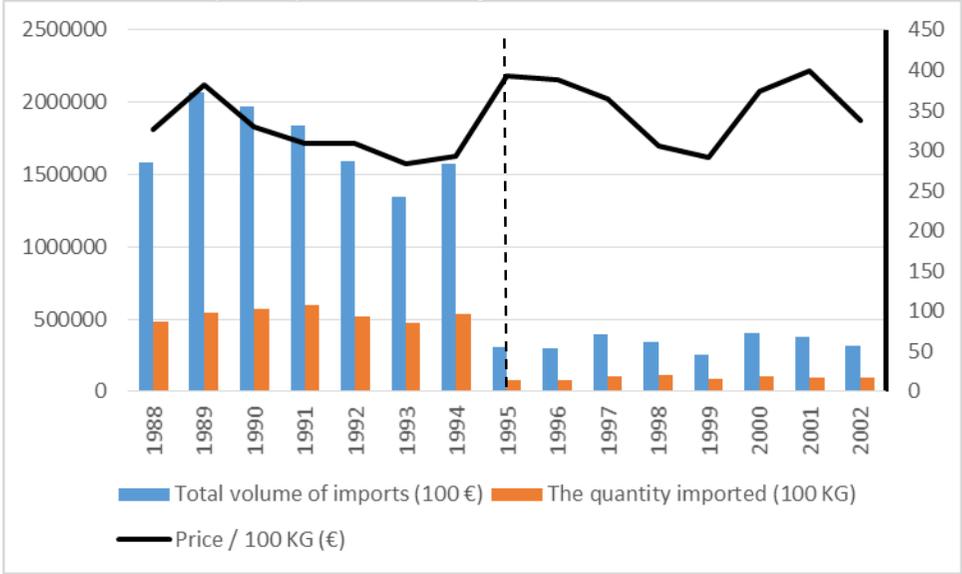


**Figure 1:** Evolution of the total volume of imports, of the imported quantities and of the price of copper tubes and pipes during 1988 – 2002
Source: made by the author on statistical data from Eurostat, available online at: http://epp.eurostat.ec.europa.eu/newxtweb/setupdimselection.do

According to Figure 1, starting from 1995, the imported quantity started to decrease a lot, compared to the 1988 – 1994 period. This tendency maintained until 2002.

A series of relevant elements can be seen in the case of these products. Immediately after the Uruguay Round, import prices rose, although they were supposed to decrease, following import tax reductions. This means that the cartel maintained the price at a high level, following their discussions. The volume of imports decreased dramatically, which means that companies that were part of this cartel divided the market for the product among them. Taking these aspects into account, we can say that the effects of the cartel were more than present.

It can be seen that during 1995 – 2002, the import price was higher than in 1994, except only in 1999, when the price was reduced by 1%. According to the hypothesis from which we started, after the provisions of the Uruguay Round went into force, in 1995, the import price for copper tubes used in industry should have decreased by 40% by 1999. Even if we would take the yearly inflation rate into consideration, we can see that this price reduction did not take place, but on the contrary import prices rose.


## 3. Conclusions

Starting from the work hypothesis described in the introduction of this study, we wanted to highlight the way in which a cartel can influence the effects of international trade liberalization.

The *Industrial Tubes* cartel was present on the EU market during 1988 – 2001. Companies that were part of this noncompetition agreement held in 2002 between 75% and 85% share of the market for European copper tubes used in industry. The European Commission considered, as it is made evident from the decisions, that this cartel had a great impact on the European market for copper tubes used in industry. Competition authorities have put this cartel in a category of great consequence actions.

In the cartel, companies have fixed the selling price of the product and have split market shares between them. The consequences of these actions were initially felt by industrial clients, and then the final consumers were hit too.

During our study, a very interesting aspect caught our eye. After 1994, the volume of copper tube imports in the EU fell dramatically. The most plausible explanation that we could for justifying this phenomenon derives from the negative effects the presence of the cartel had on the EU market. Things went out as such: until 1994, the volume of copper tube imports was high. This tendency was observed by companies that were part of the cartel. Businesses realized that if this tendency was going to continue, they would have gradually lost their market. Thus, during periodic meetings, the companies decided to share the market. Following this decision, by coordinating their actions, the companies finally managed to eliminate external competition from the European copper tube market. This is proven by maintaining the import levels for copper tubes at a very low level.

Normally, once the provisions of the Uruguay Round become valid, European consumers should benefit from smaller prices. As it could be seen in the second part of our study, the contrary happened to the European market for copper tubes used in industry. After 1995, prices increased a lot. In 1999, prices should have been 40% smaller than in 1994.

In reality, in the case of copper tubes used in industry in 1999, the price was reduced by 1%, as compared to the 1994 price. We cannot say that this is a consequence of liberalizing international trade, but that the price was being controlled by cartel members. This statement is backed up by the European Commission which states in the sanctioning decision of the cartel that, during   1993 – 1994 and 1998 – 1999, a decrease of the price of copper tubes used in industry on the European market could be seen, but this decrease was deliberately influenced by cartel members.

In Figure 1 it could be seen that in 2002, after the cartel stopped existing on the European market, the import prices of copper tubes used in industry started to decrease.

In conclusion, we consider that the results of the study could be resumed as such: the *Industrial Tubes* cartel, which acted on the European market during 1988 – 2001, had a decisive and negative influence on the evolution of the price for copper tubes used in industry, which manifested by maintaining a high level with tendencies to grow, as well as through controlling imports and dividing the market, thus managing to cancel the positive effects that the Uruguay Round of negotiations would have made for trade liberalization.

We want to draw attention on the fact that the policies of competition play a very important role in implementing international trade liberalization policies. The efforts made for liberalizing international trade are worthless if appropriate attention is not given to

competition aspects. Because of this it is necessary to introduce common norms at a multilateral level as to what the competition policies are concerned. Still, until this will be possible, it is advisable that at least at a regional level, the competition policy should be permanently monitored and improved.

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# DECISIONS, METHODS AND TECHNIQUES RELATED TO DECISION SUPPORT SYSTEMS (DSS)

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**Abstract:** *Generalised uncertainty, a phenomenon that today's managers are facing as part of their professional experience, makes it impossible to anticipate the way the business environment will evolve or what will be the consequences of the decisions they plan to implement. Any decision making process within the company entails the simultaneous presence of a number of economic, technical, juridical, human and managerial variables. The development and the approval of a decision is the result of decision making activities developed by the decision maker and sometimes by a decision support team or/and a decision support system (DSS). These aspects related to specific applications of decision support systems in risk management will be approached in this research paper. Decisions in general and management decisions in particular are associated with numerous risks, due to their complexity and increasing contextual orientation. In each business entity, there are concerns with the implementation of risk management in order to improve the likelihood of meeting objectives, the trust of the parties involved, increase the operational safety and security as well as the protection of the environment, minimise losses, improve organisational resilience in order to diminish the negative impact on the organisation and provide a solid foundation for decision making. Since any business entity is considered to be a wealth generator, the analysis of their performance should not be restricted to financial efficiency alone, but will also encompass their economic efficiency as well. The type of research developed in this paper entails different dimensions: conceptual, methodological, as well as empirical testing. Subsequently, the conducted research entails a methodological side, since the conducted activities have resulted in the presentation of a simulation model that is useful in decision making processes on the capital market. The research conducted in the present paper also entails an empirical testing phase, involving the hypotheses directed at the impact of adopting risk management in decision making processes under efficient corporate governance.*

**Keywords:** decision making process, risk management, decision support systems.

**Jel classification: G34, M14**

## 1. Current knowledge in the field

*According to empirical research* (Malakooti, 2012)*, efficient managers are distancing themselves from traditional decision making processes (which firstly entails rational analysis) and compensate for any time or information related limitations by relying on intuition.* Any decision-making process developed within the business entity entails the simultaneous concurrence of certain economic, technical, legal, human and managerial variables. The development and adoption of a decision is the result of decision making activities developed by the decision maker who is sometimes assisted by decision support team or/and a decision support system (DSS). These aspects related to the specific applications of decision support systems in risk management will be approached in this paper. Managers on all hierarchical levels of the organisation are the direct beneficiaries

and users of decision support systems from the subcategory of decision makers. Ronald A. Howard in „*Speaking of Decisions: Precise Decision Language*" recommends giving up the manner in which one differentiates between the concepts of risk and uncertainty. Basically, *financial risk tolerance* can be defined as "the maximum uncertainty level that anyone is willing to accept when making a financial decision" (Grable, 2008). In theory, *financial risk tolerance* depends on the various magnitudes of risks. Weber, Blais and Betz (2002) refer to risk attitude as "an individual's location on the continuum from risk aversion to risk seeking" and argue that the risk taking level greatly depends on each specific field. Individuals manifesting risk aversion in one sector (for instance, financial) may not manifest the same behaviour in other sectors. Basically, risk taking behaviour is multidimensional. From the standpoint of financial consultants (Cordell, 2002, Boone, Lubitz, 2003), financial risk tolerance can be defined as a mixture of the two – risk attitude – (how much risk I am willing to take) and "risk capacity" (how much risk I can afford to take). However, these two components of risk tolerance are intrinsically different: risk attitude is a psychological trait (Weber, Blais and Betz, 2002, who consider it as a personality trait), while risk capacity is mainly a financial trait (Grable, Davey and Roszkowski, 2005).

Numerous researchers have analysed the way in which: *risk, risk perception and risk tolerance* influence individuals when they make choices under uncertainty. The term *risk* in decision making processes is an essential element in the classical theoretic economic context (the so-called normative approach), from the theory of anticipated utility of Von Neumann, Morgenstern (1944) to the theory of portfolio analysis of Markowitz H. (1952). However, even though they were deeply contrasting, the first papers on behavioural economics in the 70's, such as Kahneman and Tversky A.'s prospect theory (1979) to the more recent theory of Behavioural portfolio (Shefrin and Statman, 2000; Hoffmann, Shefrin, Pennings, 2010) have emphasized the evidence of cognitive confusion that influence the decision making process relying on reason (a descriptive approach).

## 2. Research methodology

Starting from the working hypothesis we have presented, this paper is directed at developing a model that would be an actual isomorphic representation of the current state of the capital market. The scheme of the heuristic model will consist in developing a system that resembles the one we are investigating (the real system) and will consist in the following stages:
- we will develop an initial solution;
- we will test it under admissibility circumstances (restrictions system);
- we will calculate the performance function of the initial admissible solution (based on economic indicators);
- we will calculate the performance function for a certain time span;
- we will check if the solution suggested through the model overlaps the economic and financial history of the companies included in the quantitative analysis.

The Monte Carlo method will be used to model random variables in order to identify the characteristics of their distribution, when these characteristics cannot be identified through analytical expressions based on the probabilistic density functions. The model developed in this paper also supports the improvement of multiple objectives, enabling decision makers to understand and formulate their fundamental objectives.

## 3. The role of information systems in decision-making processes

In the Anglo-Saxon system, the financial and accounting analysis allows stakeholders to assess the yield and risk levels of their investment. Starting from the idea that the capital market is efficient and transparent, business entities will not be able to use accounting tricks to fiddle with the value of securities, since financial statements are mere information sources for investors.

In Germany and France, outcome analysis is accompanied by an analysis of how added value has evolved and, apart from the usual summary documents (balance sheet, statement of accounts, annexes), certain German business entities also include the statement of added value.

If we compare companies from Eastern Europe with those from Western Europe in terms of performance indicators, it turned out that 50% of western companies use circulating capital as the most relevant performance indicator. On the other hand, only 30% of eastern Europe companies do that, while, in turn, they focus more on the turnover.

A study conducted on 384 companies from 22 European countries, both from western Europe (Austria, Belgium, Denmark, France, Germany, Ireland, Italy, the Netherlands, Portugal, Spain, Switzerland and Great Britain) and from eastern Europe (Romania, Bulgaria, Croatia, Greece, Hungary, Russia, Serbia, Slovakia and the Czech Republic) the following analyses are the most relevant in order to highlight their success:
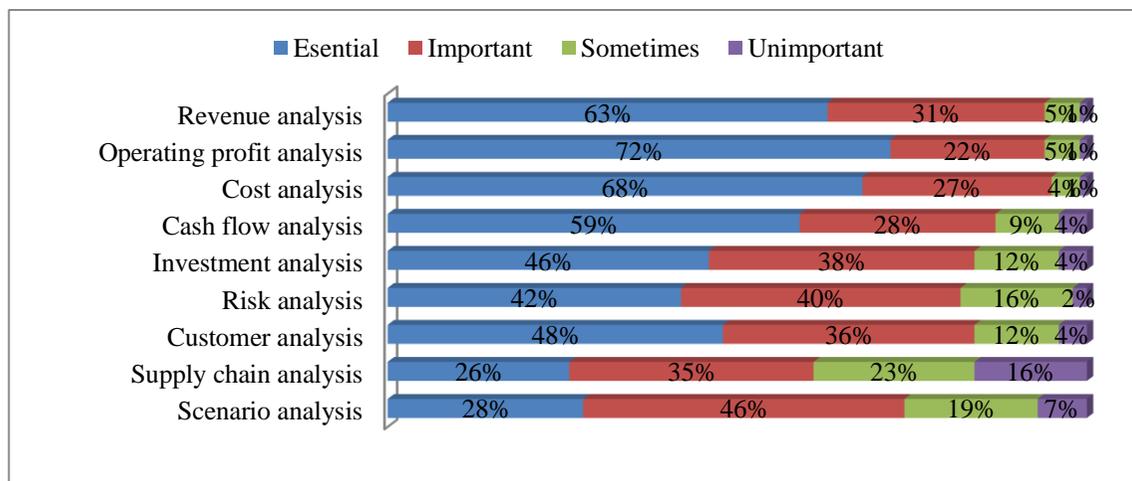


**Figure 1:** Ranking of the types of analyses conducted in business entities
Source: \*\*\*, Management information and performance: CFOs face new demands for high-quality data that drives decisions, 2007, p.10

As can be noted, all analyses are very important or important for the proper functioning of European companies, but the most used ones are revenue, operating profit and cost analyses. Moreover, company managers have confessed that they conduct these regularly or at least once a year.

However, there is one less than encouraging issue the current economy is facing. It consists of the fact that most investors do not trust company reports. A study conducted by ACCA (Association of Chartered Certified Accountants) reveals the fact that investors are sceptical as concerns the information provided by companies. The main findings of the study include that[1]:

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[1] \*\*\*, *Studii, cercetări, analize*, Revista Audit Financiar, Anul XI, nr.104 – 8/2013, p. 52

- After the financial crisis of 2007, 69% of investors have become more sceptical about the information provided by companies;
- 63% believe that the information generated outside the company is more reliable;
- 63% believe that management has too much authority as concerns the reported figures;
- 63% believe that the amount of information provided by companies has encouraged "*hyper-investments*";
- 46% believe that the mandatory quarterly reports should be done away with;
- 93% have expressed their support for the concept of integrated reporting.

Ernst & Young, one of the most famous audit firms in the world, has published a study, "*Tomorrow's investment rules: global survey of institutional investors on non-financial performance",* on the value of nonfinancial information for investors. The study identifies the most important trends and practices in assessing the information on the environmental, social and corporate governance performance of companies. It is based on a global survey conducted on 163 investors, analysts and project managers, as well as on a series of interviews. The survey was conducted in September 2013. We will further present the most important findings of the study.
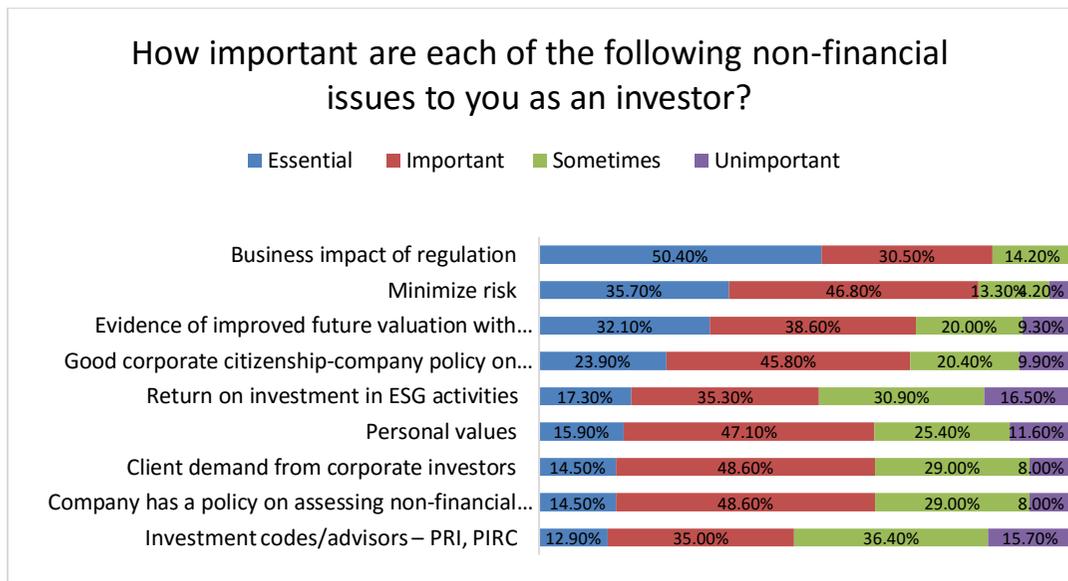


**Figure 2:** Information aspects that are important for investors

Most investors that have been interviewed use the non-financial information of companies when they evaluate the return on the invested assets. One of the most important reasons why they do this is that the non-financial information allows them to anticipate and diminish the risks associated with their investment.

## How useful would each of the following reports or disclosures be to your investment decision-making?

| Report | Benefic | Indifferent | Detrimental |
|---|---|---|---|
| Sector or industry-specific reporting criteria… | 64.30% | 34.20% | 1.20% |
| Statements and metrics on expected future… | 64.40% | 35.00% | 0.60% |
| Company disclosures based on what they feel… | 60.00% | 37.50% | 2.50% |
| Integrated reports that connect non-financial… | 57.20% | 40.30% | 2.50% |
| Prescriptive accounting standards for non-… | 46.00% | 49.10% | 5.00% |
| Separate sustainability and financial reporting | 42.50% | 53.10% | 4.40% |
| Integrated reports that do not (explicitly)… | 23.90% | 67.30% | 8.80% |

**Figure 3.** Useful reports in the decision-making process

The aspects investors are very interested in are corporate governance, strategies used by the company in terms of long term value creation and particularly the materiality of the data for the sector they operate in ("*material data*").

## How useful do you find the following types of non-financial information when making an investment decision?

| Type | Essential | Important | Somewhat useful | Seldom relevant |
|---|---|---|---|---|
| Annual report | 46.80% | 29.80% | 17.70% | 5.70% |
| Integrated report | 26.20% | 34.80% | 23.40% | 15.60% |
| Corporate website (including… | 26.10% | 35.90% | 28.20% | 9.90% |
| Press coverage and business commentary | 19.70% | 34.50% | 38.70% | 7.00% |
| Environmental, social and governance (ESG)… | 12.70% | 27.50% | 33.80% | 26.10% |
| Corporate social responsibility (CSR) or… | 9.90% | 24.80% | 34.80% | 30.50% |
| Sustainability or CSR index rankings produced by… | 4.30% | 27.00% | 32.60% | 36.20% |
| Social media channels including a company's… | 2.80% | 13.40% | 40.10% | 43.70% |

**Figure. 4.** Usefulness of non-financial reports in the decision-making process

The interviewed investors usually look at the information provided directly by the companies they invest in and not from the ranking agencies or other third parties. The first

providers of information related to environmental, social and corporate governance performance of companies are the annual reports and the information posted on their website. An important part is assigned to the integrated reports (which takes into account the information available in several departments and which tries to provide a complete image of the company's performance). A percentage of 61% of the respondents believe that the availability of an integrated report is essential for decision-making. Finally, 40% of the respondents state that they also check the information provided by third parties, such as Bloomberg, but also the information provided by the media.

In practice, we have noted that European financial analysts are increasingly using market oriented methods and are trying to also take into account factors such as geographical distribution of the turnover and current state of the sector. These practices are also supported by the IFRS that wish to ensure the comparability of the financial statements of the various business entities and to help them overcome any difficulties that may occur.

Professional literature mentions the presence of numerous studies conducted on how companies understand access to funding sources and particularly the funding available for small and medium-sized enterprises. Statistics show that the size of the SME sector in east-European countries is smaller than that of the same sector in most developed countries. Nevertheless, SMEs are part of the most dynamic sector of the east-European economy. A new type of companies is emerging in transition economies, more profit and market oriented but also facing certain financial constraints that block their access to long-term funding and affects their development. Therefore, a new type of company is emerging in transition economies.

## 4. The Monte Carlo simulation model – case study financial investment companies (SIF 1)

The present research focuses on identifying a method of establishing the price of the shares listed on the Bucharest Stock Exchange based on an analysis of the changes occurring in the evolution of the main economic and financial indicators for the companies included in the study.

### *The analysis of the main indicators for FIC Banat-Crişana*

The main indicators showing the economic and financial changes occurring in each quarter, during December 31st 2013 – September 30th 2014, at the Financial Investment Company Banat-Crisana have been summarised in Table 1. The evolution of these indicators is fluctuating, with periods of appreciation followed by periods of decline. If certain increases/decreases can be interpreted as positive aspects in the evolution of the company, others are viewed as negative. Thus, if the decreased rate of return indicates a negative change in the company, the lower gearing is a positive change.

**Table 1:** Analysis of the FIC Banat Crişana (SIF 1) indicators during Dec. 31st 2013 – Sept. 30th 2014

| Indicators | Dec.31st.13 | Mar 31st.14 | Jun.30th 14 | Sept 30th 14 | Absolute change Sept.30th 2014/ June 30th 2014 | Dynamic indicators Sept.30th. 2014/ June 30th 2014 % | Relative change Sept.30th. 2014/ June 30th 2014 % |
|---|---|---|---|---|---|---|---|
| Fixed assets | 997.503.553 | 995.074.040 | 934.692.554 | 950.874.353 | 16.181.799 | 101,73 | 1,73 |
| Working capital | 112.585.753 | 161.137.975 | 289.518.913 | 280.187.060 | -9.331.853 | 96,78 | -3,22 |
| **Total Assets** | 1.110.089.306 | 1.156.212.015 | 1.224.211.467 | 1.231.061.413 | 6.849.946 | 100,56 | 0,56 |
| **Total Liabilities** | 34.153.880 | 33.589.734 | 42.409.210 | 23.620.335 | -18.788.875 | 55,70 | -44,30 |
| Shareholder's equity | 1.075.935.426 | 1.122.622.281 | 1.181.802.257 | 1.207.441.078 | 25.638.821 | 102,17 | 2,17 |
| Market price | 1,29 | 1,14 | 1,20 | 1,24 | 0,04 | 103,33 | 3,33 |
| Number of shares | 548.849.268 | 548.849.268 | 548.849.268 | 548.849.268 | 0 | 100,00 | 0,00 |
| Net income | 80.143.950 | 54.127.006 | 149.295.427 | 151.362.268 | 2.066.841 | 101,38 | 1,38 |
| Total revenues | 142.094.475 | 90.623.459 | 235.848.763 | 248.681.243 | 12.832.480 | 105,44 | 5,44 |
| **Book value** | 1,96 | 2,05 | 2,15 | 2,20 | 0,05 | 102,17 | 2,17 |
| **Earnings per share** | 0,15 | 0,10 | 0,27 | 0,28 | 0,00 | 101,38 | 1,38 |
| **Gearing** | 3,08 | 2,91 | 3,46 | 1,92 | -1,55 | 55,39 | -44,61 |
| **ROE** | 7,45 | 4,82 | 12,63 | 12,54 | -0,10 | 99,23 | -0,77 |
| **ROA** | 7,22 | 4,68 | 12,20 | 12,30 | 0,10 | 100,82 | 0,82 |
| **Rate of return** | 56,40 | 59,73 | 63,30 | 60,87 | -2,44 | 96,15 | -3,85 |
| **Solvency ratio** | 96,92 | 97,09 | 96,54 | 98,08 | 1,55 | 101,60 | 1,60 |
| **Liquidity ratio** | 3,30 | 4,80 | 6,83 | 11,86 | 5,04 | 173,76 | 73,76 |
| **PER** | 8,83 | 11,56 | 4,41 | 4,50 | 0,08 | 101,92 | 1,92 |
| **P/B** | 0,66 | 0,56 | 0,56 | 0,56 | 0,01 | 101,14 | 1,14 |

Source of the datas: author's own, based on the data available on:
http://www.tradeville.eu/actiuni/actiuni-SIF1/date-financiare,,
http://www.bvb.ro/ListedCompanies/SecurityDetail.aspx?s=SIF1&t=2, Statement of financial position and shareholder's equity, Profit and Loss account. Informative data 30.09.2014.pdf

**During June 30th 2014 – September 30th 2014, the earnings per share have increased by 1,38%, and the market price of the shares on SIF1 was higher by 3,33% on**

**September 30th 2014 as compared to June 30th 2014. For the same period, the total liquidity has increased by 73,76%.**
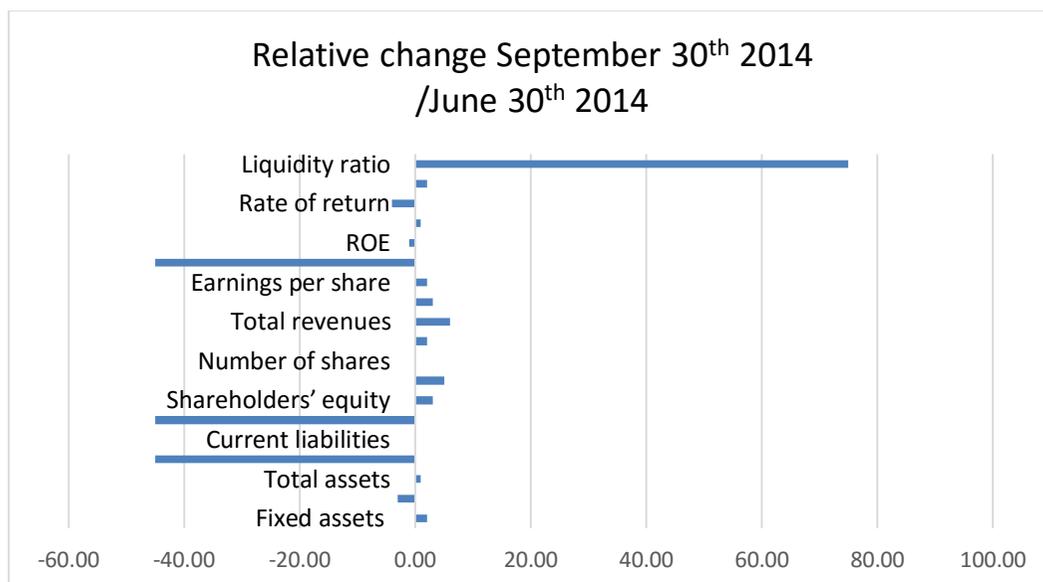


**Figure 5:** Relative change of the main indicators for FIC Banat Crişana (SIF1) during June 30th 2014 – September 30th 2014

If we state that the changes in the market price of the shares have been caused by the changes in the economic and financial indicators of the company, then we can calculate the market price of the shares for the current period, starting from the value reached during the previous period, weighed by the value of an average dynamic indicator that would reveal the changes occurring in the evolution of these indicators, thus:

$$P_1 = P_0 * \bar{I}$$

where:

$P_1$ - market price of the shares at present;

$P_0$ - market price of the shares during the reference period;

$\bar{I}$ - average dynamic indicator.

If we start from the assumption that an investor conducts a rational analysis of certain economic and financial indicators when making the decision to buy or to sell shares, we will consider the share price and the dynamic indicators for:

- **Book value per common share (Vc);**
- **Earnings per share (EPS);**
- **Rate of return (Rp),**
- **Return on assets (ROA);**
- **Return on Equity (ROE);**
- **Solvency ratio (Sp);**
- **Liquidity ratio (Lp).**

The average dynamic indicator for these ratios, during June 2014 – September 2014 will be calculated as a geometrical average, thus:

$$\bar{I} = \sqrt[7]{I_{Vc} * I_{Rp} * I_{ROA} * I_{ROE} * I_{Sp} * I_{Lp} * I_{Eps}} =$$
$$= \sqrt[7]{1,0217 * 0,9615 * 1,0082 * 0,9923 * 1,0160 * 1,7376 * 1,138} = 1,0840$$

Based on this average indicator, we will identify the share price on September 30th 2014, as follows:

$$P_{sept.2014} = P_{iunie2014} * \overline{I} = 1,20 * 1,0840 = 1,301$$

The obtained value ranks above the market price of the shares, identified based on the graph presented in Figure no. 2, thus leading us to believe that there have also been other factors that influenced the share price on the market. The gradual identification of the selling price of these shares by using the **Monte Carlo method** entails the following steps:

- *Computing probabilities and cumulative probabilities*

| Date | Average price | Volume | Probability | Cumulative probability |
|------|------|------|------|------|
| 03.11.2014 | 1,249 | 256300 | 0,060467366 | 0,060467366 |
| 04.11.2014 | 1,252 | 293080 | 0,069144657 | 0,129612023 |
| 05.11.2014 | 1,278 | 155740 | 0,036742831 | 0,166354854 |
| 06.11.2014 | 1,285 | 1933340 | 0,456121643 | 0,622476496 |
| 07.11.2014 | 1,285 | 366920 | 0,086565298 | 0,709041794 |
| 10.11.2014 | 1,273 | 155950 | 0,036792375 | 0,745834169 |
| 11.11.2014 | 1,284 | 92950 | 0,021929152 | 0,767763321 |
| 12.11.2014 | 1,276 | 96150 | 0,022684109 | 0,79044743 |
| 13.11.2014 | 1,271 | 43890 | 0,010354712 | 0,800802142 |
| 14.11.2014 | 1,279 | 73060 | 0,01723662 | 0,818038762 |
| 17.11.2014 | 1,266 | 31910 | 0,00752834 | 0,825567103 |
| 18.11.2014 | 1,261 | 102640 | 0,024215257 | 0,84978236 |
| 19.11.2014 | 1,254 | 55700 | 0,013140976 | 0,862923336 |
| 20.11.2014 | 1,258 | 109580 | 0,025852571 | 0,888775907 |
| 21.11.2014 | 1,262 | 48940 | 0,011546129 | 0,900322036 |
| 24.11.2014 | 1,259 | 47280 | 0,011154495 | 0,911476531 |
| 25.11.2014 | 1,269 | 225410 | 0,053179668 | 0,964656199 |
| 26.11.2014 | 1,267 | 100260 | 0,023653758 | 0,988309957 |
| 27.11.2014 | 1,26 | 38350 | 0,009047692 | 0,997357649 |
| 28.11.2014 | 1,263 | 11200 | 0,002642351 | 1 |
| **Total** | | **4238650** | **1** | |

1. *Graph representation of the cumulative probabilities*
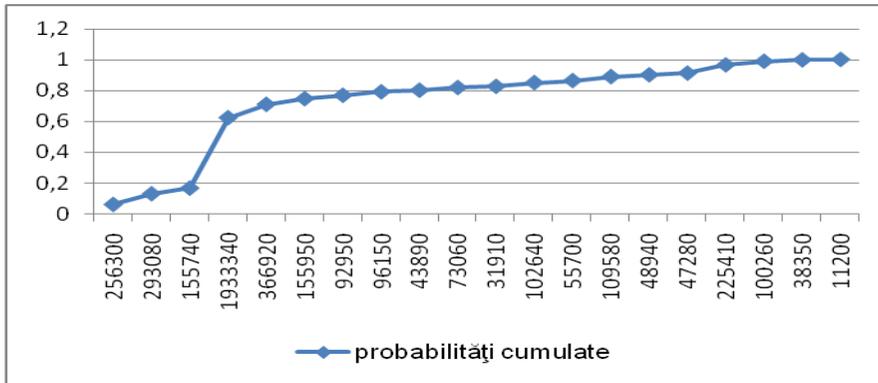
The generation of the random numbers, calculating the average, the square standard deviation, the variation coefficient and the confidence interval:

| Nr. observations | Lower threshold | Average price | Interval |
|---|---|---|---|
| 1 | 0,060467366 | 1,249 | [0,0604673657886355;0,129612022695906) |
| 2 | 0,129612023 | 1,252 | [0,129612022695906;0,166354853550069) |
| 3 | 0,166354854 | 1,278 | [0,166354853550069;0,622476496054168) |
| 4 | 0,622476496 | 1,285 | [0,622476496054168;0,709041793967419) |
| 5 | 0,709041794 | 1,285 | [0,709041793967419;0,745834168898116) |
| 6 | 0,745834169 | 1,273 | [0,745834168898116;0,767763320868673) |
| 7 | 0,767763321 | 1,284 | [0,767763320868673;0,790447430195935) |
| 8 | 0,79044743 | 1,276 | [0,790447430195935;0,8008021421915) |
| 9 | 0,800802142 | 1,271 | [0,8008021421915;0,818038762341783) |
| 10 | 0,818038762 | 1,279 | [0,818038762341783;0,825567102733182) |
| 11 | 0,825567103 | 1,266 | [0,825567102733182;0,849782359949512) |
| 12 | 0,84978236 | 1,261 | [0,849782359949512;0,862923336439668) |
| 13 | 0,862923336 | 1,254 | [0,862923336439668;0,888775907423354) |
| 14 | 0,888775907 | 1,258 | [0,888775907423354;0,90032203649747) |
| 15 | 0,900322036 | 1,262 | [0,90032203649747;0,911476531442794) |
| 16 | 0,911476531 | 1,259 | [0,911476531442794;0,964656199497482) |
| 17 | 0,964656199 | 1,269 | [0,964656199497482;0,988309957179763) |
| 18 | 0,988309957 | 1,267 | [0,988309957179763;0,997357649251531) |
| 19 | 0,997357649 | 1,26 | [0,997357649251531;1) |
| 20 | 1 | 1,263 | 1 |

Based on the data from the above table, the random numbers have been generated as well as the necessary calculations to estimate the stock market price based on the Monte Carlo method. The obtained results can be found in Annex 1.

The average price is the arithmetical average of the simulated prices, thus:

$$\overline{X} = \frac{240,367}{189} = 1,27183$$

The square standard deviation is:

$$\sigma^2 = \frac{\sum(\ _i - \overline{X})}{n} = \frac{0,0240841058}{189} = 0,0001274$$

Dispersion:

$$\sigma = \sqrt{\sigma^2} = \sqrt{0,0001274} = 0,0112885$$

Variation coefficient:

$$c_v = \frac{\sigma}{\overline{X}} * 100 = \frac{0,0112885}{1,27183} * 100 = 0,8876082$$

For 188 degrees of freedom, a 5% error, the interval indicating the price that can be obtained is given by the ratio:

$$\left(\overline{X} \pm t_{0,05;188} * \frac{\sigma}{\sqrt{189}}\right)$$

Replace and thus get the interval:

$$\left(1,271783 - 1,645 * \frac{0,0112885}{\sqrt{189}}; 1,271783 + 1,645 * \frac{0,0112885}{\sqrt{189}}\right)$$
$$(1,270432336; 1,273133801)$$

We can state, with a 95% probability, that the share price will range between a minimum of 1,2704 and a maximum of 1,2731.

The analysis of the changes in prices, based on the regression and correlation method, entails taking into account the values for a longer period of time. The evolution of share market prices on SIF1, based on the data available on the website of the Bucharest Stock Exchange for a period of 180 days, is detailed in Figure 6.
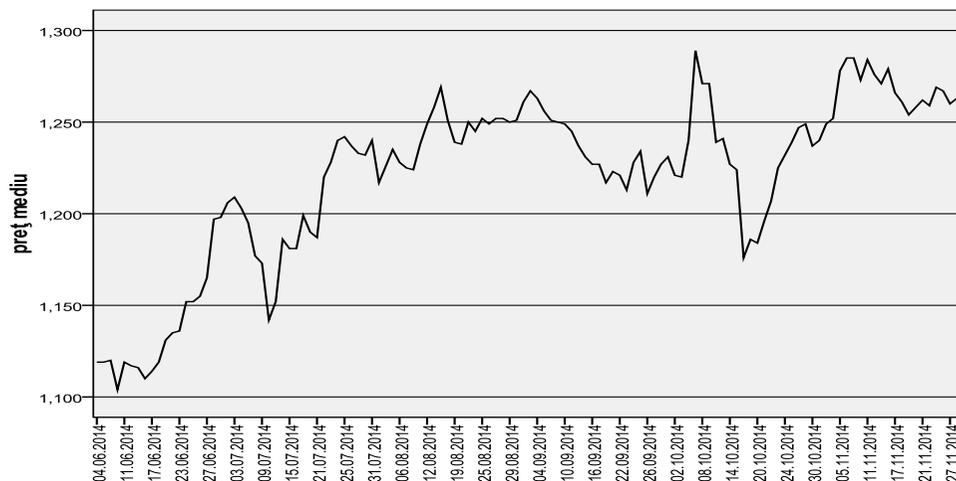


**Figure 6:** Evolution of FIC Banat Crişana shares during June 4th – November 28th 2014
Data source: author's own, based on the data available at www.bvb.ro

The figure highlights a maximum point in October, amounting to 1,289 (October 7th 2014) and a minimum point of 1,104 in June (June 10th 2014).

During June 4th – November 28th 2014, the average price of SIF 1 shares was of *1,22*. The dispersion of the series values around the mean is quite low (*0,04611*), the series is asymmetrical on the left, while the asymmetry coefficient is *-0,98.*

**Table 2:** Descriptive statistics

| | Indicators | | Values | Standard error |
|---|---|---|---|---|
| Average_price | Mean | | 1,22008 | 0,004108 |
| | 95% Confidence Interval for Mean | Lower Bound | 1,21195 | |
| | | Upper Bound | 1,22821 | |
| | 5% Trimmed Mean | | 1,22250 | |
| | Median | | 1,23200 | |
| | Variance | | 0,002 | |
| | Std. Deviation | | 0,046111 | |
| | Minimum | | 1,104 | |
| | Maximum | | 1,289 | |
| | Range | | 0,185 | |
| | Interquartile Range | | 0,054 | |
| | Skewness | | -0,980 | 0,216 |
| | Kurtosis | | 0,133 | 0,428 |

The figure representation of the series, detailed in Figure no. 6 pinpoints the fact that the evolution of the Stock Exchange prices during June 6th – November 28th can be approximated by means of a quadratic or a cubic model. In order to select the evolution model, we have calculated the coefficient of determination and the square of the modelling errors. Based on the conducted calculations, we have selected the cubic model in order to adjust the evolution of the Stock Market price for the period under analysis.

**Table 3:** Estimates of the correlation coefficients

| R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|
| 0,896 | 0,803 | 0,798 | 0,021 |

The determination coefficient, *R square adjusted*, shows that the cubic model accounts for 80,3% of the variation of the phenomenon, while the value is significantly different from zero.

**Table 4:** Testing the significance of the determination coefficient

| | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Regression | 0,213 | 3 | 0,071 | 166,040 | 0,000 |
| Residual | 0,052 | 122 | 0,000 | | |
| Total | 0,266 | 125 | | | |

The general form of the cubic model is given by the ratio:

$$P = a + b_1 * t + b_2 * t^2 + b_3 * t^3$$

where:

P- share market price

$t$ - time variable

$b_i$ regression coefficients

**Table 5:** Estimates of the regression coefficients corresponding to the complete cubic model and their testing relative to zero

| | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| Case Sequence | 0,0066388 | 0,0005164 | 5,2574985 | 12,8566063 | 0,0000000 |
| Case Sequence ** 2 | - 0,0000901 | 0,0000094 | -9,3539678 | -9,5563656 | 0,0000000 |
| Case Sequence ** 3 | 0,0000004 | 0,0000000 | 4,9605630 | 8,1314722 | 0,0000000 |
| (Constant) | 1,0793493 | 0,0076025 | | 141,9733364 | 0,0000000 |

After estimating the parameters of the cubic model, we get:

$$P = 1,0793493 + 0,0066388 * t - 0,0000901 * t^2 + 0,0000004 * t^3$$

The adjustment of the series by means of this model is conducted in the graph in Figure 7.
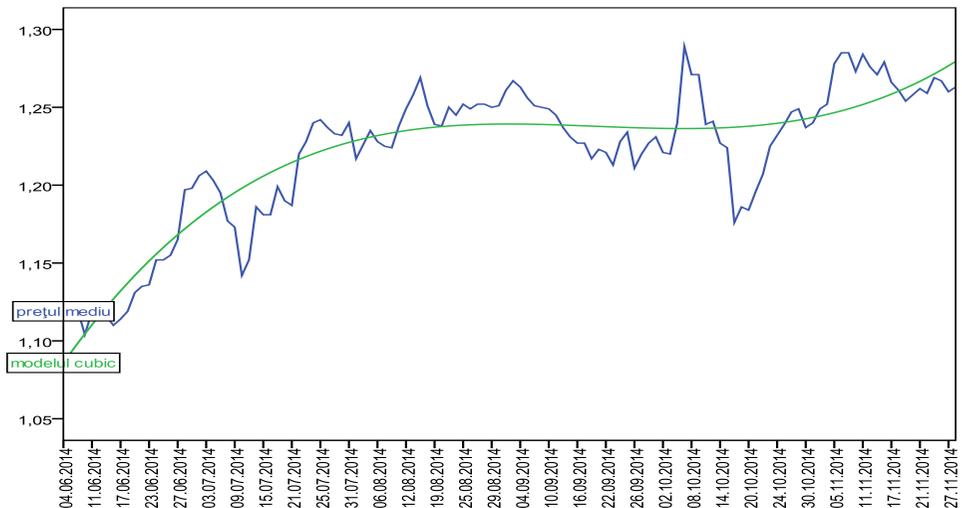


**Figure 7:** The price of the SIF 1 shares on the Stock Exchange during June 6th – November 28th 2014, adjusted by means of a cubic model

## 5. Conclusions

There are countless approaches related to the complexity/difficulty of the decision making contexts in today's economy; some researchers suggest a new framework for substantiating business decisions; they speak of simple, complicated, complex and chaotic contexts; they also say that keen leaders are able not only to identify the context they are

working in, but also manage to adapt their behaviour to the characteristics of that particular context.

However, we should not generalize: in practice, decision makers are never confronted with just one decision related issue, and the information system provides a wide range of information. That is why the cost-profit approach should focus on the collective effect of the decisions taken in one company. For instance, a complex and costly accounting information system can provide sufficient data and even features for budget elaboration. In more simple situations (let's say, identifying the required supplies), a cheap application implemented on a computer or even a model designed by the user in a usual development environment can provide sufficient data for decision making, under circumstances of economic efficiency.

The accounting information system of an enterprise is one of the essential components of the economic information system, as it is the main means of understanding, managing and controlling the assets and the output of that particular enterprise. The main role of the accounting information system in the decision making process entails that its organisation and functioning should ensure the successful completion of the following objectives:

- provide the necessary information for decision making, both for the management of that particular enterprise and for third parties;
- provide the information needed for drawing up the plans and economic activity programmes, particularly used with the budgets of those companies;
- chronologically and systematically record the economic activities that influence the financial position, performance and treasury flows of the company;
- provide the necessary data for calculating the cost of the products, transactions and services;
- provide the information needed for preparing the financial and accounting reports.

Thus, the financial information becomes a paramount resource for decision-making processes, used both for drawing up strategic development plans, in agreement with the corporate culture of each business entity, and also for designing operational plans in agreement with the medium term and long term development strategies.

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# SOME ASPECTS CONCERNING SOVEREIGN DEBT AND THE RELATIVITY OF INDEBTEDNESS INDICATORS

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**Abstract**: *For quite a while, the economic world was concerned more and more about sovereign debt. Taking a brief look at economic history, we see that we are not dealing with anything new. Episodes in which states have entered into default occurred, even centuries ago. Moments like the one where Edward III refused to pay the debt to Italian bankers, the Mexican default of August 1982 or the Argentine one back in 2001, aiming at nearly 100 billion dollars, are well known. The current discussion about sovereign debt started with the so-called sovereign debt crisis, which has in the foreground the problem of the Greek state. In 2010 it became acute, Greece being unable to honor its external obligations. It took a strong intervention, supported internationally mainly by the European Union (and also the IMF), but the situation is not resolved even today. This crisis, which we would put on the account of the governance inconsistency and errors, starting with the unprepared entry in the European Union and hasty adoption of the Euro, and continuing with the serious fiscal disorder in the economy, put in difficulty even the single European currency and the economic and monetary union.*

*Shortly after the start of the Greek crisis, which had as a "catalyst" the violent and pro-cyclical reaction of rating agencies, we found that the problem is much deeper, some other countries (the so-called "PIIGS", for example) being affected by massive indebtedness. In this context, the construction of indicators, of alert thresholds and "early warning" mechanisms is an important gain for policy-makers, as well as for the various economic operators.*

*The study of sovereign debt can take many forms; on one hand, using data covering a long period, we may create models containing key indicators: sovereign debt, GDP, inflation, foreign trade, economic growth. Assumptions about the relationship between variables and their testing will be done as a second phase. On the other hand, the analysis may be very relevant by just highlighting the important elements of the recent sovereign debt dynamics, often ignored, both by specialists and governments. It is what we propose in this short study, along with a more nuanced definition of sovereign debt sustainability.*

**Keywords:** sovereign debt, default, ratios, indebtedness threshold, economic policies.

**JEL classification:** F3, F34, G01.

## 1. Introductory remarks

When we analyse sovereign debt, we have to point out, from the beginning, that a state differs from any other economic actor.
Therefore, we must always look at sovereign debt taking into account several aspects:
- The specific reasons for which a State becomes a debtor;
- The factors influencing the behavior of a state as a debtor;
- The possibility for a country to enter into default regarding sovereign debt.

In general, private agents and especially firms turn to debt, to credit in order to obtain money for investments. From this point of view, it is favorable that the profit rate related to the investment exceeds the interest rate. The remark is a logical and simple one.

In the case of countries, the situation is different. Often, the goal of indebtedness has nothing to do with investment, with technology transfer, and is linked to the need for financing social policies or operating costs. In some cases, states even borrow in order to repay their current debt or to service it – especially paying interests (Garello, Spassova, 2011). The lack of investments, or their inefficiency, undoubtedly represent an obstacle to economic growth; in the absence of a real GDP growth, often state control over debt premises are severely affected.

We will not say here that all the investments and actions taken by the state are wrong. Some governmental decisions can hep economic activity, and foster a good climate for economic development; in this case, sovereign debt can be seen as a growth tool, the use of which being recommended. It is quite logical that large investments, whose effects and profitability are displayed over several years, should be funded by debt. We admit that some of them, such as infrastructure, are of real national interest, and, as they will also serve future generations, it is normal that descendants help to pay for them.

But there are significant differences when talking about today's public consumption, or about the cost of social policies. Using debt in this situation turns out to be completely unhealthy. Also, in addition to covering operating expenses or major projects, sovereign debt can meet the needs of foreign trade. In this context, we must say that using debt in order to finance an efficient international trade can lead to some positive effects.

A state differs from a company due to the fact that it has an important feature called sovereignty. In some situations, a state can increase taxation, can operate fiscal changes, can modufy the legal environment, or even print money. These levers obviously can not be used by private actors. Also, often the state is favored relative to private agents in the context of a loan, this privilege meaning, first of all, a lower interest rate. Often, when a country accumulates debt, people are tempted to say that its creditors are not at risk. Government bonds have been perceived as risk-free assets for a log period of time (Landau, 2012). However, sovereign risk has occurred and is present, more than ever, in the global economy. Often, the default is recorded long before a state drains its resources (Reinhart, Rogoff, 2009). Basically, it is the result of an analysis carried out by political factors, which choose the alternative which is favorable. Economic interconnections make unlikely sovereign debt repudiation in the contemporary world, countries desiring to maintain good quality economic and diplomatic relations. A good economic analyst must, however, make a proper distinction between the concepts of "willingness to pay" and "ability, capacity to pay". In this context, we mention another relatively rare concept, that of "odious debt", which refers to the "right" of a government to refuse paying a debt inherited from another one, corrupt and of bad faith. Of course, the concept is relatively controversial, the odious nature of debt being difficult to prove; however, a certain influence on the payment behavior of states is present.

## 2. Recent developments concerning sovereign debt

If we focus on the current situation, we notice rapidly that the contemporary indebtedness situation of various countries has its origins in the economic policies pursued for decades, since the second half of the twentieth century. In the developed countries especially, sovereign debt reaches very high levels today, levels that worry both analysts and policy makers (Pettis, 2015). We can also notice that the developed countries became excessively indebted, taking advantage of the low interest rates available. Of course, we will not say here that indebtedness is synonymous with a total lack of responsibility from the government, but we believe that not only economic theory recommending state intervention in order to stimulate growth was behind the decisions. Several authors speak about political, electoral connotations of indebtedness (Garello, Spassova, 2011).

It is evident that debt accumulation was a process, an evolution which meant several decades. In conclusion, the problem is much older, and existed long before the 2007-2008 moment, as stressed in many studies (Abbas, Belhocine, El Ganainy, Horton, 2010). After

the beginning of the crisis, supporting demand involved significant budgetary measures, in most countries of the world; the developed countries were the leaders in this regard. These measures had side effects, affecting the budget balance; in the same time, fiscal revenues dropped. The sovereign debt burden became higher and higher, especially for developed countries, as shown in the figures below:
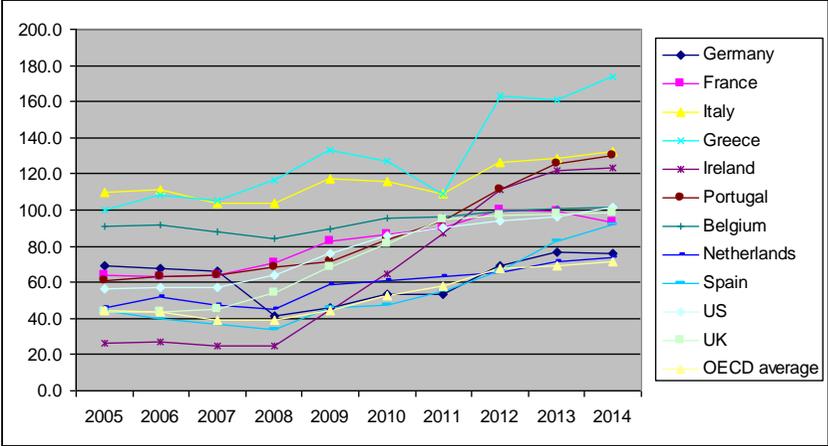


**Figure 1:** Sovereign Debt to GDP evolution (%, selected developed states)
Source: Author's calculations, using data from World Bank, www.tradingeconomics.com
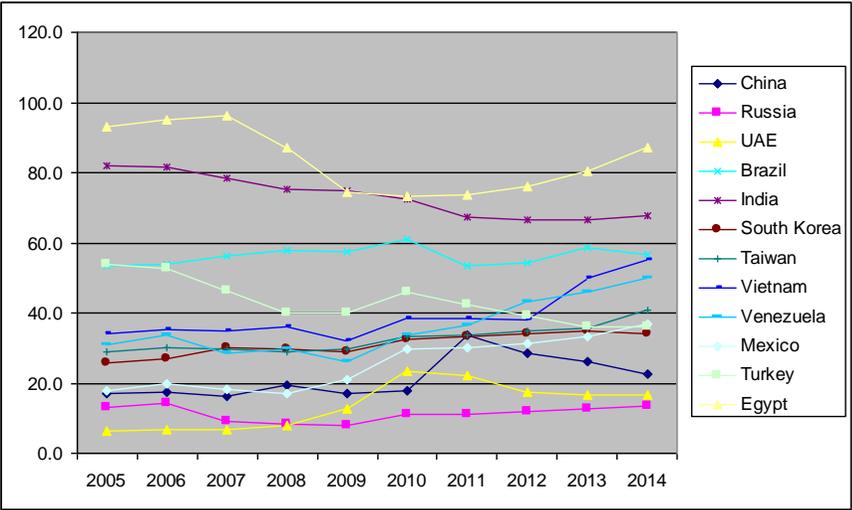


**Figure 2:** Sovereign Debt to GDP evolution (%, selected emerging states)
Source: Author's calculations, using data from World Bank, www.tradingeconomics.com

It is also evident that in the period preceding the global crisis, developed countries have experienced high levels of indebtedness. On the other hand, we notice a slight decrease in the share of sovereign debt in GDP in the years preceding the crisis, but this positive evolution was stopped by the explosion of debt after 2008, in the context of recovery policies. The various commitments taken at European level, for example (the Stability and Growth Pact, the Maastricht Treaty) have largely lost consistency.

For developed countries, the average of the sovereign debt / GDP indicator is currently around 100%, many countries exceeding this threshold; emerging countries present a

value well below 100%. In the EU, the average of 87% recorded in 2014 is maintained – 86.6% Debt to GDP in the first months of 2015.

## 3. Some remarks concerning sovereign debt sustainability

It is obvious that the sovereign debt had in recent years a general growing trend. We consider this evolution as worrying, but we also think, and we said this many times, that debt sustainability is essential. The issue of sovereign debt sustainability is complex; as underlined in some studies (Landau, 2012) most often analysts are seeking a categorical answer to the question of sustainability – the debt is sustainable or not. In reality, things are much more complicated, and even influenced by political factors Often, debt indicators, like for example Total Debt/GDP, Exports/Total Debt, Reserves/Imports, and many others are used to determine thresholds of indebtedness, above which the default becomes imminent. This practice is useful, but presents some disadvantages. Countries behave very differently, and a given level of debt that can be perfectly sustainable in a country is totally unsustainable in another one. Economic history has recorded instances where a state having a sovereign debt / GDP ratio of 200% or even more continued to repay its debt, while others went into default at 40-50%. Therefore, relative to sovereign debt sustainability, we make several remarks:

☐ The point at which debt becomes unsustainable varies from borrower to borrower, from country to country;

☐ The sustainability of sovereign debt is overwhelmingly influenced by the economic policies implemented by governments; for example, a state that encourages exports and international trade in general will increase its chances to repay smoothly, especially if indebted in foreign currency, which is *per se* a problem (Kedia, Moumdar, 2001); a country that will operate major investments, the effect of which involves generating a consistent income, can ensure a climate extremely favorable to sustainability;

☐ Sustainability is favored by the stability of debt rations (Debt-to-GDP, Debt-to-Exports, or state revenues, and others);

☐ Debt sustainability is strongly influenced by sovereign rating agencies and the financial markets; in this context, we should highlight the problems of pro-cyclicality of rating, and also the inefficiency of markets and *herd behavior*, more and more common in financial markets (Trenca, Pece, Mihuţ, 2015);

☐ A state with significant and stable economic growth is always in a good position to service its debt;

☐ When studying sustainability, one should distinguish between insolvency and illiquidity, and assess the *self fullfilling solvency traps* (Roubini, 2001).

## 4. The relativity of indebtedness indicators

A short recent economic literature review allows us to begin with a remark: the relativity of indicators and thresholds regarding sovereign debt is clearly highlighted by the constant contradictions between the various authors on the subject. We will come back to that later. What we want to emphasize is primarily that there are significant differences in behavior between states, between governments.

When talking about the probability of default, we must not lose from sight the degree of debt intolerance shown by countries; it differs significantly from country to country. The economic literature traditionally considered emerging countries to have a lower tolerance to indebtedness. Often, and economic history confirms this, starting from relatively low debt levels, there may be a loss of confidence from the international markets, and consequently a significant increase in the interest rate required on government debt (rise in risk premium). The default can occur at Debt to GDP levels of 60% or even below. We can say, therefore, that the thresholds are mobile, and depend largely on the history of the state and on its features. Currently, the Greek episode does not seem to have an end, and is often seen as a surprise, but we should not forget that, in the past, the Greek State has

entered default several times. We can give many examples of countries that have entered default in the past without touching the current indebtedness thresholds (60% or 90%); even Mexico, in the 80s, was below 50%:

**Table 1:** Sovereign Debt ratios before default (some examples)

| State | Year of crisis | Debt/GNP (%) |
|---|---|---|
| Russia | 1998 | 59 |
| Argentina | 2001 | 51 |
| Venezuela | 1982 | 42 |
| Bulgaria | 1990 | 57 |
| Turkey | 1978 | 21 |

Source: World Bank

Therefore, a threshold of indebtedness is a volatile concept – which is undoubtedly influenced by many factors, among which we mention here:

&#9633; the state history, especially the history of sovereign debt management;

&#9633; the political, governmental attitudes towards creditors, the relationship with international markets; for example, at some point, a new government may consider the previous debt as "odious" (in some cases, sovereign and political risk are combined);

&#9633; the inflation rate and its evolution;

&#9633; international trade (especially the dynamics of exports);

&#9633; the country rating provided by agencies (which is often pro-cyclical);

&#9633; institutional characteristics;

&#9633; the Capital Flows;

&#9633; the economic growth rate and its evolution;

&#9633; the issue of foreign currency denominated debt.

For emerging markets, Reinhart and Rogoff speak even of a danger of default somewhere around 30-35%. Of course, we agree that developing countries encounter difficulties in comparison with developed countries when it comes to sovereign debt. But, given the current debt burden of developed states, we consider that sovereign risk affects them, too.

It is therefore difficult to predict the behavior of governments, as shown in the chart below, which captures completely different approaches to sovereign debt management:
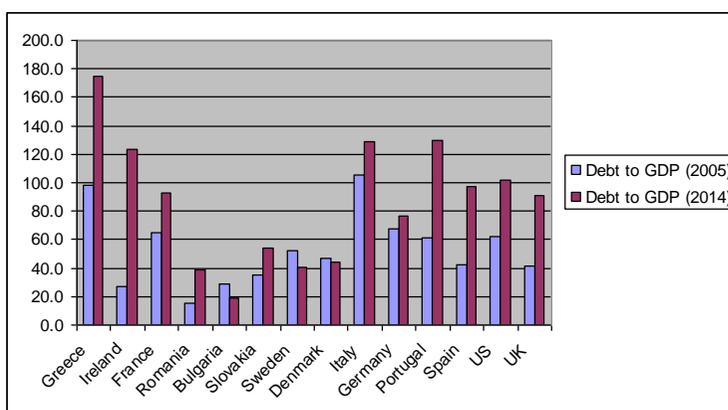


**Figure 3:** Sovereign Debt to GDP evolution (2005 versus 2014, selected states)
Source: Author's calculations, using data from World Bank, www.tradingeconomics.com

Different countries show different trends relative to sovereign debt issues;iIf countries like Greece, Ireland, France, Romania, Italy, Portugal, Spain, USA, UK and many others have experienced significant increase in the sovereign debt / GDP ratio, some other governments have managed to achieve an outstanding performance, lowering the debt/GDP ratio, even in the context of crisis. For example, Bulgaria has gone from 28.7%

in 2005 to 18.8% in 2014, while Sweden has reduced the Debt to GDP ratio from 52.1% to 40.6% in the same period of time. A similar approach had in the last decade the Danish State; it is very surprising, because we are dealing with countries that have, traditionally, an extremely developed social policy.

Another interesting example, at least at the first sight, is Japan. If we decide to orient ourselves only by using the classic sovereign debt / GDP ratio, we find an alarming evolution of Japanese debt, as shown in the chart below:
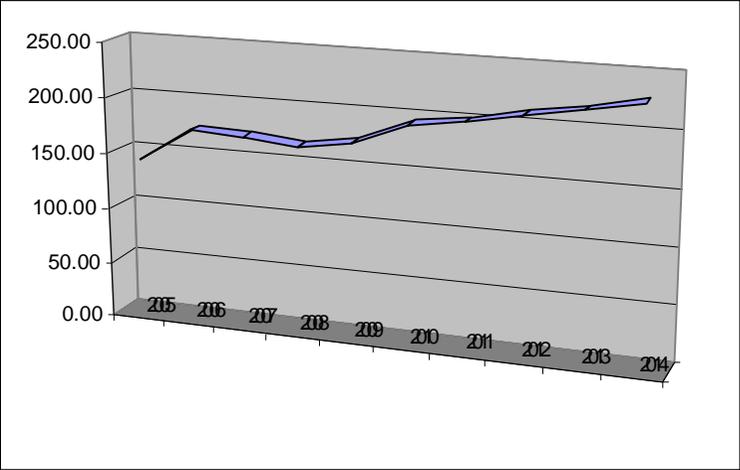


**Figure 4:** Sovereign Debt to GDP evolution, Japan (2005-2014)
Source: Author's calculations, using data from World Bank, www.tradingeconomics.com

Compared to the GDP, Japanese debt exceeds 220%, a level more than twice higher than the average of OECD countries. Also, its sovereign debt evolution in the last decade is marked by a significant tendency to increase. According to the classical indicators of sovereign risk, the default seems imminent. However, even despite a modest rate of economic growth, the Japanese government continued to borrow at relatively low interest rates.

Providing explanations to the Japanese situation is not a simple endeavor. In order to address such a problem, we need a much broader framework, but a few ideas can be mentioned in this context:

☐ Japan continues to be a state with a very strong industry, an important actor on the stage of international trade;

☐ Most of Japanese government debt is in the hands of residents, unlike the situation in European countries, for example (Brender, Pisani, Gagna, 2013);

☐ The Japanese state continues to have significant financial assets (Reserves of foreign exchange and gold); these assets are, in the case of the asian state, more significant that American and European ones;

☐ Net public debt is, in the case of Japan, much lower than gross public debt.

Some of the ideas mentioned above are captured in the following figures:
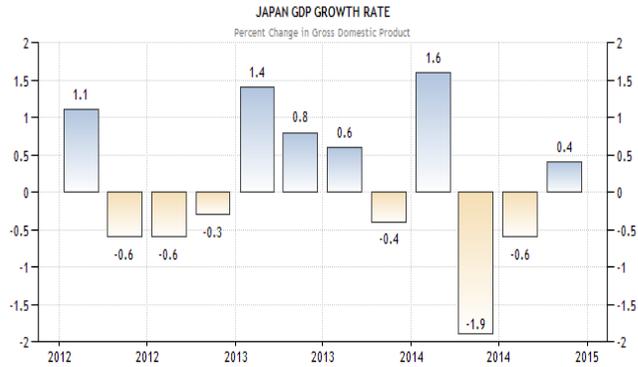
**Figure 5:** GDP growth rate and export evolution, Japan
Source: Cabinet office, Japan, www.tradingeconomics.com
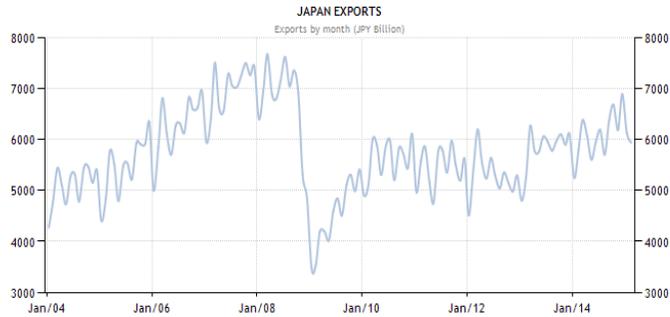


**Figure 6:** Exports evolution, Japan
Source: Cabinet office, Japan, www.tradingeconomics.com



**Figure 7:** Japan foreign exchange reserves evolution, 2006-2014
Source: Cabinet office, Japan, www.tradingeconomics.com

## 5. In conclusion

For many years, bonds issued by countries were being perceived as low risk assets (Landau, 2012, p. 214), stable and safe. But, recent years have marked a significant decrease in the number of highly liquid assets with a low associated risk.

Economic literature has tried lately to provide practical solutions, to identify thresholds of indebtedness beyond which the default becomes imminent. These efforts were only partially successful, rather being feasible to analyze the consequences of debt on economic activity. Even in the case of this type of approaches, the relativity of conclusions and thresholds / indicators is obvious, and this is underlined by the numerous contradictions and corrections that appeared and were made over time. The famous 2010 study conducted by Reinhart and Rogoff showed the world that there is not a significant relationship between debt and inflation; however, regarding the link between sovereign debt and economic growth, the conclusion was clear: for countries where Sovereign Debt to GDP ratio exceeds 90%, the average economic growth slows sharply.

In a first phase, the article had a considerable impact, the threshold of 90% being increasingly discussed in political circles – the OECD, and even the EU, have integrated this value in economic policy objectives.

However, in recent years, the conclusions drawn by Reinhart and Rogoff were contradicted several times:

☐ some studies identify even a reverse link between debt and growth (Checcherita, Rother, 2010);

☐ an extensive and in-depth analysis made by other specialists (Minea, Parent, 2012) identifies a new threshold (Debt to GDP = 115%), above which the negative debt-growth link changes sign; in addition to a number of complex nonlinearities, Minea and Parent determined, surprisingly, that if below 115% (Debt/GDP ratio value) an increasing governmental debt harms GDP growth, over this value the effect is opposite; the conclusion of the study is, however, less radical – they find that increasing public debt is detrimental to economic growth;

☐ Other economists (Herndon, Ash, Pollin, 2014) did a remake of the Reinhart & Rogoff analysis and found serious methodological errors, the results themselves being flawed – for example, during the period considered by R&R, the states with Debt to GDP of over 90% had a real annual growth of 2.2%, and not -0.1% The authors also find that the relationship Between Debt and GDP growth varies significantly from state to state and period to period, and believe that the threshold of 90% is not relevant at all.

The fact that debt indicators are relative does not mean that the efforts to determine them, or the effects of indebtedness, are futile. What we want to emphasize here is that research efforts should rather aim at discussing trends, causes, effects, remedies, instead of setting ambitious fixed alert thresholds.

The reality shows that solutions to prevent over-indebtedness or getting out of this situation can be identified only through complex analysis, based on the entire system of financial and economic indicators, as the limits (thresholds) are highly mobile (and relative) from a country (or stage) to another, and from one organization to another.

## 6. Acknowledgements

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# INTERNATIONAL BEHAVIOUR AND PERFORMANCE BASED ROMANIAN ENTREPRENEURIAL AND TRADITIONAL FIRM CLUSTERS

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**Abstract:** *The micro, small and medium-sized firms (SMEs) present a key interest at European level due to their potential positive influence on regional, national and firm level competitiveness. At a certain moment in time, internationalisation became an expected and even unavoidable strategy in firms' future development, growth and evolution. From theoretical perspective, an integrative complementarily approach is adopted concerning the dominant paradigm of stage models from incremental internationalisation theory and the emergent paradigm of international entrepreneurship theory. Several researcher calls for empirical testing of different theoretical frameworks and international firms. Therefore, the first aim of the quantitative study is to empirically prove, the existence of various internationalisation behaviour configuration based clusters, like sporadic and traditional international firms, born-again global and born global firms, within the framework of Romanian SMEs. Secondly, within the research framework the study propose to assess different distinguishing internationalisation behavioural characteristics and patterns for the delimited clusters, in terms of foreign market scope, internationalisation pace and rhythm, initial and current entry modes, international product portfolio and commitment. Thirdly, internationalisation cluster membership and patterns differential influence and contribution is analysed on firm level international business performance, as internationalisation degree, financial and marketing measures. The framework was tested on a transversal sample consisting of 140 Romanian internationalised SMEs. Findings are especially useful for entrepreneurs and SME managers presenting various decisional possibilities and options on internationalisation behaviours and performance. These emphasize the importance of internationalisation scope, pace, object and opportunity seeking, along with positive influence on performance, indifferent of specific subjective measurement content. Results are consistent with the literature based on results in developed countries, although limitedly studied before within the Romanian national framework to the best of the author's extant knowledge.*

**Keywords:** sporadic international; traditional international; born-global; born-again global; international behaviour; international performance; cluster analysis.

**JEL classification:** F23, L26, M16.

## 1. Theoretical Background

Nowadays, international business stream focus mainly on the internationalisation process, research preferences being bivalent distributed between the traditional incremental approach and the novel international entrepreneurship.

Internationalisation is considered a dynamic process (Jones and Coviello, 2005) transcending activities over the national boundaries (Wright and Ricks, 1994).

The traditional paradigm of incremental theory is based on the ideas and findings of the Uppsala (Johanson and Vahlne, 1977) and innovation-related (Reid, 1981) stage models. Firm internationalisation is considered a linear, sequential, slow and reactive process, where resource commitment, experience and knowledge about foreign markets leads to

assuming the next stage of international establishment chain depending on geographic and psychological market distance.

The contemporary paradigm of firm internationalisation as an entrepreneurial behaviour (Jones and Coviello, 2005) is specific to born global (Knight and Cavusgil, 1996) or international new ventures (Oviatt and McDougall, 1994) type new or extant firms. The phenomenon of accelerated, rapid and early internationalisation of new firms is characterized by proactivity in discovering and exploiting international opportunities, innovativeness regarding product offering, client servicing and opportunity exploration, along with the assumed risks involved in the search for new key markets and projects. Similar to born globals but with a time-gap, born-again globals due to a critical event internationalise rapidly after concentrating exclusively on the domestic market for a long time (Bell et al., 2003).



| International behaviour (pattern) | | Internationalisation cluster | | International performance |
| --- | --- | --- | --- | --- |
| Foreign market scope | $H_1$ | Sporadic international | $H_2$ | Internationalisation degree |
| Internationalisation speed | | Traditional international | | International financial performance |
| Internationalisation rhythm | | Born-again global | | International marketing performance |
| Entry method | | Born global | | |
| Product portfolio | | | | |
| International commitment | | | | |

**Figure 1:** Research model

Internationalisation "may be captured as patterns of behaviour" (Jones and Coviello, 2005: 292) via dimensions of the process, like foreign market scope, speed, rhythm, entry method, product portfolio and commitment. Bell et al. (2003) and Nițu and Feder (2009) proposed 3 variants of SME internationalisation, including the born global (BG), born-again global (BAG) and traditional internationalisation (TI) based on scope, speed and knowledge, while Aspelund and Moen (2005) considered early and late internationals with born and late global firms depending on internationalisation pace and degree. Kuivaleinen et al. (2012) delimited based on the internationalisation precocity, scale and scope a large set of firm types, highlighting BA, BAG, TI and sporadic international (SI) firms. Consequently, internationalisation patterns of traditional and entrepreneurial SMEs are not just often divergent, but depend clearly on several dimensions:

$H_1$: The international behaviour of various types of international SMEs will differ significantly, in terms of: (a) market scope; (b) speed; (c) rhythm; (d) entry mode; (e) product; (f) commitment.

Internationalisation is perceived as a high potential strategy to ensure firm performance, development or even sustainability (Papadopoulos and Martin, 2010). Hence, internationalisation behaviour pattern specific clusters influence firm level performance (Kuivalainen et al., 2012), permitting to hypothesise that:

$H_2$: Various clusters of international SMEs will obtain different levels of (a) internationalisation degree, (b) financial and/or (c) marketing performance.

## 2. Research Methodology: Sample, Variables, Data Collection and Analysis

Studies on international entrepreneurship initially focused exclusively on international options of new firms (Jones et al., 2011), afterwards concerns have extended to include the international behaviour of SMEs generally (Oviatt and McDougall, 1994; Bell et al., 2003), or exclusively in high-tech or knowledge intensive domains (Knight and Cavusgil, 1996). Therefore, within the quantitative empirical study purposes, data has been collected from Romanian SMEs involved in international commercial operations. Primary data has been gathered through on-line self-administrated questionnaires sent out to firms selected via probabilistic random sampling technique from multiple databases, including the Romanian Centre for Trade and Investment, Kompass and Amadeus business directory.

From the 1700 on-line questionnaires, 140 fulfilled all criteria and were returned entirely completed, otherwise eliminated from the sample, determining effective response rate of 8.235%, considered adequate in a national context with limited academic-private research cooperation. Biased sampling was eliminated via probabilistic sampling method, reconfirmed by the heterogeneity of respondents, with regard to firms' employees, turnover, activity domain and region of origin.

Regarding the year of establishment, sampled internationalised SMEs were founded between 1919 and 2009, set up in average between 1995 and 1996, the majority after 1998, while the most frequently occurring year was 1991.

Considering the number of employees, the 140 respondents from the sample are structured in: 33 (23.57%) micro level firms with 0-9 employees, 53 (37.68%) small firms with 10-49 employees and 54 (38.56%) medium-sized firms with 50-250 employees, as most commonly appearing firm size. Comparatively, workforce employed exclusively for international operations range between 1 and 95 people, in average between 9 and 10 employees, but most frequently just 3 people.

The final sample incorporate firms from a great variety of activity domains, as indicated by NACE standards and sectors: the primary sector including agriculture and extractive industry represents 10.71% of the whole sample, manufacturing firms symbolize the great majority of 77.15%, while the service sector stand for 12.14% of the sample, including ITC and professional services.

Almost half of the firms included in the sample (49.29%) had turnover from foreign markets less than €500,000; 27.86%, in the range of €500,001 to €2 million; 17.86% between €2 million and €10 million. Firms with foreign turnover exceeding €10 million represent only 5% of the total sample, well under the ceiling of the €50 million, delimited by recommendation of the European Commission (EC, OJ L124/20.05.2003: 36-41). Regarding foreign profitability margin, the range is quite extended, from 0.35% to 55%, in average and most commonly around 9-10%.

Regarding international behaviour measurement, as dimensions of the internationalisation process, within the undertaken research, the scope and speed of internationalization, entry mode and product portfolio were measured based on scales of Autio et al. (2000), Zahra et al. (2000) and Ruzzier et al. (2007), while for international commitment Cavusgil and Zou's (1994) scale has been applied. All the above scales have been tested and validated in several previous studies (Cadogan et al., 2001; Stoian et al., 2010; Papadoupulos and Martin, 2010). Criteria applied for delimiting main internationalisation patterns, as designated by Kuivalainen et al. (2012) include scope and time.

As argued by Sousa (2004) the majority of empirical studies use numerous subjective performance measures, on the detriment of a more limited scope of objective variables. Therefore, an aggregated international performance outcome measure was been chosen for the study to reflect respondents perception on multidimensional (Hult et al., 2008) financial (foreign sales, international profit) and marketing (foreign market share and international image of the firm) components.

## 3. Empirical Results and Discussion

Data analysis, conducted in IBM SPSS statistical software, involved three consecutive stages: (i) descriptive statistics, including central tendency and dispersion measures assessment with minimum, maximum, mean, median, mode and standard deviation; (ii) k-mean cluster analysis for group creation and delimitation by centroids; (iii) international behaviour (scope, rhythm, entry method, product portfolio, commitment) and performance pattern analysis in order to determine cluster specificities, in the case of scale measures via one-way ANOVA technique (F test) followed by Welch and Brown-Forsythe robustness tests and Turkey HSD post-hoc assessment, respectively in the case of nominal and categorical variables, via Pearson's chi square test as means comparison followed by Phi and Cramer's V options of association.

**Table 1:** Pattern centroids within the four main internationalisation clusters

| Cluster | Mean | | | | F-value |
|---------|------|------|------|------|---------|
| Centroids | BAG | TI | BG | SI | (sig.) |
| Scope of external markets | 9.56 | 2.24 | 10.42 | 2.50 | 19.419 (0.000) |
| Time to internationalise | 9.69 | 8.27 | 2.00 | 1.73 | 69.030 (0.000) |
| Number of cases | 54 | 45 | 19 | 22 | |

Depending on threshold values of two variables, 5 countries for the scope of foreign markets and 3 years as time necessary to internationalisation after firm inception, as indicated by Kuivaleinen et al. (2012), 4 firm clusters were delimited:

- BAG cluster: present in more than 5 countries (9-10 markets), internationalising in more than 3 years after firm creation (9-10 years), counting for 54 firms;
- TI cluster: target less than 5 countries (2-3 markets), becoming interested in international expansion late, long after 3 years counted from founding (8-9 years), encompassing 45 firms;
- BG cluster: regards presence in over 5 countries (10-11 markets) in less than 3 years after creation (2 years), including 19 SMEs;
- SI cluster: present in less than 5 countries (2-3 markets) early within the first 3 years after creation (1-2 years), incorporating 22 firms.

Considering the two variables, the significant 19.419 and 69.030 F-values clearly differentiate the 4 clusters regarding their envisaged international behaviour.

**Table 2:** Internationalisation scope patterns in delimited clusters

| Cluster | Mean | | | | Test (sig.) |
|---------|------|------|------|------|-------------|
| Pattern | BAG | TI | BG | SI | |
| No. of foreign markets | 9.56 | 2.24 | 10.42 | 2.50 | F=69.030 (0.000) |
| Geographic distance | 2.29 | 2.79 | 2.18 | 2.62 | F=1.209 (0.309) |
| Psychological distance | 3.73 | 3.77 | 3.56 | 3.79 | F=0.431 (0.731) |
| Rhythm/ pace | 3.14 | 3.05 | 3.22 | 3.02 | F=0.302 (0.824) |
| Preferred regions: | **Distribution** | | | | |
| - Neighbours | 7.41% | 22.22% | 0% | 4.55% | $\chi^2$=20.469 (0.059) |
| - European Union | 51.85% | 55.56% | 36.84% | 72.73% | |
| - Europe | 18.52% | 8.89% | 10.53% | 9.09% | |

| | | | | |
|---|---|---|---|---|
| - America | 12.96% | 2.22% | 26.32% | 0% |
| - Asia, Pacific, Africa | 9.26% | 11.11% | 26.32% | 13.64% |

Along with the number of targeted foreign markets, favoured regions do create differences between the 4 clusters ($\chi^2$=20.469, sig=0.059), with important association measures of Phi=0.352 and Cramer's V=0.203. TI firms are interested mostly in neighbor countries (55.56%), while SIs target markets from E.U. member states (72.73%). The BAG and BG categories are the most heterogeneous regarding foreign market scope, the first being interested mostly in European and American markets (83.33%), while the second in E.U., American, Asian and African markets (89.48%).

Geographic (physic) and cultural (psychological) distance do not differentiate the 4 clusters, as highlighted by insignificant small F values (F=1.209, sig=0.309; F=0.431, sig=0.731). Although, considering the mean values across clusters, geographical location and distance are the least important factors for BG and BAG firms, while are mostly considered by SI and TI firms preferring close markets. When selecting foreign markets SMEs from the 4 clusters have quite similar preferences, BAGs are the less sensitive to perceived cultural differences, while SI is the most prudent group.

Internationalisation pace, as the rhythm of subsequent new market entries, BGs are the fastest (3.22) in considering further international expansions, followed by BAG firms (3.14), while with a slower pace can be characterised TI (3.05) and SI firms (3.02).

**Table 3:** Initial international entry mode patterns in delimited clusters

| Time | Cluster | Mean | | | | Pearson |
|---|---|---|---|---|---|---|
| | Pattern | BAG | TI | BG | SI | chi$^2$ (sig.) |
| Initial | Export | 90.74% | 95.56% | 89.47% | 100% | $\chi^2$=6.694 |
| | Licence, franchise | 0% | 0% | 0% | 0% | (0.669) |
| | Joint-venture | 3.70% | 0% | 0% | 0% | |
| | M&A | 1.85% | 0% | 0% | 0% | |
| | Greenfield invest. | 3.70% | 4.44% | 10.53% | 0% | |
| Current | Export | 83.33% | 86.67% | 47.37% | 81.82% | $\chi^2$=7.748 |
| | Licence, franchise | 1.85% | 0% | 0% | 0% | (0.305) |
| | Joint-venture | 3.70% | 0% | 5.26% | 4.55% | |
| | M&A | 1.85% | 0% | 5.26% | 0% | |
| | Greenfield invest. | 9.26% | 13.33% | 36.84% | 13.64% | |

Initially and currently preferred international entry mode presents no significant differences ($\chi^2$=6.694, sig=0.669; $\chi^2$=7.748, sig=0.305). In all the clusters, as initial entry mode the indirect and direct exports were preferred (90.74%, 95.56%, 89.47%, 100%), while in the current preferences, excluding BGs (47.37%) the same conclusion is valid (83.33%, 86.67%, 81.82%). For the exception category, from exports a shift have taken place toward sales, production or integrated subsidiary creation as brownfield (5.26%) and greenfield (36.84%) investments. In the same vein, within all the 4 clusters an increasing interest in hierarchic internationalisation methods with time on the expense of export methods.

**Table 4:** Products portfolio for international markets in delimited clusters

| Cluster | Mean | | | | Pearson |
|---|---|---|---|---|---|
| Pattern | BAG | TI | BG | SI | chi$^2$ (sig.) |
| (0-20%] | 11.1% | 33.3% | 5.3% | 31.8% | $\chi^2$=20.968 |
| (20-40%] | 18.5% | 2.2% | 21.1% | 22.7% | (0.051) |

| | | | | |
|---|---|---|---|---|---|
| (40-60%] | 22.2% | 17.8% | 21.1% | 9.1% | |
| (60-80%] | 16.7% | 17.8% | 15.8% | 18.2% | |
| (80-100%) | 31.5% | 28.9% | 36.8% | 18.2% | |

Products portfolio for international markets is heterogeneous, differentiating the clusters ($\chi^2$=20.968, sig=0.051), showing association between the object of internationalisation and clusters (Phi=0.356, Cramer's V=0.206). TI and SI firms' concentrates on commercialising either a limited (<20%) scope of products, while BG and BAG firms mainly try to sell internationally the whole product portfolio.

**Table 5:** International commitment patterns in delimited clusters

| Cluster | Mean | | | | F-value |
|---|---|---|---|---|---|
| | BAG | TI | BG | SI | (sig.) |
| Management commitment | 4.32 | 4.28 | 4.42 | 4.21 | F=0.266 (0.850) |
| Resource commitment | 3.68 | 3.53 | 3.79 | 3.33 | F=0.956 (0.415) |
| Opportunity seeking | 4.07 | 2.09 | 4.43 | 3.11 | F=13.028 (0.063) |

International commitment patterns show no significant differences between clusters regarding managerial and resource commitment (F=0.266, sig=0.85; F=0.956, sig=0.415), while the opportunity seeking behaviour differentiates them (F=13.028, sig=0.063). Concerning commitment, BG and BAG show higher managerial devotion and resource dedication than TI and SI firms do, for both variables SIs have the lowest level of commitment toward the internationalisation process. Opportunity seeking on foreign markets is the main motivation of BG (4.43) and BAG firms (4.07), being at least important for TI firms (2.09).

All the above differences between the four clusters, as highlighted for patterns regarding the number of foreign markets, regions of interest, speed of internationalisation, product portfolio, commitment for opportunity seeking, we can state that hypothesis $H_1$ is partially supported.

**Table 6:** Internationalisation degree in delimited clusters

| Cluster | Distribution | | | | Pearson |
|---|---|---|---|---|---|
| Pattern | BAG | TI | BG | SI | chi$^2$ (sig.) |
| (0-20%] | 12.96% | 13.33% | 10.53% | 31.82% | $\chi^2$=18.113 (0.042) |
| (20-40%] | 14.81% | 28.89% | 21.05% | 22.73% | |
| (40-60%] | 24.07% | 17.78% | 5.26% | 9.09% | |
| (60-80%] | 16.67% | 20% | 26.32% | 18.18% | |
| (80-100%) | 31.48% | 20% | 36.84% | 18.18% | |

Internationalisation degree, as percentage of foreign sales in total income, significantly differentiates respondents from the 4 clusters ($\chi^2$=18.113, sig=0.042): while the most of SIs (31.82%) have a less than 20% ratio, TI (28.89%) present an internationalisation share between 20-40%, while BAG (31.48%) and BG (36.84%) firms have the highest internationalisation percentage from overall sales.

**Table 7:** International performance in delimited clusters

| Performance | F-value (sig.) | Welch test | Brown-Forsythe test | Tukey HSD post hoc test significance |
|---|---|---|---|---|
| Financial performance | 5.585 (0.001) | 4.909 (0.004) | 5.005 (0.003) | 1/2=0.916; 1/3=0.519; 1/4=0.070; 2/3=0.037; 2/4=0.427; 3/4=0.002 |
| Marketing performance | 4.198 (0.007) | 4.503 (0.008) | 4.065 (0.01) | 1/2=0.918; 1/3=0.658; 1/4=0.428; 2/3=0.043; 2/4=0.462; 3/4=0.004 |

Note: 1=BAG, 2=TI, 3=BG, 4=SI.

Regarding the influence of delimitated clusters membership, as specific pattern of international behaviours, on perceived international financial and marketing performance, one-way ANOVA was performed. The test was significant with F=5.585 and p=0.001, demonstrating the existence of the cluster based differences for international financial performance, sustained also by the Welch (4.909, sig=0.004) and Brown-Forsythe (5.005, sig=0.003) robustness tests. Turkey HSD post-hoc comparisons to evaluate pair-wise differences were conducted, revealing significant disparities between: (i) BAG and SI (sig=0.070); (ii) TI and BG (sig=0.037); (iii) BG and SI (sig=0.002).

Similarly, in the case of international marketing performance, ANOVA (F=4.198, p=0.007), demonstrated the existence of cluster based significant differences for the second component of international performance, sustained also by the Welch (4.503, sig=0.007) and Brown-Forsythe (4.065, sig=0.01) robustness tests. Turkey HSD post-hoc comparisons revealed significant pair-wise differences between: (i) TI and BG (sig=0.043); (ii) BG and SI (sig=0.004), thus validating and supporting partially hypothesis $H_2$. The least difference in international financial or marketing performance was found between BAG and TI firms.

## 4. Conclusions, Implications, Limitations and Future Research Directions

Findings of the conducted research suggest clear, robust and significantly different four clusters of internationalised SMEs, namely SI, TI, BG and BAG firms, depending on the scope of foreign markets and time necessary to internationalisation using criteria of Kuivaleinen et al. (2012). Within the Romanian the TI (32.14%) and BAG (38.57%) firms are the most numerous (70.71%), followed by SIs (15.72%) and lastly BGs (13.57%).

Differential international behaviour options were adopted by the Romanian SMEs.

SI firms seek a limited number of foreign markets in a small amount of time after inception, being in particularly interested in exports to E.U. member states of a part of their product portfolio (below 40%). This cluster showed the most limited managerial and resource commitment being limitedly and reactively interested to business opportunity propositions.

TI firms favour a limited number of neighbour and E.U. markets with average psychological distance, preferring almost exclusively export methods for their best products (below 20% of portfolio), lacking to seek foreign opportunities, they are willing to dedicate above average resources and managerial commitment, after dedicating to the domestic market before becoming interested in sequential time consuming internationalisation.

Firms following the BAG pattern are interested in geographically appropriated numerous foreign markets, mainly in the European region, following the second fastest rhythm of new market entries, preferring export methods for commercialising a large variety of products initially designated for the domestic market, seeking foreign opportunities and allocating resources above average and second after BG firms, although they need significant time to dedicate themselves to start the internationalisation process.

BG firms seek numerous foreign opportunities, on the largest scope of foreign markets from any part of the world in a very timely manner after founding. Export and hierarchic entry modes are preferred to commercialise the largest scope of products from the studies clusters, committing the highest quantity and diversity of resources to identify, create or exploit opportunities.

Finally, respectively international behavioural preferences based discrepancies on international performance, in the case of internationalisation degree, financial and marketing measures. Concerning internationalisation degree and international financial performance, all 4 clusters have differentiated contributions, while in the case of international marketing performance firms from sporadic, TIs and BG categories have distinguished impact, BAGs being assimilated to TIs.

The above research results are consistent with the studies of Aspelund and Moen (2005) and Kuivaleinen et al. (2012). The present study complementary extends previous findings by: (i) assessing the presence and differences of internationalisation patterns in the case of SMEs; (ii) applying the research model to identify differential performance implications of several internationalisation patterns specific to the four clusters; (iii) empirically testing the research model in the context of Romanian SMEs, a catching up economy, contrasting the focus of earlier studies on large developed countries (Zahra et al., 2000; Stoian et al., 2010; Kuivalainen et al., 2012) or on small ones (Aspelund and Moen, 2005).

For entrepreneurs or SME managers, within already or just intending to become internationalized by involving in foreign commercial transactions, there are some noteworthy implications of the findings. When creating their development strategies, decisions need to be taken within the framework of the above findings, differentiated clusters, behaviours and performance implications.

The conducted research carries some limitation, and implicitly several potential future research avenues. First, the main limit is represented by the sampling process, especially by the limited sample size (140), therefore comparative subsample analysis was unfeasible and generalizing results would be inaccurate. Future studies conducted in Romania either should focus on a specific activity domain, like high-tech industries or knowledge-intensive networks (Roja et al., 2014), either on trying to increase response rates for transversal research or even conduct longitudinal studies (Kuivaleinen et al., 2012) to assess pattern and cluster endurance. Second, the sample consists of SMEs from a single national framework, although Romania is a large open economy, future research should focus more on the comparative element of the international entrepreneurship (Jones et al., 2011). Furthermore, control and contingency variables should be included in such comparison based approaches. Third, the study investigated the influence of cluster membership on preferred internationalisation behaviours and 4 items of international performance. Future research should investigate the effects on other multidimensional measures (Hult et al., 2008) of international efficiency, effectiveness and adaptability. Lastly, the study examined only linear performance effects, without considering possible convex or concave relations (Sousa, 2004). Due to above limitations, research findings cannot be extrapolated to the entire Romanian foreign market interested and oriented SME population.

## 5. Acknowledgements

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# EXCHANGE RATE VS. INTEREST RATE: HOW MUCH DOES UIP WORK FOR ROMANIA? (STUDY CASE ON THE EUR/RON CURRENCY)

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**Abstract**: *This paper is part of a larger research that aims to analyze the deviation between the Real Exchange Rate and the Equilibrium Exchange Rate in Romania (EUR/RON currency) and to come up with conclusions regarding this deviation and with solutions to minimize it, if the case. Because this is the most important discussion after having the empirical results: what do emergent markets like Romania need to do to keep up with the EU trend? Which are the concessions they have to make in order to maintain a sustainable growth? Do these concessions include breaking the present equilibrium for a future BETTER? Starting with the most well-known methods to calculate the Equilibrium Exchange Rate, this article`s purpose is to create an accurate overview on the UIP model in Romania (the interest rate differential), to verify, using the latest data if the economic environment has brought any changes on the results of this model in the latest years. Is the UIP model a trustworthy equation to establish the Equilibrium Exchange Rate? In order to verify if the UIP model was more reliable in returning a value for the Equilibrium Exchange rate in the latest years on the Romanian market, this paper presents an empirical study containing recent compiled data from the last 10 years, analyzing the 2005 – 2014 period. The NEW in this article is that the used data is very fresh, currently, most probably the only study that verifies the UIP model in Romania for this specific period of time. Why is it useful? Why is it important? Because it doesn`t only bring a confirmation of weather the UIP works for Romania or not but comes up with hints and conclusions regarding the current economic situation of Romania. We can see what has been changed in the local market in the last ten years in terms of monetary policy and what has this change brought with it – if the results are those expected or not and also, what would be the direction for the next years – to most suitable direction to be adopted.*
**Keywords:** macroeconomic variables, exchange rate, interest rate, UIP, depreciation, appreciation.
**Jell classification:** E4, E5, E6.

## 1. Introduction

The Uncovered Interest Parity model it`s an equilibrium model, an equation that in ideal situations returns the expected value of the forward exchange rate, a value that takes in count the current values of one, very important, macroeconomic variable – the interest rate. Part of a larger research that aims to analyze the evolution of the real exchange rate in Romania (the EUR/RON currency), to compare it with the equilibrium exchange rate and to come up with some conclusions and suggestions regarding the related economic policies that would help develop an emerging market, this article has the goal to offer an overview on how the evolution of the interest rate affects the exchange rate. The result is important also for knowing if the interest rate is a variable that can be taken in count in other, more complex models also. The most important aspect of this study is that the used data is very fresh, the time series that were used include numbers for 2014 also and, taking this in count, it`s easier to verify if Romania`s emerging market has changed from the last studies or not and if yes, in what way.

The Uncovered Interest Parity`s equation is this:

$$1. \quad S_t - S_{t-1} = a + b(r_i - r_i^*) - e$$

## 2. The Specific Literature Tells us That the UIP can be Interpreted in More Than one way

### 2.1. How the evolution of the exchange rate affects the spot exchange rate:

UIP tells us what should happen to the exchange rate when one of the interest rates gets to a higher value. For example, if the interest rate that defines the deposits made in RON rises with 1% then the other part of the equation should rise with 1%. When the interest rate grows, the investors will find the RON more attractive, they will buy it and this makes that the first effect on the exchange rate to be the appreciation with 1%.

### 2.2. Determining the expected exchange rate:

If, for example, the interest parity it`s 2% then the expectations are for the RON to grow with 2%. The interest parity it`s generally the criteria that banks take in count when they decide whether to buy/sell currency using a forward contract.

### 2.3 The effect that the expected exchange rate has on the spot exchange rate:

Let's suppose that UIP works. If the expectations are for the RON to depreciate more than 1% than in the last 12 months, the spot exchange rate will decrease with 1% in the present. The noise we hear in the markets affects the exchange rate`s volatility most of the times.

## 3. Case Study – How Much Does UIP Work For Romania in the Present?

### 3.1. This case study aims to analyze, verify and interpret the following points:

- To verify in what percent UIP works for Romania in the present;
- To calculate the equilibrium exchange rate in case that the model doesn`t apply and to analyze the reasons for the existence of the deviation from the equilibrium exchange rate;
- To offer a set of useful conclusions in regards to the relevance and utility of using the UIP inside this type of studies.

### 3.2. The used data base for this study is formed by three main time series out of which resulted other times series:

- The EUR/RON exchange rate on a 10 years period of time: 2005 – 2014; the frequency of the used data was daily, monthly and annually (**figure** 1);

CURS_ANUAL
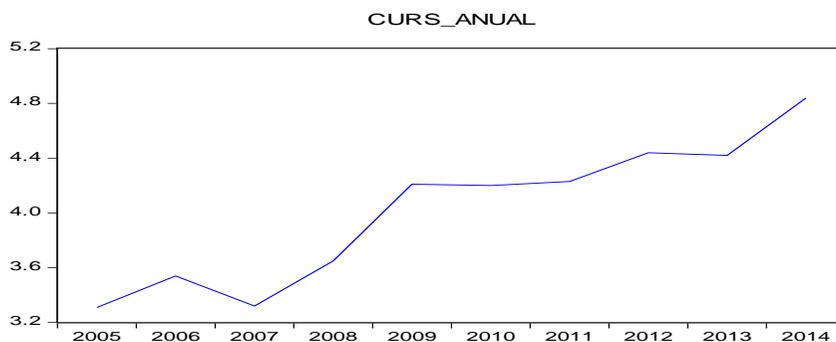


**Figure 1:** The annually evolution of the EUR/RON currency between 2005 – 2014
Source: Own processing of the time series taken from INSSE.ro and BNR.ro

- The interbank interest rate - the deposits attracted in Romania: Robid on a period of 10 years; the frequency of the used data was daily, monthly and annually (figure 2);

ROBID_ANUAL
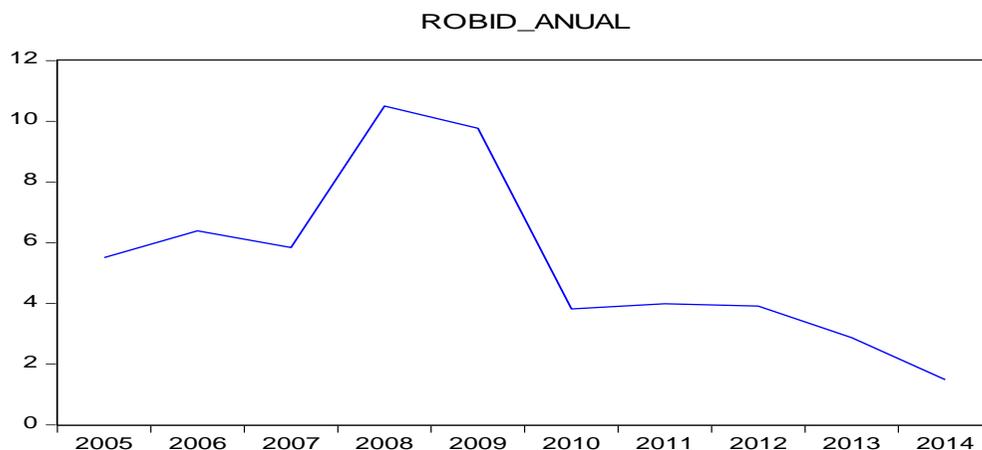


**Figure 2:** The annually **evolution** of Robid between 2005 – 2014
Source: Own processing of the time series taken from INSSE.ro and BNR.ro

- The interbank interest rate - the credits taken in UE: Euribor on a period of 10 years; the frequency of the used data was daily, monthly and annually (figure 3);

EURIBOR_ANUAL
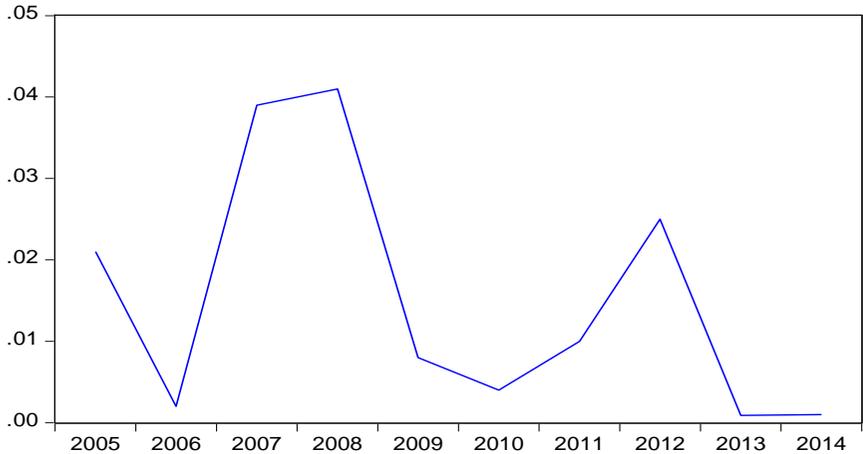
**Figure 3:** The annually evolution of EURIBOR between 2005 - 2014
Source: Own processing of the time series taken from ECB`s official site

**3.3. The research methodology was the following: using the UIP model to analyze if the interest parity influences and in what percent the evolution of the exchange rate.**

The used model was the following:
***Sfwd – Sspot = a + b( Robid – Euribor) + e****;*
*The equilibrium condition in this case is:*
        **a = 0;**
        **b = 1;**
        ***The risk premium = e = 0***;

**3.4. Results:**

### 3.4.1. The results for the daily frequency time series:
For the daily frequency time series, the **b** coefficient that shows in what percent the interest parity influences the expected exchange rate had a very low value. This shows that the market needs some time to incorporate new information and to react at changes, a period of time that is usually larger than one day.

**3.4.2. *The results for the monthly frequency time series:***
**Table 1:** The UIP model results for the monthly series

Dependent Variable: DIF_CURS_LUNAR
Method: Least Squares
Date: 12/07/14   Time: 14:19
Sample (adjusted): 3 119
Included observations: 117 after adjustments
DIF_CURS_LUNAR=C(1)+C(2)*DIF_DOB_LUNARA

|  | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C(1) | 0.001394 | 0.006614 | 0.210789 | 0.8334 |
| C(2) | 0.001536 | 0.004795 | 0.320295 | 0.7493 |
| R-squared | 0.000891 | Mean dependent var |  | 0.001325 |
| Adjusted R-squared | -0.007797 | S.D. dependent var |  | 0.071230 |
| S.E. of | 0.071507 | Akaike info criterion |  | -2.421098 |

| | | | |
|---|---|---|---|
| regression | | | |
| Sum squared resid | 0.588023 | Schwarz criterion | -2.373881 |
| Log likelihood | 143.6342 | Hannan-Quinn criter. | -2.401928 |
| F-statistic | 0.102589 | Durbin-Watson stat | 2.680186 |
| Prob(F-statistic) | 0.749326 | | |

Source: own calculations using the times series

We can observe that b coefficient still has a very low value, very close to 0. This result shows that the connection between the interest parity and the expected exchange rate is very weak.

### 3.4.3. *The results for the annually frequency time series are the following:*

**Table 2:** The UIP model results for the annually frequency time series

Dependent Variable: DIF_CURS_ANUAL
Method: Least Squares
Date: 12/07/14   Time: 13:57
Sample (adjusted): 2007 2014
Included observations: 8 after adjustments
DIF_CURS_ANUAL=C(1)+C(2)*DIF_DOB_ANUALA

| | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C(1) | 0.085005 | 0.112728 | 0.754073 | 0.4793 |
| C(2) | 0.100029 | 0.040872 | 2.447353 | 0.0500 |
| R-squared | 0.499564 | Mean dependent vary | | 0.023750 |
| Adjusted R-squared | 0.416158 | S.D. dependent vary | | 0.406867 |
| S.E. of regression | 0.310886 | Akanke info criterion | | 0.713535 |
| Sum squared reside | 0.579899 | Schwarz criterion | | 0.733395 |
| Log likelihood | -0.854140 | Hanna-Quinn critter. | | 0.579585 |
| F-statistic | 5.989536 | Durbin-Watson stat | | 1.682495 |
| Probe(F-statistic) | 0.049970 | | | |

Source: own calculations using the time series.

This time, the connection between the exchange rate and the interest parity is a little stronger, 10% from the modification of the exchange rate being a result of the two interest rates difference. These results show that, in an emerging economy like Romania has, UIP can`t be applied most likely.

**3.5. Comparing the obtained results with the equilibrium exchange rate:**

**Table 3:** The deviation between the real exchange rate and the equilibrium exchange rate
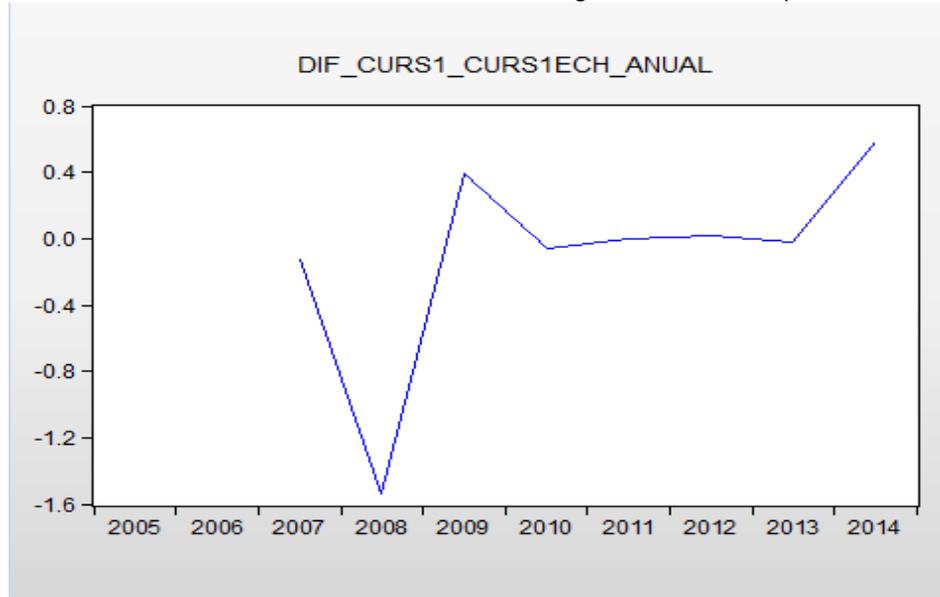


Source: Own processing of the main used time series.

Even though UIP doesn`t work for Romania, we can see that besides the beginning of the general economic crisis from 2008 that covered the entire globe, the real exchange rate wasn`t too far from the equilibrium exchange rate. This means that, even though an emerging market, Romania has some solid background at least in making economic policy being efficient in regards to the exchange rate`s objective.

**4. Conclusions:**

- It`s well known that UIP doesn`t usually work so Romania it`s not an exception.
- These type of studies aim rather to verify in what percent does UIP work for a certain country because the results give details about the maturity of that certain market, about how many investors is it able to attract in different conditions.
- The results of UIP can give also information about local specific policies that an investor should know about.
- Romania is an emerging market and because of this, even though the interest rates are attractive, many other aspects have to be taken in count when bringing a large amount of money here; these aspect regard stability and sustainability.
- Having less functional instruments than the developed countries, Romania needs to play the depreciated currency role, in order to increase exports and to bring money to the budget.
- Having to choose between the present equilibrium and the future sustainability, the emerging country Romania usually chose the medium – long term objective.

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# DIPLOMACY – SCIENCE OR ART

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**Abstract:** *Even though everyone defines diplomacy in some form, all recognize its special place that bears its political and legal mechanisms and structures, changes over the centuries in foreign policies enhancing its importance in the new context of globalization, thus acquiring new meanings and ways and embracing new features. As we will see later in the paper, diplomacy exists even in ancient times, though not necessarily under this name. Nowadays we can say that diplomats, through their efforts they reconcile conflicting situations and even avoid negative consequences for states, such as embargoes or even wars. It is therefore necessary for diplomats to master the art of negotiations and to be specialized and skilled people. The present study will make an incursion into history until present time to highlight the evolution and importance of diplomacy in international relations. The paper is addressed to those who wish to learn a brief history of diplomacy in a couple of minutes, from El-Amarna until today. The impact of diplomacy on how the state is seen in relationship with others is even more powerful considering the ability to reflect how conflicts are settled or resolved before they escalate. The aim of the paper is to provide a broader vision of what diplomacy means, through the chronology from appearance and its development to the final conclusion: is it a science or an art? The intention is that this work will be useful to all who wish to know more about this subject still considered relatively new. It is worth to mention that it has led to the emergence of a new job – the diplomat, an official, whose mission is to maintain relations with officials of other states or to deal on behalf of his country, who knows how to behave in a situation in order to achieve his goals. Briefly, a shift from art itself to a policy of the art of diplomacy.*

**Keywords:** diplomacy; international relations; negotiation

**JEL classification:** F50

## 1. Introduction

What does diplomacy represents? Throughout history (and we can take very wide limits), diplomacy was and is an area with different definitions, but all with a common denominator: diplomacy is the axis that passes through the state borders to develop relationships, to ensure a climate of peace and also to promote self-interests in other areas.

Elmer Plischke gives a technical definition which says that diplomacy is a dynamic institution, designed to facilitate relations between states, to promote national and international goals of nations (Plischke, 1979).

According to the Oxford Dictionary, diplomacy means the conduct of international relations by negotiation. Concise Dictionary defines it as leading the relations with other states through peaceful methods and the ability in managing international relations, arguing that diplomacy is a science with specific object and method.

The term "diplomacy" comes from the Greek "Diplos" which means duplicated. This meant in antiquity the action of drafting official documents and diplomas in two copies, the carrier of one became a diplomat and his work - diplomacy. In Romanian, the term is also found in early eighteenth - century to Dimitrie Cantemir in "Chronicle of Romanian-Moldovan Vlachs" in the sense of charter or certificate.

The actual meaning of the term diplomacy was first used in England in 1787 and related to the science that allows the retrieval of rights enshrined in the old charters and on which sovereigns could maintain claims. In the early nineteenth century, De Flassan said diplomacy is the expression of which knowledge of foreign relations or foreign affairs of States are designated, or in a determined sense, science or art of negotiations (De Flassan, 1866). Jen Mellisen defines it as the mechanism of representation, communication and negotiation by which states and other international actors conduct their foreign affairs (Mellisen, 1999). Marcus Terentius Varro emphasize that diplomacy is the sum of intelligences, the elite values, involving skills without which it isn't effective. P. Fauchille believes that diplomacy can be regarded as a science and an art. As a science, its purpose is to become able to deal with legal and political relations between different countries. As art, its purpose is to manage international negotiations, and this involves the ability to coordinate and lead political negotiations, accompanied by a full understanding (Rivier, 1896).


## 2. Diplomacy and foreign policy achievement

Romanian literature emphasizes the idea that diplomacy art meets concurrently with the scientific attributes. Mircea Malita, academician and diplomat by profession, defines diplomacy as the application of intelligence and tact in relations between states (Maliţa, 1969). He points out that diplomacy should not be confused with international relations and is not synonymous with foreign policy. Foreign policy is the prerogative of the State, but its promotion depends in a large measure of intelligence and tact diplomats. State policies must be harnessed through diplomatic work abroad. Bryant Wedge in Communications Analysis and Comprehensive Diplomacy emphasized as well that besides some good knowledge in law and international relations, diplomats need talent to maximize this knowledge in order to complete the pursued objectives.

As we study the literature, it increases the focus of diplomacy as a profession. According to Bolshaya Sovetskaya Encyclopedia, diplomacy is the activity of the state's representatives in another state, defending peaceful the state's rights and interests for goals that are pursued by the foreign policy of the ruling class of that State.

French publicist Paul Pradier-Fodera believes that diplomacy is invested with the noblest, the most brilliant and enviable feature that could aspire a bright spirit and a chosen soul: to represent abroad the cultural and moral dignity, perennial interests and legitimate rights of his country; diplomacy is the art of representing the government and the country's interests beside governments and foreign countries; to ensure that the rights, interests and homeland's dignity should not be ignored; to manage international affairs and either lead or to follow, as instructed, political negotiations ( Pradier–Fodere, 1881).

Diplomacy is associated with state efforts to regulate conflicts and disputes, maintain and develop peaceful relations. Calvo defines diplomacy as the science of relations between different countries, as these relationships result from their mutual interests, the principles of international law and treaty stipulations (Calvo, 1885).

In our national literature, diplomacy is defined as an official activity of state bodies for External Relations and foremost diplomats, held with negotiation, correspondence and other peaceful means for achieving foreign policy goals and objectives of the state, for State rights and interests abroad. It is the most important means of achieving foreign policy of states (Alexandrescu et al, 1967).

## 3. Diplomatic activity - past and present

Titulescu asserts that the diplomatic activity conducted by talented and intelligent diplomats through peaceful means, will succeed in a country's international efforts. In 2001, Professor Adrian Nastase said that diplomacy is an ongoing activity through peaceful means of external relations, which requires specialized knowledge and a lot of skill in action (Năstase, 2001).

A dedicated research diplomacy cannot ignore is the the emergence and development of the profession and of the importance that has been granted over the centuries. Diplomatic negotiations characterize not only the modern era, and the past - especially the distant past - was not only dominated by conflict (Lall, 1966).

### 3.1. Antiquity

Historically, diplomacy has existed since antiquity. Certainly not as an institution that currently takes, but most fundamental features that underlie it. Always, throughout history, it has resorted to diplomacy as the main alternative to resolving conflicts in force. Community leaders and elected representatives have held talks on behalf of the states they represent, political and military alliances and treaties or conventions guaranteeing the stability and progress of the communities concerned.

The diplomatic activity in ancient cities has found expression in intense negotiations, the exchange of messages in concluding treaties with defensive or offensive. In this way they gradually developed organizational forms, methods and means of diplomacy.

The first known facts which attests the emergence and development of diplomatic activity are found in the Ancient Orient. The volume and richness of content, the correspondence from El-Amarna and the 1296 BC treaty between Ramesses II, Pharaoh of Egypt and Hattuşill III, king of the Hittites are the most prestigious prime sources of diplomacy. Moreover, this Treaty presents another great importance for the history of diplomacy. It is the oldest monument of international law as far as known. Treaty of Ramses and Hattuşill reflects a fundamental feature of the Ancient Orient: full identification of the state with the person holding the supreme power. All negotiations were conducted exclusively on behalf of the king. You first meet commitments to non-aggression and mutual assistance. This assistance was provided in the form of collaboration between both parties, even putting down internal revolts.

Another source of outstanding value for early diplomacy is the Laws of Manu, a source that has its origins in ancient India. The authentic text of these laws was not kept up to date. The latest variant in lyrics was kept, apparently dating from the first century CE. According to Manu, diplomatic art requires skill to prevent war and strengthen peace. Peace and its opposite - the war - depend on messengers, for they are those who create alliances or enmity on his allies. In their power is all those things because that means the settling of peace or the beginning of war. The diplomat informs the sovereign of the intentions and plans of the foreign ruler. In this way, he protects the state from danger and threats. That is why the diplomat must be a diligent man, highly trained and one who knows how to attract the sympathy of the people. He must know how to discover the foreign ruler's plans by not only their words or actions, but even by their gestures and facial expressions (Elmanovici, 1913). The head of state is encouraged to call the diplomats after a judicious choice and to exercise caution. The diplomat must be an older man with a dignified appearance, brave, eloquent, loyal, helpful, honest, clever, have a good memory and a good knowledge where and when to act. These are the basic teachings of Manu on diplomacy and diplomatic role. As we can see, even today, those states who choose such criteria for their diplomats, enjoy international diplomatic prestige. Selection on criteria other than professional ones (ex. the criterion of political affinity) often is a millstone for State diplomacy, being marginalized diplomatically.

Laws of Manu show that ancient Indian ruling class representatives had developed a series of views on the art of diplomatic parley.

### 3.2. Greek diplomacy

International law and Greek diplomacy are lost as well in the mists of time. The international relations seeds arise from the Iliad, in the form of agreements between different tribes. All scientific research on the subject emphasizes the virtues of ancient Greek diplomacy (diplomatic academies, the courses begin with the diplomatic service of the era, for example.). The work of Demosthenes is eloquent about the role of Greek diplomats: an ambassadors weapons are his words ... A soil in a system like ours acts slowly, making us lose favorable moments not only to lose such opportunities, but to lose the control of events (Nicholson, 1966).

Hellenistic Age is a rich source for diplomacy and with an impressive number of treaties of alliance, symanders and epimachs (defensive and offensive alliance). Among the documents of diplomatic history in the Hellenistic Age we can mention the treaties that were preserved and letters of the rulers and statesmen's speeches transmitted through the works of historians in Antiquity. At that time, special functions were created for people that managed the relations with neighbors. Such foreign policy leaders existed in the State Seleucid and Ptolemaic kingdom. They had under their chancellors scribes the instructions prepared by messengers, preparing response letters for leaders of the neighboring countries, talked with foreign ambassadors before they went to be their king.

In the Hellenistic Age were developed a set of rules of conduct in international negotiations. The Greek historian Polybius notes that the first Roman envoys who arrived in the Hellenistic states amazed the Greeks with their rudeness and ignorance conducted in the local society accustomed to politeness. It is considered inappropriate for a ground or a ruler to vent, during negotiations, his feelings - joy, anger or irony. Usually, even enmity between them, leading statesmen diplomatic talk calmly and with a smile.

In the era of Hellenism appeared several international customs, considered as a kind of rules of international law, the breach of which was described as barbaric and cause a real contempt in all Hellenistic countries. These rules were: do not use poisoned weapons war, the return of prisoners of war when they were offered money for ransom, not to attack neighbors without a formal declaration of war. It is considered very important to show the neighboring countries, the state that has resorted to breach the peace and started the war, did it because it has no other choice. The war was considered the extreme mean which was available to middle managers and only if all possibilities to resolve the conflict through diplomatic negotiations have been exhausted. Therefore, each party to the dispute was struggling to strengthen their claim through documents or references to historical rights. During the conflict, the parties often resorted to arbitration of another state. The defeated state, who wanted to end the war and begin peace with his enemy, addresses to a neutral state, with the request to serve as an intermediary and submit proposals to the opponent to begin a peace treaty (Polybius – Historiae). These rules are more than present. If we see only in current international intermediate the state's role was taken by international bodies, in one form or another, their actions are directed to all those bearing an offensive policy. In fact, the winner or winners are those who mediate, but give the impression of impartiality by interposing an international body.

### 3.3. Roman diplomacy

The Greek diplomacy can be characterized as a skilful diplomacy, nuanced, clever, refined, but with the decay of Greek, the Roman diplomacy imposes, rigid, unimaginative, but much tighter. The development of international relations brings to Rome the first seeds of international law. As economic life became more complicated, peaceful relations with neighbours were growing alongside the old civil law (jus civile) ,which did not extend only to the Roman citizens, appears the "right of people" (jus gentiune), which regulate relations between Romans and foreign.

It is characterized by a not so rigid formalism such as civil law and made it possible to end all kinds of contracts and commercial transactions (even then we see that the economic aspect has not been neglected by diplomacy, being the first brick in scaffolding economic diplomacy later).

In the Imperio era all foreign policy issues were within the jurisdiction of the king (the peace treaty, receipt and processing of the message, declaring war). In this way, diplomacy has turned into an attribute of civil Imperio, the king's chancery having an important role. The roman youth gained the wish to graduate schools of rhetoric, which places special emphasis on the art of diplomacy.

The oratory and diplomacy manuals develop in detail plans for speeches, figures and their proportions. On average, a diplomat speech (says the straightening) should not exceed 150 or up to 200 rows.

Medieval era had as a determinant Christianity, which emerged and developed naturally during this period, regardless of the atrocities and persecutions to which were subjected those who declared themselves Christians. With decisions taken by one of the most important Byzantine emperors Constantine the Great, Christianity became the official state religion, and constituted since that moment one of the vital engines of diplomacy. Moreover, in diplomacy theory we find a distinct category, namely religious diplomacy. To say that diplomacy is circumscribed only to the political, economic, military and cultural is naive. Any comprehensive study of diplomacy cannot ignore the religious diplomacy occupying an important place in international relations structures. We must not make the mistake of looking at them unilaterally. All sectors set overlap, diplomatic means and instruments used by each of them contributing to the international diplomatic activities.

### 3.4. Venetian diplomacy

A good example would be the medieval Venetian diplomacy. It includes both religious diplomacy and military and commercial. Not that what the Venetians did in the name of religion is worthy of applause. The atrocities that took part in the Crusades are an example of what can be wrong in the name of religion. But they knew very well how to combine the three diplomatic structures to achieve their goals, especially the aggressive gripping and territorial domination and economic default.

What characterizes the Venetian Republic are not only diplomats who have distinguished themselves by their talent, but the entire reorganization of the diplomatic activity that made Venice a school of diplomacy for the world. Commercial oligarchy, specific of Venetian state, introduced the spirit of diplomatic activity of secrecy and distrust, while imparting to the systematic nature and purpose that pervaded the entire leadership of state affairs. Venice took over from Byzantium its diplomacy methods and procedures leading to the virtuosity but negative elements such as methods of seduction and corruption, hypocrisy, betrayal, treachery and espionage. In the context of our study it is important to reveal the role of financial institutions in that period in diplomatic activity. For example, Italian banks in France were for their state both financial and political agencies. Venetians are distinguished by a special talent in the use of their merchants in diplomatic purposes. In turn, merchants were supported by diplomats in expanding their commercial activities, thereby laying the foundations of a genuine economic diplomacy, though not under that name explicitly.

### 3.5. Public good

At the end of the fifteenth century, Europe has entered a new phase of international relations, with a particular emphasis on "public good". The theory of diplomatic art was subject to the principle of "state interest". Religion ceases to have an important role in politics. One of the most famous literati and diplomats, Machiavelli says in his famous Prince: you should know that there are two ways to fight: one based on law and the other on force: the first is primary to people, the other belongs to animals; but since the former is often not enough, we must resort to the second. So it is necessary for a prince to know how to be as good as an animal and a man ... Therefore, a prince must know how to use animal resources carefully, he shall take the example of the fox and the lion, because the lion does not defend from traps ahead of him, and the fox does not defends itself from wolves. Therefore, you must be a fox to recognize snares and a lion to frighten wolves (Machiavelli, 1960).

The emergence of large states and the development of diplomatic relations between them led to the appearance of diplomatic law and international law. Dutch jurist Hugo Grotius is the one who laid the foundations of international law as a science in his work "On the Law of War and Peace", where he devotes an entire chapter to the rights of the ambassador.

A prominent follower of the "public good" in the history of diplomacy is Cardinal Armand - Jean du Plessis de Richelieu. Lord Acton, in his Lectures on Modern History notes that through his actions, Richelieu founded and promoted a new style in politics and European diplomacy. For example, he has put great emphasis on the role and significance of treaties. Cardinal warned that once concluded the treaties, they must be respected, what can be found in diplomacy under the name of "Pacta sunt servanda".

Great French Revolution of the years 1789 - 1794 has reshaped the monarchical diplomacy. Retaining many of diplomatic methods of monarchs, the new bourgeoisie printed diplomacy class interests and ideology. In the nineteenth century crossing from one territory to another dynasty is becoming increasingly rare. Dynastic marriages and succession issues have not had the importance of the past in all international relations. It has increased the importance of issues regarding customs policy, trade agreements, namely those attributes of commercial diplomacy. It is not surprising this relocation. Do not forget that those in charge were not royalty but monarchs of small artisans, entrepreneurs,

who have sought to develop their businesses outside the traditional area, focusing on what they knew best to do.

In the nineteenth century, the strengthening of the colonial monopoly of England and the conquest of India led the country to launch the idea of freedom of trade (free trade). Due to the overwhelming superiority of the industry and its fleet, Britain no longer was afraid of the competition of anyone and was seeing in free trade a path to strengthen its monopoly. Thus, through diplomatic means available it increased the importance of trade missions, becoming more structured and developed.

Modern diplomacy has taken on new meanings after one of the most sensational moments of the second millennium, the American Revolution. Thus, a State appeared in diplomatic picture, one that will play an increasingly important role in redefining and repositioning diplomacy the following centuries. We can say, considering the events occurred at the time, that diplomacy had a decisive contribution in the victory of the American Revolution, further reinforcing the importance of diplomatic activities in the existence and development of nations. Diplomacy during the revolution and after the conclusion of peace with Britain has changed the course of world history, while contributing to the relocation of international relations.

Another crucial moment in the evolution of diplomacy was the First World War. If by that time, diplomacy was based on personal relations of sovereigns, after the end of the war appeared another kind of diplomacy, an open, collective diplomacy. Some have called it collective security. We maintain reluctance to this feature, of security, the events of the last century often demonstrating that the name of collective security have made many excesses, trying to obtain profit only for some actors. Collective security was in some cases only the leitmotif of expansionary actions and imposing control over new areas of influence.

Initially, this open diplomacy was promoted by US President Wilson through its program "14 points". In it, the President proposed that the agreements to be negotiated in the open international conferences, involving, on an equal footing, large and small states. Many of the ideas of Wilson were found in the Treaty of Versailles in 1919 and the Charter of the League of Nations (1921).

The increase number of nation - states and diplomatic actors, caused by the collapse of the Austro - Hungarian Empire, the failure of the League of Nations, the economic crisis of 1929 - 1933, the growing desire for power of Nazi Germany and Fascist Italy, the deteriorating situation in Europe, which was heading rapidly towards Second World War - all revealed some limitations, difficulties and tortuous evolution of diplomacy. So soon after the Second World War, diplomatic activity took place under the old European system than stated principles of the UN Charter. This period was dominated by the confrontation diplomacy West - East, becoming one bipolar international system through two major world powers - the United States of America and the Union of Soviet Socialist Republics.

Completed in 1961, the Vienna Convention on Diplomatic Relations held a joint fund to customs, norms and rules in the matter, although they were practiced for a long time. Representatives of States agreed on them, in order for a better functioning of the relations between their countries and establish customs of international law on which they intend to use in their mutual relations.

Under the auspices of the Cold War, the decolonization process and the emphasized complexity of the problems of the world economy, diplomacy has seen a new development, which required the involvement of professionals and experts in various fields (trade negotiations, economic, environmental, media). The Bretton Woods Agreements decided the establishment of an international exchange unit - gold and two reserve currency, the US dollar and the British pound and the creation of the International Monetary Fund, represented milestones in terms of growth and economic issues involving foreign trade transactions, leading to the affirmation of a certain type of diplomacy - economic diplomacy. This goes to the fore, as a natural consequence of the predominance

that acquires trade and movement of interest from the political to the business, cooperation and confrontation (sometimes tougher than war) economy in a global competitive environment.

In the new international social-economic conditions we can say without any mistake that Mihai Eminescu's words are more than the current "state is like a man ... has as much liberty and equality as freedom. The poor is always unequal and a slave to the one that stands above him (Eminescu, în Opera politică, 1999). The same great poet said in the same tone that to the one who has nothing ... give him all possible freedoms, he remains a slave, a servant to his own needs, because it is the same if you close a bird in its cage, if you have gathered the grains from which it feeds from everywhere.

Diplomacy's progress and shaping as a true science nowadays implicitly led to a more significant role in nation's progress. If the developing technologies, new means of promotion and realization of trade led to dramatic changes in all areas, diplomacy cannot remain outside the sphere of influence of these changes. On the contrary, it is stated as a factor of progress with a recognized impact on the economic, social and political on a planetary scale.

## 4. In conclusion

In the current circumstances, the increasing globalization of economies obliges states to practice diplomacy to protect and promote the best possible interests, so in this global system, every nation occupies a certain place. Given the difficulties faced by nations to occupy such a place, policymakers are obliged to pay due attention to diplomatic negotiations, using their trained and most talented diplomats and eliminating amateurism and improvisation in diplomatic activity.

Responsibilities with regard to modern diplomacy cannot be looked upon in simplistic organizational terms. Chief diplomatic representatives have continuously concerns about mobilization and development of interstate economic relations, which are essential for the development of a nation. This is due to the extensive process of globalization in recent decades that have led to a number of conceptual and structural changes so that the vectors of power in international relations slide from the political-military to economic trade".

Smart sustainable diplomacy uses the concepts of sustainable development, eco-bio-economy and those related to attractiveness "smart power" and "contextual intelligence" can open an authentic political and diplomatic multi-conceptual dialogue, in a globalized multicultural context.

In the end, I agree with P. Fauchille, concluding that diplomacy can be regarded both as a science and an art.

## 5. Acknowledgement

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# FEEDBACK AND LOGISTICS CONTROLLING

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**Abstract:** The following things led to that the feedback, the supervision and improvement of the processes have become more pronounced: continuous rise in the importance of logistics; increase in complexity of its content; its activity becoming more complex. These activities are necessary for the optimum information supply. The intensification of market competition requires the corporations to possess exact and up-to-date information about their activities. Complexity of the logistics system presumes a parallel application of an effective feedback, supervision and management system simultaneously with the given logistics system. The indispensability of logistics is also proved by the fact that it can be found sporadically (in the form of logistics departments) or in a complex way in case of each organization. The logistical approach means a huge support in the management since it contains the complexity, the handling as a unit in order to ensure a harmony of the different corporate departments and part activities. In addition to the professional application of a logistics system, there is an opportunity to coordinate the relations inside an organization as well as between the organizations and to handle them as a unit. The sine qua non of the success of logistical processes is a harmony of the devices applied. The controlling system is a device for feeding back the processes of a corporate system. By means of the checkpoints intercalated into the processes, the logistics controlling provides information for the leadership which contributes even more to the complex approach of logistics system. By dint of the logistics controlling, the monitoring and coordination of every logistical part activity become possible with the help of information supply ensured by the logistics controlling. The logistics controlling reviews, assesses and coordinates; these activities have an effect on the cost and income management. Its reason is to be searched in the built-in checkpoints which allow a retrospection of the results of corporate processes, if necessary, a formation or improvement of the processes. The cost and income management includes the most critical points of the operation of enterprises since it can be posited that, despite the dissimilar activities and management of organizations with different profiles, the common interest of every organization is to reach the better results, and with it, the higher profit and indeed to maximize it as well as to reduce or minimize the costs related to the activities. The simultaneous application of a logistical system approach and controlling even more allows the control, if necessary, a formation and development of the processes. In the life of corporations, these activities are able to appear as a tool increasing the competitiveness, efficiency. Summarizing the above, the reasons of applying the controlling system are the minimal possibility of errors and the opportunity for reaching the maximum profit which are outcomes from the information supplying, leading and coordinating functions of the system. I have carried out an empirical research regarding the following questions. What opinion do the organizations hold on the significance of feedback? How are their activities influenced by the application of a logistics controlling system or the lack of it? Have the organizations experienced an improvement in their economic results thanks to the feedback and the accurate information supply? What areas have been affected by the introduction of a logistics controlling system?

**Keywords:** information, economy, logistics, logistics controlling, success

**JEL classification:** (e.g.: O31)

## 1. General Introduction

The elaboration of a system contributing and supporting a well-functioning, smooth and effective management is indispensable in our current world where the present and future, the success and fiasco of the firms and corporations are determined by the market and the competitive situation evolved there. A benefit of the logistics system is the system approach which handles each organization as a complex, according to it, organizes their activities in a merged way and as a unit.

In addition to the continuous rise in the importance of logistics which involves that the content complexity increases and the activities become more complex, the feedback, the supervision and improvement of the processes also become more and more important in order to contribute to the supply of current information. An accurate and up-to-date knowledge about the organizations and their activities enables the corporations to remain in the market.

Basis of the successful operation of a logistics system is the accurate and up-to-date knowledge of the organizational processes, the documentation and review of their results. Access to information i.e. the feedback is necessary for the tasks mentioned before.

The controlling system is developed for the feedback of activity, results of a corporate logistics system. By means of the checkpoints intercalated into the processes, the logistics controlling provides information for the leadership in order to increase the complex approach of logistics system. The simultaneous application of a logistical system approach and controlling even more allows the control, if necessary, a formation and development of the processes. In the life of corporations, these activities are able to appear as a tool increasing the competitiveness, efficiency.

The difficulty of information management is caused by the fact that it is not enough to generate information but data with appropriate contents shall be created. Namely, we in vain have information without useable data contents because we cannot apply them since they answer not the current questions so they become unnecessary. An attentive and professional elaboration of the feedback points of a controlling system makes it possible to form such information which has a correct data content and can be used effectively (Fenyves, 2013). The adequate information and the feedback related to the organizational operation lend an enterprise flexibility and easier adaptability (Tarnóczi et al, 2011).

According to Maczó et al. (2001) the logistics controlling helps to manage the logistical activities by performing actions of logistical planning, plan-fact analysing and information-providing. However, as the logistics permeates the organizations, the needs of departments shall be handled and reached by squaring them with the total needs of corporation.

By applying the logistics controlling system professionally, we can get those data having proper content which present an opportunity to respond to the market changes rapidly, to comply with them i.e. to fit in a new environment quickly.

Nagy et al. (2010) thinks that the controlling can provide a consonance between the environment, strategy and structure of an organization. By means of this, the planning, reporting and information supply are organized into an integrated system.

Hanyecz (2006) presents the controller's role in the process in such way that the controlling shows itself as a cooperation of the leader and controller. Since a system vainly operates well if the "system administrator" is not appropriate, the efficiency will go to waste.

The aim of logistics controlling is to possess a permanent economic control among the costs and incomes as well as the planned and fact data of them, to obtain and analyse those decision-preparing information being necessary and essential for the leadership which contribute to the success of corporate activity

The goal of my research is to collect such information which helps to present the results of the operation of a feedback system built on the corporate logistics and to prove that the

application of a logistics controlling system contributes to the optimization of corporate operation.

## 2. Subject of Research

The basic multitude of my research has been constituted by such organizations whose activities are closely linked to the logistical processes as well as the controlling, including the logistics controlling system, has an important role within the organization.

The examination sample contains, according to distribution in the national economy, enterprises located in the agriculture, industry and service-providing sector as well.

Thanks to the complexity of logistics, it is present in each of the national economic sectors; therefore I have passed the questionnaire edited by me to 202 enterprises.

In case of the classification by size, I have applied those size categories which are used in case of statistical statements and worked up on the basis of the headcount of employees:

- 0-9 heads micro-organization,
- 10-49 heads small-sized enterprise,
- 50-249 heads medium-sized enterprise,
- 250 heads < big enterprise.

Enterprises participating in the research have emerged from every group of the size categories. One of the viewpoints for choosing the basic multitude was that the organizations should get into the sample irrespectively of their size, methodized during the processing.

In order to form a sample being relevant from viewpoint of the examination, I have examined the organizations' size as well as nature of their main activities together and I have obtained the following results illustrated by Figure 1:
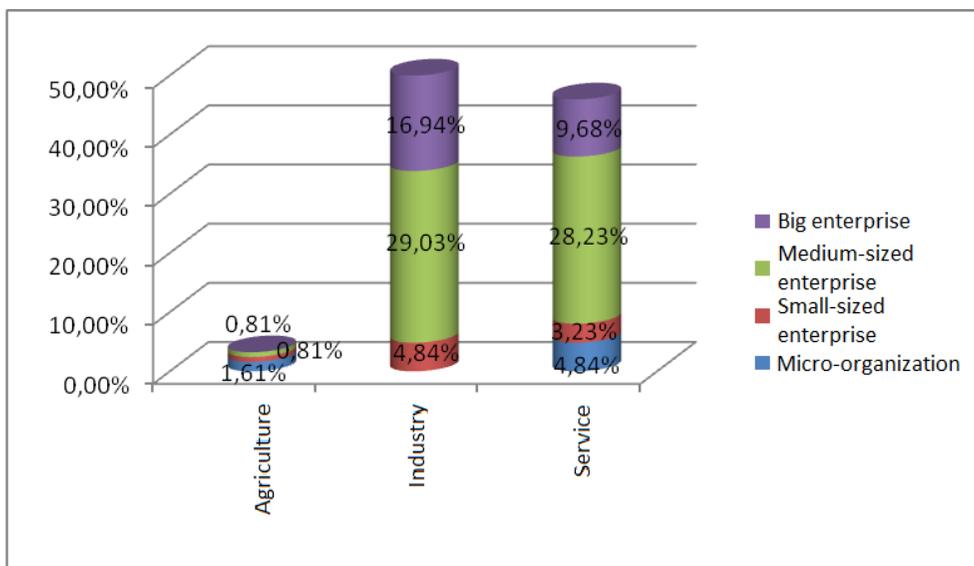


**Figure 1:** Classification of the examined organizations according to size and nature of main activity

Source: Own editing based on the research

Considering the Figure 1, it can be unequivocally stated that the vast majority of the organizations can be found in the industry (50.8%) and the service-providing sector (46.0%). And considering their size, the medium-sized enterprises (57.2%) and big enterprises (26.6%) dominate.

Due to their rate being irrelevant from viewpoint of the examination, I remove the organizations working in the agriculture from the sample and I continue to deal with the organizations located in the area of industry and service-providing, including the medium-sized and big enterprises.

## 3. Method of Research

The method of my research work was of empirical and theoretical character. My methods of examination can be divided into three groups:

- Theoretical research, by means of which I have established the examination of the subject-matter;
- Practical experiences obtained during the research as well as the processing and assessment of my results;
- Theoretical background as well as comparison of the practical experiences.

My examination was based on the questionnaire drawn up by me. The applied questionnaire embraces several topics as well. I have worked with both open and closed question. In case of certain questions, a given respondent could mark more than one alternative.

The recording of questionnaire has been performed via Internet or within the framework of personal interviews. I have attached invitation letters to the questionnaires sent by e-mail via Internet. I have collected 87.9% of the questionnaires by means of Internet while in case of 12.1%, a personal interview has been performed. The low measure of personal interviews is explained by the territorial deconcentration of the companies. Choice of the participants in research was based on the way mentioned before, their logistics activity.

According to Malhotra (2002), the questionnaire-based research shall meet three requirements:

- The questions shall be formed in such way which the interviewed person is able to and willing to answer;
- Interest shall be aroused, the respondent shall be prodded to complete the questionnaire;
- Accurate answer options shall be given in order to minimize the response faults.

According to opinion of Rubin et al. (2010), the questionnaire-based survey can be advantageous because it gives an opportunity to examine a numerous basic multitude, to analyse in detail, it is well-generalizable – depending on the subject.

The aim of my research was to prove that the feedback i.e. the application of logistics controlling has a positive effect on the management of organizations and it provides an opportunity for reduction of the costs.

## 4. Results of Research

More than 80% of the examined organizations apply a controlling system. Each of the appliers have agreed in that introduction of the system was an advantage for the organizations. However, not every organization has experienced improvement in the cost and revenue data by applying the controlling system. Considering the ones applying the controlling system as 100%, less than half (44.3%) experienced a positive change in their cost and revenue data while 55.7% of the users did not experience a change of this kind in results of the management. Table 1 illustrates this fact.

**Table 1**: Effect of the application of controlling system in the examined organizations

| Experiences regarding the application of controlling system | | | |
|---|---|---|---|
| Ones which experienced improvement | | | Ones which did not experience improvement |
| 44.3% | | | 55.7% |
| **Nature of improvement** | | | |
| Revenue growth | Stock value reduction | Cost reduction | |
| 88.4% | 58.1% | 65.1% | |

Source: Own editing based on the research

The above-described facts may include a contradiction but, by a more thorough examination of the organizations, we can observe that the application of a controlling system does not necessarily appear in the financial results immediately. Initially, after introducing the system, a step forward can be experienced "only" in operational practices of the organizations and positive financial implications will join later.

In case of the organizations under examination, the most characteristic effects of logistics controlling were as follows:

- quality of the performance of logistics has improved as a result of the feedback from the application,
- functioning and operation of the enterprises has become more cost-effective,
- the organization has been adapting better to the market changes since the beginning of application

The logistics controlling has a complex effect on the applying organizations as it is presented by Table 2.

**Table 2:** Effect of the logistics controlling on the organizations by activity area

| Description | Revenue growth | Stock value reduction | Cost reduction | Ones which experienced improvement |
|---|---|---|---|---|
| **Industry** | 60.5% | 44.2% | 48.8% | 74.4% |
| **Service** | 27.9% | 14.0% | 16.3% | 25.6% |
| **Total** | 88.4% | 58.1% | 65.1% | 100.0% |

Source: Own editing based on the research

74.4% of the organizations experiencing an improvement in connection with the application of logistics controlling system are active in the industrial sector while 25.6% of them operate in the service-providing sector. Organizations involved in the examination have

experienced positive changes in three particular areas confirming the improvement by numbers. A revenue growth has been realized in 88.4% of the cases, a stock value reduction in case of 58.1% and cost reduction in case of 65.1%. Based on the distribution of these results occurring in the area of industry and service-providing, we can say that the logistics controlling has a bigger effect in case of the organizations located in the industrial sector and specifically dealing with tangible products than in case of the enterprises carrying out service-providing activities.

Measure of the effect of logistics controlling is shown by Table 3.

**Table 3:** Measure of the effect of logistics controlling by activity area

| Description | Revenue growth | Stock value reduction | Cost reduction |
|---|---|---|---|
| **Industry** | 5-10% | 20-25% | 10-15% |
| **Service** | 10% | 15% | 10-15% |

Source: Own editing based on the research

According to the data of Table 3, we can make the following statements. Extents of the positive changes helped by the logistics controlling are different in each sector of the economy. According to the content of this table, once more the organizations operating in the industrial areas have realized greater revenue growth (5-10%) as well as stock value reduction (20-25%). Workers in the service-providing sector have also experienced an improvement but its extent lags behind the industry.

Extents of the experienced improvements are equal in one area, both sectors have realized a 10-15% cost reduction by means of the application of logistics controlling. Reduction of the costs has come forward in the extent of direct variable costs linked to the production, activity. The costs of logistics account for approximately half of the aforementioned costs (52-55% in the industry, 40-45% in the service-providing sector). This means that the positive effect of logistics controlling on the logistics activity greatly contributes to the organizational cost reduction.

## 5. Conclusion

It becomes increasingly clear for the managers that the rise in importance of the logistics, its system "permeating everything" as well as the maintenance and occasional increase of its effectiveness cannot lack the feedback to the managers as well as the related supervision.

The major expectation of our world developing rapidly and being in a constant competition as well as the involved markets from the organizations (aimed at remaining in the market competition) is to ensure the transparent management as well as to maximize the profit and reduce the costs according to the environmental conditions.

In order to fulfil these two targets, a transparent management becomes indispensable, the results of which are continuously reported to the leadership in consequence of the periodic feedbacks.

My examinations have verified that the vast majority of organizations involved in the research apply logistics controlling systems which greatly contributed to the reduction of their costs as well as their stocks by means of its continuous information supply and ensuring a possibility to intervene thereby. Its effect is complex and affects not primarily the costs. The system forwards the enterprises to the reduction of their costs and increase of their revenues by way of optimizing the processes of an organization.

According to the results, the application of a logistics controlling system greatly establishes the attainment of an effective management and provides a significant support in order to reach the long-term success.

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# THE IMPACT OF THE EXTERNALITIES GENERATED BY COMPETITIVE INTELLIGENCE

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**Abstract**
*The goal of the paper named "The impact of the externalities generated by Competitive Intelligence" is to describe and understand how this activity works and behaves in a competitive environment, and what are the real cost of obtaining durable competitive advantages through a process such as Competitive Intelligence. This activity creates high added value on the market and the proper use of it can have a strong influence on increasing the competitiveness on the global economic environment and, therefore, increasing the efficiency inside those environments. On the other hand, externalities play a significant part in the economic welfare and, currently, in a globalized world, must be taken into consideration in order to obtain sustainable growth of the economy. As any other economic activity, Competitive Intelligence is also causing both positive and negative externalities. A thorough analysis of those externalities effects has to be made in order to understand how this process really works, and this paper aims to be the starting point of that analysis. Of course, further studies have to deepen each impact and obtain relevant results that will add up and draw more specific conclusions. This study's conclusions, however, will reveal if this activity can work properly in every type of economy, regardless of its state of development. Since it represents a way to improve global competitiveness and, therefore, the market's performance, the impact Competitive Intelligence is making on the whole economic system is a main parameter for establishing its real use. All in one, by being one of the most innovative ways to obtain competitive advantages through qualitative methods of analysis, the implementation of this process into the organizational culture of firms might change the way competitors choose to respond to one another's actions. This research has taken into consideration both the macroeconomic and the microeconomic environment, using both empirical and theoretical items. Also, it was conducted in a qualitative manner, since the Competitive Intelligence process is made exclusively through qualitative analysis methods.*

**Key Words:** competitiveness; economic environment; externalities; intelligence; Competitive Intelligence; information analysis.

**JEL classification**: D80

## 1. Introduction

Competitive Intelligence deals with the need to obtain information about competitors and about the market, giving the one that uses it acting capability. The mere possession of some information is not always sufficient and the way they are processed and analyzed in order to produce new information (intelligence) makes the difference between performing companies and those that disappear. Intelligence is the element likely to be encoded in order to be stored, processed and communicated; it is the product resulting from the collection, processing, integration, analysis, evaluation and interpretation of the available data concerning the areas of interest (Nicolaescu et al, 2004, p.25). Competitive Intelligence is perceived as a sum of operations through which data and information are collected and analyzed and, in the end, the produced intelligence will be disseminated to

beneficiaries. One of the main goals of Competitive Intelligence activity is to understand the role of early warnings and to prevent surprises that can have major impact on he market share, reputation, turnover and profitability on medium and long term (Ivan, 2012, p. 146).

Despite the fact that the works of M. Porter redefine and place this activity on a conceptual rut since 1980 in his book "Competitive strategy", Competitive Intelligence is not assimilated yet in the Romanian entrepreneur's management culture. At the same time, the utility of this process is proving to be more and more important along with the evolution of technologies. The high volume of information in competitive markets requires removing informational asymmetry for competitors who want to perform and Competitive Intelligence can play a decisive role on this scene.

Realistic insights related to the competitors on the market - intentions of development, competitors wage policy, competitors expected market developments, possible merges or competitors pricing policy - are essential for the development of a firm in a crowded and competitive market. In fact, the Competitive Intelligence core is to legally and ethically obtain useful information about competitors and market, in order to generate added value and competitive advantages through processing and mainly qualitative analysis. In this context, the information appears as a production neo-factor, protecting and enhancing the classical production factors – nature, labor and capital.

The Competitive Intelligence activity satisfies a requirement that the global economy market has developed in response to the evolution of the informational field and the existence of a fiercer competition. The degree of competitiveness in the global market is increasing and Competitive Intelligence proved, in the last 30 years, that it is part of the answer for the problems generated by these factors.

If we look at the performing states, regarding competitiveness, we can see that in many of them Competitive Intelligence developed continuously and undeniably helped to achieve economic performances.

Japan, for instance, has one of the most developed integrated systems of Competitive Intelligence, both nationally and internationally. Larry Kahaner presents in his book, "Competitive Intelligence: How to Gather, Analyze and Use Information to Move your Business to the Top", in a whole chapter, the situation of Japan. He stated that, due to the unique organizational culture and the close link between the social side and the business side, Japan managed to build an exceptionally informational system, coordinated by the state itself, which aims to disseminate intelligence towards all domestic companies.

The impressive growth of Japanese economy began in 1986, when the GDP almost doubled over the previous year. It is not a coincidence that, in the proximity of that period, Competitive Intelligence activity was taking shape and the methods of achieving it were revealed to the public. Japan was amongst the first states to understand the importance of this activity. While it is obvious that the explosive evolution of macroeconomic indicators was, to a significant extent, due to other causes, the development of Japanese firms was, according to Kahaner, based mainly on economic espionage and Competitive Intelligence. Currently, Japan has one of the most important internationally active agency (JETRO), which aims to achieve this kind of analysis. JETRO Agency carries out activities in more than 60 countries worldwide. With its aid, and with the close link between Japanese companies, which form real clusters, called "Keiretsu", Japan manages to constantly evolve in an era where innovation is indispensable.

This example, along with the United States of America, France, Germany, Sweden and other developed countries, show the significant impact Competitive Intelligence activity has on the macro-economy and on the sustainable development.

In the past, the state or the company which attained more information about the market was the one having an advantage, but now, when information reached a very large volume and is growing at an exponential pace, the one that is able to choose from this great mass

of information only the ones that provide action capability and are useful, will be the new winner.

Moreover, being an activity with impact on numerous economic influence factors, the externalities created by Competitive Intelligence are at a significant level. Whether we are talking about this activity done by the state or by firms, the use of Competitive Intelligence will inevitably reflect on others on the same market and even on the ones on different markets. As exemplified above, holding a vast information network leads to growing performance and increase competitiveness, which in turn influences a wide range of economic agents.

The creation of intelligence follows a five-step cycle, and the compliance with the order and characteristics of these stages is a must in order to obtain the desired result. These steps are presented in The Oxford's Essential Dictionary 2002 edition as follows:

a.   Setting the information requirements and collection planning;
b.   Data and information collection;
c.   Data and information sorting, capturing and storing;
d.   Data and information analysis, production of intelligence and intelligence products;
e.   Intelligence dissemination and obtaining feedback from the beneficiary;

## 2.  Competitive Intelligence cycle stages

### 2.1.  Setting the information requirement and collection planning

At this stage, the activity objectives are set. These objectives depend on the staff skills regarding the next steps and as well the complexity of the particular case. This first step requires a three-pronged approach: a clear understanding of customer needs, including its constraints of time; the development of the collection and analysis plan; the correlation with search planning and the identification of legality issues.

### 2.2.  Data and information collection

The second phase of the cycle involves the actual collection of data and information of interest. Most of them are available in public to anyone and can consist of annual and periodic reports (private or governmental), books, broadcasts, speeches, databases, information on the internet, etc. Competent staff can find, most of the times, all the information it needs legally and ethically (Kahaner, 1997, p.44). The collection is made in compliance with a set of rules that helps streamlining the business. Therefore, two ways of collecting take place simultaneously: first, the information with a specific reason or in response to a request from the management will be searched, and secondly, information with future utility that might be exploited at a later point in time later will be collected. At the same time, the collection will be made based on the principles "from easy to hard" and "from the cheapest to the most expensive"(Duncan, 2009, p. 55), reaction speed, cost efficiency and the quickness with which this step of the cycle is done being very important elements in the economy of the entire activity.

### 2.3.  Data and information sorting, capturing and storing

This Competitive Intelligence cycle stage includes processing, consolidation and evaluation of the information which hold significance relating to the targeted objectives, so that they can be transmitted and stored. New technology, using computers and specialized software, can perform processing and storage very easily. Also, it is necessary to assign features, such as reliability of the source, concerned area, processing stage, the obtaining manner etc., that will support analysts to complete the work in the next stage.

*2.4. Data and information analysis, production of intelligence and intelligence products*
Data and information analysis, the production of intelligence and reporting is the most complex and difficult phase of the cycle. This refers to the application of data analysis techniques in order to transform the gathered information into intelligence and then correlate the results with the initial information requirements. The analysis requires special skills because the analyst must weigh the information in order to identify patterns and create different scenarios based on what he knows. Even if the analysis is based on hard information, that kind of quantitative, verifiable, easy to store information, transmitted in impersonal ways, their content being independent to the collecting process, the analysts sometimes have to fill "gaps", to make assumptions and to estimate possible outcomes (Kahaner, 1997, p.45). They have to use multiple methods of analysis for the result to be truthful. The analyst is obliged to make the best estimate he can.

*2.5. Intelligence dissemination and obtaining feedback from the beneficiary*
The fifth stage of the cycle is the dissemination and obtaining feedback. Given that it is a continuous cycle, we can say that this stage can be both last and first. Specifically, it may be the first step of a new cycle of Competitive Intelligence whose objectives will be set according to the disseminated products, or the last stage of a cycle that started with the formulation of information requirements. It is the time when the analysts or the persons who will carry out the dissemination will suggest possible courses of action based on the obtained results. They must be able to operationalize the recommendations and to support them with arguments. The ultimate goal is to distribute the results to the departments that can use them in a prolific manner. Therefore, the final form of the intelligence must be easily comprehensible, concise and concrete.

## 3. The impact of the externalities generated by Competitive Intelligence

The externalities are the effects or consequences that affect people from the environment in which certain activities happen, generally of economic nature. These are reflected in benefits or costs which are not revealed by the result of economic agents quantitative studies. Two of those externalities features are that the effects are not directly recorded, leaving the competitive balance untouched, and that they derive from the work of actors in the market, other than those that directly support costs. Depending on their type, positive or negative, externalities can be materialized through the concepts of external marginal cost and external marginal benefit. Also, the concepts of private marginal cost or benefit and social marginal cost or benefit have a strong link with the externalities analysis.

Private marginal cost expresses only directly incurred expenditures of the units involved in organizing and running a business.

External marginal cost refers to the spillover effects due to negative externalities. This occurs when the production or consumption of a product imposes a cost on a third party.

Social marginal cost expresses all costs and opportunities culled, materialized in costs covered by the community members, following the organization and development of certain activities. It is reflected in the sum between private cost and external cost.

External marginal benefit represents the propagated effects due to positive externalities.

Social marginal benefit includes, in monetary terms, all the advantages of the members of a community as a result of the organization and development of certain economic activities, and can be calculated as the sum between private benefit and external benefit (Enache et al, 2007, p. 318).

### 3.1. The positive externalities generated by Competitive Intelligence

Positive externalities are benefits, advantages, gains or profits generated by an economic agent to third parties without them paying.

This type of externality may be spread over a wide area of the economy in the case of Competitive Intelligence activities. With regard to the use of information in order to gain competitive advantages at the microeconomic level or to increase competitiveness at the macroeconomic level, the entire economy benefits from this activity.

Regarding the activity done by a firm, creating intelligence shows its effects across the whole market. For example, obtaining a competitive advantage will force other competitors to react. These tensions will increase the competitiveness in the market and a high degree of competitiveness is reflected into an increased focus on the consumer needs, in order to retain those who already purchased the product or service offered and to attract others. At the same time, in order to remain competitive, firms will resort to various methods, either to reduce costs and thus the price, or increase the quality of products and services. Thus, the level of consumer satisfaction will be higher, this being the positive externality created by the activity itself. The external marginal benefit, in this case, is represented by all the benefits gained by the consumer following the Competitive Intelligence activity, such as increased quality/price ratio, creating new range of products to satisfy more needs, providing promotions to customers, etc.

This type of externality occurs frequently in the case of companies that sell products with high added value. For example, the mobile phone market is significant in this case. Firms on this market frequently found themselves, many times in the past years, in the position to respond to innovative actions of competitors. If until recently, Nokia was the uncontested leader of the market, the evolution of other companies such as Samsung or Apple, the market leaders of today companies frequently practicing Competitive Intelligence activity, changed the situation in the division of market share. Today, we see that every product launched by one of the two companies is followed by a prompt response from the competitor, resulting in a growing quality/price ratio, advantageous to buyers.

The macro-economic impact of Competitive Intelligence activities at the firm level is reflected in the indicators evolution. Except the cases of natural monopoly, increased competitiveness will always create added value at an economic segment level. Innovation and adaptation to new customer needs are essential elements for the healthy growth of a company and also of the economy. Stimulating the consumption and the investments, key parts of GDP formation, through innovation and creation of value added, will result in a significant increase in wealth and living standard. Therefore, the external marginal benefit to the macro-economy is the welfare growth felt by the population and it involves the evolution of macro-economic indicators, such as GDP per capita, unemployment rate or the average salary. Thus, the Competitive Intelligence activity can be a contributing factor to the economic boom of Asian countries and their ascent to the top of the global economic powers list.

The work done at the state level provides the intelligence obtained through legal and ethical ways to the companies. However, in addition to firms targeted by the state, all other entities interested in the subject to which the intelligence refers can access it. Still, this depends on the level of permissiveness displayed by the respective state. Japan, for instance, offers the available intelligence to any Japanese speaker, publishing it in monthly publications such as "New Technology Japan" or "Focus Japan" (Kahaner, 1997, p. 172). Therefore, the positive externalities created by Japan are very extensive, comprising all the competitive advantages obtained by third parties due to the use of the respective intelligence.

Given all these, positive externalities effects are not destabilizing the economy in which the Competitive Intelligence activity is performed. Thus, market intervention in order to internalize them is not necessary. It is sufficient to provide a fair competitive environment,

according to market economy principles, in order for the development to be healthy and effective on the long term.

*3.2. The negative externalities generated by Competitive Intelligence*
In addition to the positive effects of this activity, we distinguish a number of negative externalities, defined as damages, losses, costs or expenses that an operator generates or induces to third parties.

For the firm level activity, the main negative externality refers to disadvantages created to the competing firms by using information about their actions. Although Competitive Intelligence is an ethical and legal activity, most certainly a large part of the information collected is of great interest. Often, through the negligence of employees or through public disclosure of important details about their activity, the companies place into the public domain information that would normally be confidential. Through the process of Competitive Intelligence, such information is collected, analyzed and disseminated for use. Of course, the purpose of the activity is not to harm other competitors, but to create their own competitive advantages, this negative externality being, however, inevitable.

Another negative externality may be hindering the market entry of new competitors. Using intelligence by a company that already has a strong position in the market can create a monopoly situation. In this case, a couple of positive externalities are canceled, in particular those relating to the product quality growth due to increased competition on the market. Moreover, the monopoly will give the economic agent the opportunity to strengthen this position further, hampering the market entry of new firms. However, this negative externality can be internalized by regulations against the possibility of creating monopolies, regulations which partly exist in most of the countries that have a market economy.

The external marginal cost is materialized, therefore, as the marginal cost of the third parties, as a result of the use of the intelligence that concerns them directly by the companies that use Competitive Intelligence but also as the additional cost of the consumers, both in terms of price and quality of the products purchased in a monopoly situation.

For the activity done by the state, the negative externalities also refer to the companies that the collected information refers to, but on a much larger scale. The French state, for example, has helped their companies to collect information about other firms in the United States since 1958 (Kahaner, 1997, p. 191). This helped French companies, both public and private ones, to develop and innovate using such information. However, in a globalized economy where interconnections and common markets are becoming more and more developed, the competitive advantage, achieved by some companies as a result of the intelligence disseminated by the state, can cause negative externalities for the rest of the competitors. The additional costs that this competitors are forced to pay in order to compensate for the damaged caused by the Competitive Intelligence activity represent the marginal external cost in this case.

With the exception of the monopoly situation mentioned above, the internalization of negative externalities is not necessarily needed in order to create equilibrium on the market. Most of the times, the positive externalities generated by Competitive Intelligence creates a much greater impact than negative externalities. The benefits, both microeconomic and macroeconomic, far outweigh the costs, and the proof is the intensive development of the states and the markets in which this kind of activity was made.

*3.3. The graphical representation of externalities*

Price (cost-benefit)
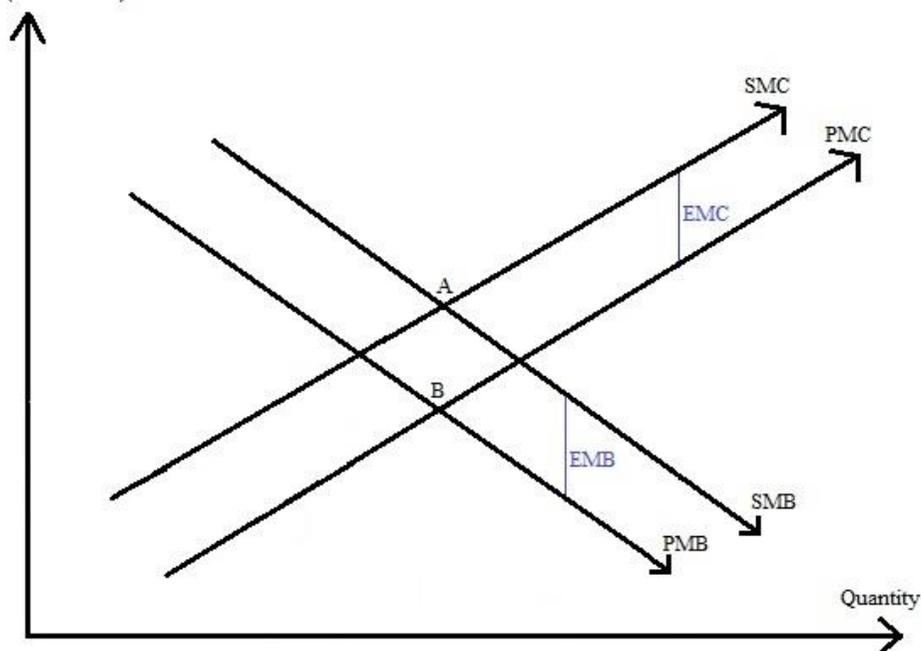


Source: Cornes et al, 1986

The graph illustrates how the positive and negative externalities can be described and embodied, according to the quantity and the derived cost or benefit. The hypothesis from which we start is that external marginal cost (EMC) and the external marginal benefit (EMB) evolve independently of quantity.

In the case of the state caused externalities, private marginal cost (PMC) represents all the costs that the state incurs in order to obtain information on the competitive environment (personnel, electronics, software, quantitative analysis, transport costs, fixed costs resulting from the use of one or more offices, etc.). External marginal cost is represented by the total expenditure that firms on the same market or complementary markets have to do in order to recover losses generated by the competitive advantages of those using the intelligence generated by the state. The private marginal cost line shows the direct relationship between the amount of information generated and the cost of obtaining them. Considering the independence of the external marginal costs in relation with the production, the social marginal cost (SMC), represented by all the governmental spending together with those of others affected directly or indirectly, follows the same direct relationship between quantity and cost.

The same reasoning is applied to the marginal benefits. Both private and social marginal benefits (PMB and SMB) indicate a reverse relationship between quantity and actual benefit. Private marginal benefit is represented, in case of the state activity, by the advantages of the firms that benefit from the provided intelligence, including the possibility of innovation, knowledge of pricing strategies, knowledge of marketing strategies and tactical movements anticipation of competitors and market evolution. External marginal benefit, as outlined above, refers specifically to the advantages that costumers have as a result of the increasing market competiveness.

## 4. Conclusions

The Competitive Intelligence activity has a significant impact on the markets and on their balances. Whether we refer to firm's activity or the state's, the overall economy is directly influenced by this process. Even if there are multiple elements that led to the development of important states around the world economically, this activity is certainly a significant support for sustainable development, especially in the context of globalization.

Regarding the externalities, the success of the international markets on which this type of analysis is applied (optical technology market, IT products market, automotive market, etc.) leads to the intuitive conclusion that the social marginal benefit exceeds the social marginal cost and, therefore, the activity can support a long-term sustainable growth of the economy.

However, the externalities analysis may differ from country to country, due to customs and organizational culture within each state. Certainly, no other state will be able to create, in the near future, an information gathering network more efficient than that of Japan, regardless of the investment level, due to the specific organizational culture of this country. However, the fact that the positive externalities are undeniably superior in value to the negative ones, reassures that the activity generating these externalities is beneficial overall. Even if it doesn't confer the same results, if used correctly, the Competitive Intelligence activity works in any environment where market economy is present, and ,with its help, notable performances can be achieved.

In conclusion, it is necessary to be aware of both the positive and the negative externalities of the Competitive Intelligence activity, the actual result of the differences between benefits and costs being the one who will reveal the real impact of this process on sustainable development. Further research should study more examples and maybe even undertake experiments on the real market, narrowing the gap between the known effects and externalities of Competitive Intelligence activity and the real ones.

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# ENTREPRENEURSHIP IN ROMANIA. A BEHAVIORAL ECONOMICS PERSPECTIVE

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**Abstract:** *Economics provides insight into how entrepreneurship influences growth and development and, on the other hand, how the macro structure of a region or country impacts the type and abundance of entrepreneurship. Economic analysis provides insights for scholars, guides practitioners and policymakers. From a broader perspective, economic theories guide the understanding of human behaviors and the constant quest toward realization, comprehension and improvement of human condition. Moreover, behavioral economics combines insights of psychology, sociology and economics in trying to better understand and predict human decision-making. At the intersection of economic studies with social sciences, behavioral economics succeeds to demonstrate, using laboratory tests and experiments, that on a shorter term people are quite capable to perform profitable economic computations and adopt rational behaviors, but on a long term run they easily become fallible in performing rational mental accounting and are vulnerable to several factors such as emotions, certain mass-manipulation techniques, lack of self control or procrastination, etc. Extended research in the field of behavioral economics reports many other various behavioral anomalies that may have the ability to explain seemingly irrational and unpredictable responses of individuals, in general, and entrepreneurs, in particular – especially when finding themselves in conditions of risk, uncertainty or incomplete information. Furthermore, the elevated consistency of these abnormalities suggests that they are divergent only to our traditional models, but that they could otherwise be the norm. The present article seeks to explain how such insights from behavioral economics may help us better understand and enhance our perspective on entrepreneurship, what are some of the most frequent biases characteristic to entrepreneurial behavior and decision-making, accounting as most notable for the field of entrepreneurship, biases like overconfidence, optimism, mental accounting, anchoring, uncertainty, etc. Using Global Entrepreneurship Monitor (GEM) data 2011 to 2013 the current research also present a brief behavioral perspective on the Romanian entrepreneurial environment, the profile of the Romanian entrepreneur, the motivations and various other factors such as demographics, age, education, etc. that have an impact on the decision of becoming an entrepreneur. The paper also offers a few succinct explanations and suggestions on how recent findings in behavioral economics could boost the entrepreneurship driven behavior observed.*

## 1. Introduction
*Franklin D. Roosevelt said: "The only limit to our realization of tomorrow will be our doubts of today."* If we follow this path of thought we can say today's entrepreneurship is important as it represents our yesterday's hopes and dreams, which we – even if sometimes in doubt, had the courage to put into practice. Moreover, entrepreneurship is important for individuals, society as a whole, organizations, and countries. With the help of economics, management and other social sciences, we can understand how individuals make decisions, the means through which they build and grow organizations, and what the intended and unintended consequences of their actions are on our social and economical

environment.

## 1.1. Entrepreneurship in economics

Over the last period of time, a substantial amount of research in economics has focused on entrepreneurship. Reflection on the maximization in which individuals have to select between alternative employment options, authors like Wagner (2003), (Parker, 2004) and Lazear (2004, 2005) suggested entrepreneurs should be versatile players, able to perform many tasks without necessarily mastering any of them. Other major topics in which entrepreneurship has been studied relate to personal characteristics (Lévesque et al., 2002), allocation of talent (Michelacci, 2003), unemployment rates (Tervo, 2006) immigration (Fairlie and Meyer, 2003), networks and social capital (Minniti, 2004, 2005.)

Casson, (2005) argues that, in many ways, entrepreneurial behavior represents a key factor to the growth and survival of firms in a volatile environment, mainly because entrepreneurial judgment is a necessary condition for success when making complex decisions in conditions of uncertainty.

In the same register, van Praag and Versloot (2007) conclude that, in the light of broader recent studies, entrepreneurs have a very important and distinct role in the economy.

According to their findings, entrepreneurs contribute to productivity growth, allow job opportunities to appear, recognize, endorse and commercialize innovations and, as a result, generate positive regional spillovers. Further backing of their scientific research, they show that entrepreneurs also appear to be more satisfied than employees.

## 2. Research Focus and Methodology

This article explores how insights from behavioral economics may explain entrepreneurial behavior and how absorbing such findings may help us better understand and improve entrepreneurial efforts.

The primary purpose of the paper is to describe general concepts of behavioral economics and entrepreneurship and to demonstrate practical use of such research in individual decision-making processes by suggesting appropriate behavioral methods.

In accordance with this goal, a comprehensive literature review of the field, encompassing the most representative concepts and findings, is presented and a short analyses of Romanian entrepreneurial environment, based on the most recent available sets of data is conducted.

The structure of the paper is subordinated to these objectives. The first and second part briefly present research and evidence from recent literature confirming the high interest in the study of behavioral economics and entrepreneurship. The third part explains important concepts and ideas in the field of behavioral economics and the utility of knowledge and implementation of such results.

The practical part of the research consists of aforementioned brief analyses of the Romanian entrepreneurial environment, where it further describes behavioral insights methods and suggests ways for improving entrepreneurial behaviors and perception. In the end of the paper a conclusion summarizes the information presented and future research opportunities.

## 3. Insights on Behavioral Economics

Behavioral economics is a sub-discipline of economics which uses findings from psychology, sociology, anthropology and other social sciences in investigating how certain events take place in the economy, the concrete manner in which people adopt certain decisions and the possible motivations beneath them.

Another major focus of behavioral economics is studying the key drivers that may lead economic agents to sometimes undeniably irrational behaviors, often observed in different socio-economic environments or, in other words, why individuals sometimes "fail" to behave in a predictable rational way, as formally suggested by the standard economics

concept of homo economicus.

## 3.1. Changing the "homo economicus" paradigm

In the long history of the science, and especially during the neo-classical period, economists have many times tried to make predictions regarding the evolution of the market and, by this extent, the welfare of individuals and the evolution of economics and society. However, in the process of constructing these models, these issues had to be fairly simplified, or at least to a certain degree, so that they could be worked with and some assumptions had to be made.

One of the most important of these assumptions was the existence of a certain ideal individual, an "ultra rational" human being, who was permanently in the possession of perfect information, capable to perform all necessary economic calculus for maximization regardless his surroundings and who would, in the end, make the best decisions based solely on his utility. This concept of "homo economicus" and its origins can be traced to the birth of modern economics, when the notion of economic utility was primarily defined.

For example, in the work of Walras (1874) who saw things as useful when they served a purpose irrespective of the morality or immorality of the deed or Jevons' (1871) who saw value as depending entirely on the utility of the good and nothing else, stressing the value of mathematical modeling even in the absence of a way to validate it empirically.

In other words, the need of a behavioral approach appears each time when the normative and descriptive approaches clash or, in other words, what is expected from an individual to be a rational act in its ongoing strivings to maximize his utility, does not reflect in the observed economic behavior.

## 3.2. Behavioral economics – a novel approach to entrepreneurship

Among other various fields benefiting from this approach, behavioral economics has been particularly useful in providing insights on entrepreneurship. Significant behavioral economics research such as the concept of bounded rationality, judgmental biases, rule following, social norms, evolution, etc. have been successfully implemented and described in the growing amount of research on entrepreneurial behavior in economics and many effective entrepreneurial applications were drawn from of these principles over the last decades.

At the core of behavioral economics, a significant amount of studies suggest that human behavior and decision-making is often distorted by different kinds of heuristics and biases (Kahneman and Tversky, 1974). Studying and understanding these heuristics and biases can prove very useful when making entrepreneurial decisions.

Kahneman et al., (1982) explain, through a several research tests and experiments, the various ways in which human judgment deviates from rationality by defining a series of important biases.

Challenging the standard economic model, Simon (1955) appreciated that individuals do not posses unlimited capabilities in processing information and people generally apply the rule of thumb when making (economic) decisions as a way of conserving precious cognitive resources.

Further research identifies other examples of typical entrepreneurial judgmental flaws that can be encountered in situations characterized by reference dependent behaviors, like biases in probability perceptions and biases in self-perceptions (Schade and Koellinger, 2007).

Moreover, certain types of biases appear to be quite emblematic for entrepreneurial behavior. Knight (1921) agrees that this is, in part, due to the fact that exploiting business opportunities demands that entrepreneurs make decisions in complex situations without entirely knowing all relevant facts or probabilities of a future event that may occur. Reference-dependent behavior take into account all economic situations in which behavior is altered by a specific predetermined anchor, or point of reference, that influences

forthcoming behavior. Anchoring is a major heuristic in entrepreneurship when driving the time allocation decision between starting a new business and preserving a wage job. (Lévesque and Schade, 2005)

Ashraf et al. (2005) consider behavioral patterns based on different biases at core of the decision whether all working hours should be allocated to building new business, all to the existing wage job, or should be split between these two activities. Studies also show that people not engaged in a stable employment situation are more likely to attach higher subjective appreciation to the possible gains from a new business and lower subjective values to possible losses than individuals holding a career. (Ritsila and Tervo, 2002)

Other similar experimental studies depict entrepreneurs as less likely to be influenced be status quo bias, as for students and bankers. This is somehow predictable, as, by definition, entrepreneurial behavior tends to be more characteristic to individuals who diverge from the norm.

In (2007), Burmeister and Schade also found that biases in probability perceptions include judgmental flaws used to erroneously appreciate the probability of potential events, which often leads to a even more alternated assessment of perceived probabilities.

As a matter of fact, perception about one's environment seems to be a crucial influential factor on individuals' decision to start a business (Koellinger and Minniti, 2006).

Research in this area is able to demonstrate that people do indeed manifest certain inescapable biases when they attempt to estimate probabilities. This is done either by overestimating the importance of how well the available information fits into a certain model of the world they imagine, also known as a representativeness bias, or by the tendency to overvalue information which can be more easily retrieved by them, availability bias, or in some cases even information to which they have solely been (recently) exposed but is not necessarily relevant, anchoring bias (Tversky & Kahneman, 1974, p:1124-1131).

As a result of their observation the two economists have shown that not only do people make certain mistakes in interpreting data and probabilities but they make the same mistakes in a certain predictable manner. For example, people tend to overestimate small probabilities but to underestimate large values for probabilities (Tversky & Kahneman, 1981) with the extreme example being the risk aversion that people manifest when going from certainty to uncertainty (Kahneman & Tversky, 1979).

Moreover, biases in self-perceptions encompass the tendency of individuals to judge their own behavior, work and abilities less objectively then they would judge someone else's (Ariely, 2010). In his extended research on judgmental biases, Ariely offers several broadening perspectives on issues such as truth and relativity, procrastination, self-control, social norms, subjective self-evaluation, temptations and sensual arousal as determinant factors in the occurrence of certain irrational behaviors, providing us with plenty simple, but very meaningful explanations. His theories, arguments and keen observations, are in most often supported by various empirical tests and experiments carried out together with his team of fellow researchers and students from MIT's Sloan School of Management.

Another interesting of field in behavioral economics introduces a time dimension to human evaluations and preferences. This concept states that people are biased towards the present and poor predictors of future experiences, value perceptions, and behavior.

As an example, when referring to self-control (for the sake of obtaining future benefits), Ariely asserts: if a group of individuals would have to choose between "getting a half box of chocolates now and getting a whole box of chocolates in one week", they will most certainly choose "now" over "then".

But if the same option would be presented slightly differently, in terms of giving to the group the opportunity to choose between "a half box of chocolate in a year and a full box of chocolates in a year and a week", no doubt, most people will prefer to wait the extra week and get the full box of chocolate, because individuals tend to understand time and position themselves in relative terms. He shows how subjective self-evaluation can push individuals in exaggerating and overprizing the real value of their choices, actions or believes.

His disposition on relativity is that people make comparisons on a daily-basis, even when those particular comparisons are not entirely formed on a proper base. And that in the process of manipulating people, decoys are usually thrown in order to influence them more easily — a well-known example is how certain restaurant menus feature high-priced entrees, in order to allow mid-priced items to appear cheaper by comparison.

More to it, in his opinion, the phenomenon of anchoring and tagging (specific to geese) can be applied to human beings as well, when describing the process through which certain values are associated to different objects, even if completely arbitrary, and therefore, become attached of, eventually being used as a baseline for future subsequent decisions.

The importance of perception and the relativity of the context and how it impresses on the way in which facts are interpreted has been studied by many other authors.

Another well-known bias describing people's excessive confidence in their own judgments is the *overconfidence effect, which* occurs when subjective confidence in the own personal judgments is reliably greater than the objective accuracy of those judgments. For example, for certain types of questions, answers that people rate as "99% certain" turn out to be wrong 40% of the time (Lichtenstein et al, 1982).

Koellinger et al., (2007a) for example, show that most individuals manifest an over overconfidence bias when reflecting about their own relative abilities and are often unreasonably optimistic about their future. In other similar studies the authors show even that entrepreneurs of different sex tend to have on a regular base different judgmental biases in self-perceptions (Koellinger et al., 2007b).

## 4. Entrepreneurial Behavior in Romania

As shown above, behavioral economics is a relatively new and very important turn from the direction of neoclassical economics. This is mainly due to the fact that the approach it makes towards the subject matter is less influenced by the assumption that had to be made in order to construct the model and more by the actual processes, which govern human behavior. Further on, the paper will move to examine the aspects of the Romanian entrepreneurial environment, motivation and other aspects such as age, education and gender that have an observable influence on the development of entrepreneurship in Romania.

Using Global Entrepreneurship Monitor (GEM) data collected in 2011, 2012 and 2013 the current research presents a behavioral perspective on the Romanian entrepreneurial features and explores how motivation, age and other factors may have influenced the entrepreneurial development of a post-communist economy like Romania's. A number of graphs indicate the hostile nature of the environment and the relatively limited opportunities matching the country's business environment in Romania.

However, surprisingly little evidence exists about its impact on entrepreneurial behavior. The results suggest that Romania's institutional and legal environment is important in explaining its relatively low levels of entrepreneurship development, where the latter is measured in terms of both number of start-ups and of existing business owners.

In addition, the paper suggests that strong ties between businesses and state administration in the Romanian economy may provide greater opportunities for existing entrepreneurial insiders than for newcomers trying to establish a new venture. According to the available data sets in the case of Romania, the weakness and lack of trust in the "system" are detrimental to entrepreneurial activity and that, though motivation is important, it is not entirely able to offset these deficiencies and trigger healthy entrepreneurial behaviors.

## 5.Profile of the Romanian Entrepreneur

In the following section we will provide a brief description of the Romanian entrepreneur and his motivation.

| | Early Stage Entrepreneurs | Established Entrepreneurs | Entrepreneurial Employees |
|---|---|---|---|
| ■ Male | 60.8 | 63 | 57.3 |
| ■ Female | 39.2 | 37 | 42.7 |
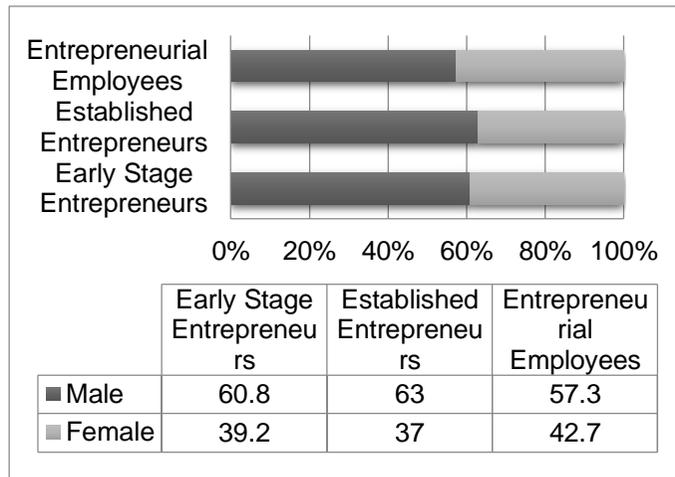
**Figure 1:** Distribution of entrepreneurs by gender
Source: Entrepreneurship in Romania Country Report, p. 37.

Using the GEM data on the profile of the Romanian entrepreneur we can easily see that the data is heavily skewed in favor of men as they dominate in all three categories and, in terms of established entrepreneurs they are almost double the percentage of women. One thing which is interesting to see is the fact that the smallest difference is when it comes to entrepreneurial employees. This suggests that there is a type of pressure in women who choose the entrepreneurial path, however, if this is due to social factors or risk adverse behavior has yet to be adequately determined.

| | Early Stage Entrepreneurs | Established Entrepreneurs | Entrepreneurial Employees |
|---|---|---|---|
| ■ 18-24 | 16.6 | 5.6 | 4.9 |
| ■ 25-34 | 34.1 | 16.7 | 24.7 |
| ■ 35-44 | 27.3 | 24.1 | 42 |
| ■ 45-54 | 14.6 | 30.6 | 19.8 |
| ■ 55-64 | 7.3 | 23.1 | 8.6 |
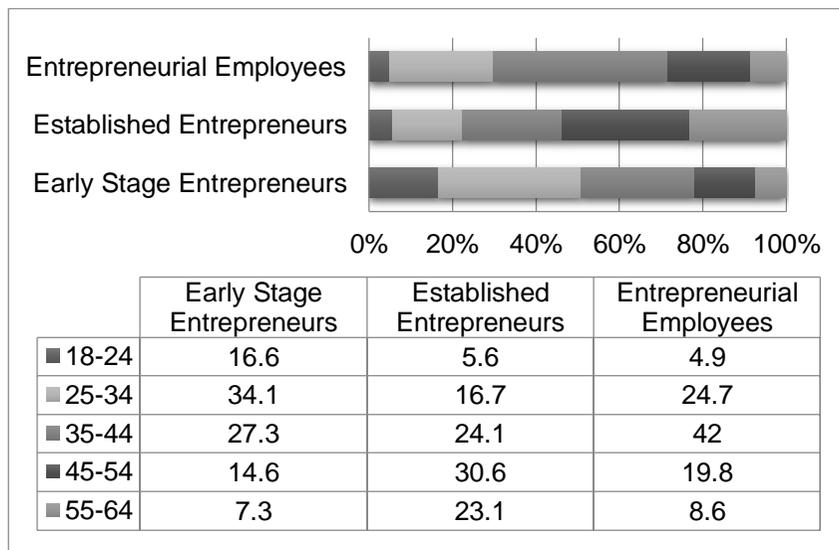
**Figure 2:** Distribution of entrepreneurs by age
Source: Entrepreneurship in Romania Country Report

When looking at the same GEM data, but accounting by age, it is very interesting to see the evolution of individuals. For starters, it is of note that there are very few entrepreneurs who start at a period later in their life, in fact, most of the early stage entrepreneurs are younger than 35 years old, with 45 being something of a maximum. This can easily be correlated with the data for established entrepreneurs whose percentage grows after 34 years with a peak between 45 and 54 years. This would suggest that those early stage entrepreneurs who have been successful tend to remain entrepreneurs instead of seeking employment elsewhere.



|  | Early Stage Entrepreneurs | Established Entrepreneurs | Entrepreneurial Employees |
|---|---|---|---|
| ■ Some Secondary | 8.6 | 6 | 2.5 |
| ■ Secondary Degree | 41.6 | 30 | 24.7 |
| ■ Post-Secondary Degree | 41.6 | 48 | 54.3 |
| ■ Graduate Experience | 8.1 | 16 | 18.5 |
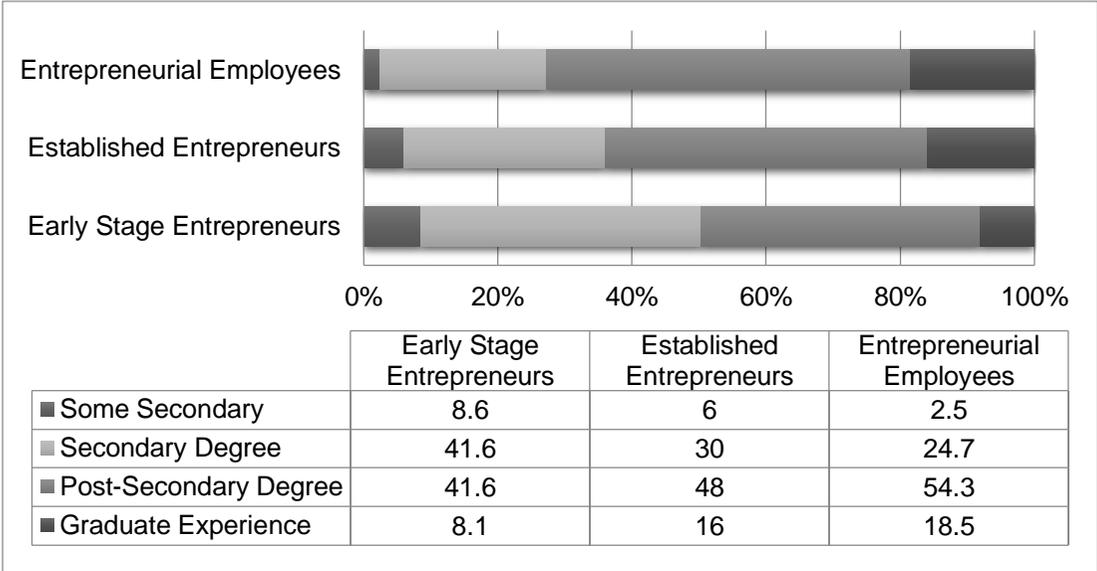
**Figure 3:** Distribution of entrepreneurs by education
Source: Entrepreneurship in Romania Country Report, p. 37.

From the distribution by education figure we can easily see that there is a strong link between education and entrepreneurial success. For starters, people who only have some secondary education rarely create their own company, only 8.6%, and even rarer still do they manage to have some degree of success, 6%. In terms of secondary degree or a post-secondary one, there is no difference when it comes to early stage businesses, however, the larger number of established entrepreneurs with a post-secondary degree would suggest that they are more successful in the long run. This holds true for those with a graduate degree who represent only 8.1% of the early stage entrepreneurs, even fewer than those lacking a secondary degree, but are 16% of the established ones. In terms of entrepreneurial employees, the data is as expected, the majority of them have a post-secondary degree with a few of them having only a secondary education and some with graduate experience.

| | 2011 | 2012 | 2013 |
|---|---|---|---|
| ■ Opportunity motive: increase income | 24.6 | 21.6 | 22.5 |
| ■ Opportunity motive: independence | 10.3 | 16.3 | 9.6 |
| ■ Mixed motive (combination of necessity and opportunity) | 18.1 | 32.2 | 30.1 |
| ■ Non-opportunity motive: necessity or maintain income | 47 | 29.9 | 37.8 |
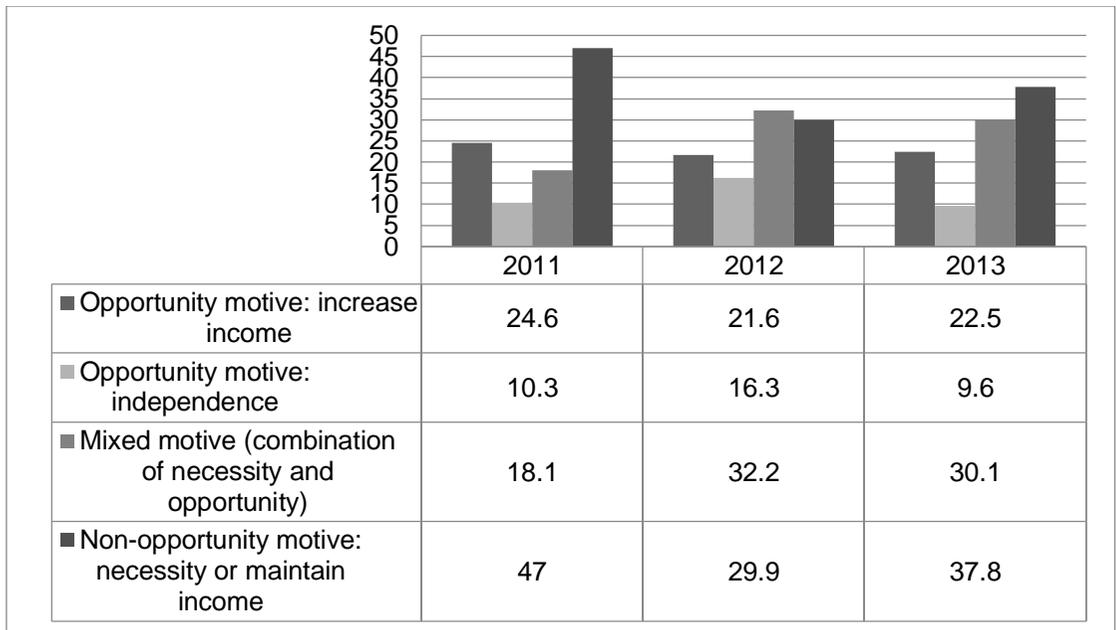
**Figure 4:** Motivation of Romanian entrepreneurs, Early Stage Entrepreneurs
Source: Entrepreneurship in Romania Country Report, p. 39.

| | 2011 | 2012 | 2013 |
|---|---|---|---|
| ■ Opportunity motive: increase income | 22.3 | 14.6 | 18.1 |
| ■ Opportunity motive: independence | 15.8 | 17.2 | 20.6 |
| ■ Mixed motive (combination of necessity and opportunity) | 9.5 | 26.3 | 18.2 |
| ■ Non-opportunity motive: necessity or maintain income | 52.3 | 41.9 | 43.1 |
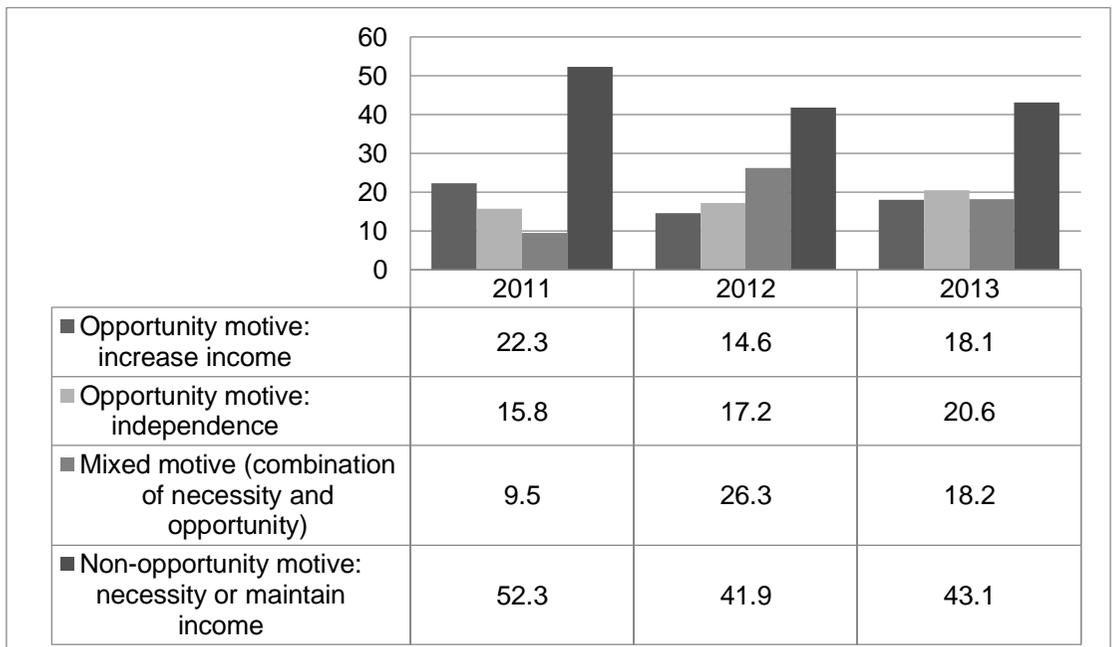
**Figure 5:** Motivation of Romanian entrepreneurs, Established Entrepreneurs
Source: Entrepreneurship in Romania Country Report, p. 39

It is very interesting to see the driving factors for entrepreneurs and to understand what has made them take on the risk of managing their own company. This is because, in Romania at least, it has not been as much a question of motivation as it has been of

necessity. From the above graphs we can see that, for most roughly 60% of the established entrepreneurs and just as many of the early stage ones, the need to obtain an income has been their main driving force or has contributed significantly. Furthermore, we can notice that, even though it is not the main motivation, the desire to increase their income is a factor for about 20% of established or early entrepreneurs. What is interesting is the fact that about 20% of established ones cite independence as a driving factor for their motivation but only 10% of the early stage ones. It would seem that the desire to improve their income is a motivator at the beginning, however, after achieving a degree of success, quite a few begin to value the ability to guide their own destiny more than they did at first.

## 6. Conclusion

Behavioral economics helps us better differentiate the various phenomena-taking place in real time and provide explanations for behaviors that may otherwise seem entirely puzzling and irrational. Ergo by directing our attentions towards some of the above research facts and numerous other interesting concepts in the field of a new emerging disciplines like behavioral economics and towards other psychology related fields, we can gain valuable insight and understanding on entrepreneurial behavior, how certain socio-economic organizations function, why some of the most complex systems fail and what are the mind paths that individuals follow in the process of decision-making and what stands as plausible solutions in addressing several judgmental biases of everyday entrepreneurial activity.

This article seeks to provide a brief review of recent research advances in entrepreneurship, to put them in the contexts of the entrepreneurship literature, and explain how the various behavioral contributions presented may be of use when trying to understand entrepreneurial behavior, in general, and Romanian entrepreneurial tendencies, in particular.

## 7. Acknowledgments

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# COMPARATIVE STUDY ON THE BALANCE OF PAYMENTS EVOLUTION AND ITS SUSTAINABILITY AT REGIONAL LEVEL

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**Abstract:** *The balance of payments stands for both good and bad impact on the economy as a whole. If the country registers a current account deficit, than the result will highlight more imports than exports. If the country runs a current account surplus, than it exports more than it imports. Both cases are unfavourable for that countries economy, because it creates headaches for all the decision makers. This current paper analyses only the first part of the balance of payments, and that is the problem of a current account deficit. For a better understanding of the analyzed phenomenon, the paper will carry out a comparative analysis of the results achieved by Romania and other member countries of the European Union. For this analysis the next countries were chosen: Bulgaria, Poland and Hungary. This was done for a parallel analysis of data recorded in the current account. Representative data was taken from the Eurostat and the annual reports of the central banks of each analyzed country. After this, based on the data above, the paper highlights Roubini (1998) elements in calculating the current account sustainability. It takes into account several elements that lead to a sustainable balance of the current account deficit. Among them the author lists: foreign reserves calculated in months of imports; the share of exports in GDP, expressed as a percentage; openness degree of the economy expressed as a percentage; public external debt relative to exports; the ability to attract foreign direct investment. All this research is needed in order to express as accurately as it can be done, the sustainability degree of current account deficit. Based on this, the paper will asses which country has the most sustainable current account, and what measures are suited if not. The conclusions will be made strictly regarding sustainability points, and some potential future measures will be highlighted in order to improve the current status.*

**Keywords:** current account, sustainability, exports, imports, Romania.

**JEL Classification:** F14, F32.

## 1. Comparative study on the balance of payments evolution

For a better understanding of the mutations recorded in the analyzed phenomenon of the current account, the paper will carry out a comparative analysis of the results achieved by Romania and other EU member states in this field.

For this analysis the next countries were chosen: Bulgaria, Poland and Hungary. This was done for a parallel analysis of the data recorded in the current account after Dodescu & Giurgiu (2008). Bulgaria was chosen because it joined the EU at the same time with Romania in 2007; Poland was chosen after classifying the similarities expressed in terms of area surface and per capita income; Hungary was chosen because of its proximity to Romania and also because of its classification in terms of per capita income. Representative data for all the countries was taken from the Eurostat, and the annual reports of central banks in each analyzed country.

First, the paper will cut right into the chase by showing the evolution of the balance of

payments, an indicator that includes the current account. When the data in Table 1: Comparative analysis of the evolution of the balance of payments of Bulgaria, Hungary, Poland and Romania between 2000-2012, is interpreted, several discrepancies can be observed in the results achieved by these countries.

The net current account for each of the four countries recorded deficit, except for Hungary between 2010 - 2012, and Bulgaria, but here only in 2011.

Current account data will be analyzed separately for each group. As shown in the Table. 1 the net current account has a significant impact on the evolution of the balance of payments.

The evolution of the current account is influenced heavily by the impact of the the trade balance deficit, for all considered member states.

A pattern can be seen for all the analyzed countries in terms of trade balance deficit, with the exception of Hungary. Romania, Bulgaria and Poland recorded an annually trade deficit, each of the three countries with a peaking recorded deficit in 2007 and 2008, followed by a rebound in 2009. Instead Hungary also recorded a trade balance deficit, but the maximum peak is reached in 2002 and 2004, and since 2004 is recorded a decrease in that deficit. Since 2009 and 2012, Hungary is the only analyzed country which records a total trade balance surplus.

The final result of the trade balance of goods and services can be separated in both intra and extra EU trade. If a look is taken at the table below, its not seen much, but it can be mentioned that Hungary is the only country in the study group who has a trade balance surplus regarding Intra-EU trade throughout the monitoring period. Poland records a deficit in this chapter only until 2008, because starting from 2009, 2010, 2012 it recorded a trade balance surplus.

Regarding the display data for Romania and Bulgaria, these chronic deficits are recorded in both intra-EU and extra-EU trade. Hungary and Poland also recorded a negative trend in the trade balance for Extra-EU trade, except in the case of Hungary, because this phenomenon led to the registration of a trade deficit only between the years 2000 - 2008.

Table 1: Comparative analysis of the evolution of the balance of payments of Bulgaria, Hungary, Poland and Romania between 2000-2012

| | GEO/TIME | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Net Current Account + Net Capital & Financial Account | Bulgaria | -731 | -859 | -402 | -975 | -1.146 | -2.470 | -4.468 | -8.343 | -7.905 | -2.638 | -243 | 537 | 9 |
| | Hungary | -4.054 | -3.212 | -4.721 | -5.966 | -6.755 | -5.778 | -5.947 | -6.518 | -6.716 | 896 | 2.796 | 3.143 | 4.247 |
| | Poland | -11.149 | -6.557 | -5.927 | -4.920 | -9.779 | -5.076 | -8.754 | -15.837 | -19.748 | -7.075 | -11.669 | -10.722 | -4.937 |
| | România | -1.459 | -2.385 | -1.522 | -2.872 | -4.590 | -6.279 | -10.250 | -15.932 | -15.555 | -4.294 | -5.228 | -5.217 | -3.361 |
| Net Current Account | Bulgaria | -757 | -859 | -402 | -975 | -1.310 | -2.705 | -4.647 | -7.756 | -8.182 | -3.116 | -534 | 40 | -527 |
| | Hungary | -4.353 | -3.568 | -4.923 | -5.936 | -6.832 | -6.378 | -6.634 | -7.224 | -7.728 | -176 | 1.063 | 816 | 1.594 |
| | Poland | -11.189 | -6.642 | -5.919 | -4.880 | -10.735 | -5.863 | -10.421 | -19.253 | -23.818 | -12.059 | -18.121 | -17.974 | -13.484 |
| | România | -1.475 | -2.484 | -1.612 | -3.112 | -5.102 | -6.876 | -10.220 | -16.758 | -16.178 | -4.938 | -5.476 | -5.936 | -5.264 |
| Net Capital Account | Bulgaria | 26 | 0 | 0 | 0 | 164 | 235 | 179 | -587 | 277 | 478 | 291 | 497 | 536 |
| | Hungary | 299 | 356 | 202 | -30 | 77 | 600 | 687 | 706 | 1.012 | 1.072 | 1.733 | 2.327 | 2.653 |
| | Poland | 40 | 85 | -8 | -40 | 956 | 787 | 1.667 | 3.416 | 4.070 | 5.078 | 6.452 | 7.252 | 8.547 |
| | România | 38 | 106 | 96 | 188 | 512 | 597 | -30 | 826 | 623 | 644 | 248 | 719 | 1.903 |
| Net Financial Account | Bulgaria | 827 | 330 | 1.129 | 967 | 883 | 3.409 | 5.298 | 10.512 | 10.789 | 1.814 | -289 | 1.126 | 72 |
| | Hungary | 4.243 | 3.180 | 4.564 | 5.763 | 7.942 | 7.485 | 7.880 | 6.537 | 9.020 | -556 | -1.256 | -1.228 | -4.753 |
| | Poland | 10.389 | 4.039 | 6.971 | 6.590 | 5.952 | 5.705 | 8.556 | 18.245 | 28.373 | 15.920 | 19.440 | 17.321 | 7.505 |
| | România | 1.371 | 1.565 | 2.403 | 3.285 | 3.706 | 5.977 | 9.403 | 16.781 | 17.662 | 5.584 | 5.691 | 4.736 | 2.436 |

Source: Eurostat

Not only consumer goods are the main determinant of current account developments in the analyzed countries. As it is known, another important group in the current account is represented by services, where Bulgaria, Hungary and Poland are registering a surplus throughout the analyzed period, and Romania in 2000, 2001, 2004, 2005, 2009 recorded deficit. This indicator suggests that the analyzed countries export more than they import, in terms of services, to third parties.

The positive result of the previous group is fed by the surplus registered by the subsections: transportation services and tourism. If at the transportation services, Bulgaria and Hungary recorded deficit between the years 2000 - 2004 respectively 2000 - 2005, and Romania between 2005 - 2008, Poland has a permanent surplus at this subchapter,

offering more transportation services than it benefited from third parties. All analyzed countries, starting since 2009, are strengthening their surplus in transportation services area.

Regarding the tourism section of the service subgroup, the situation is different. Bulgaria, Hungary and Poland recorded throughout the analyzed period a surplus in tourism services, pocketing more revenue from foreign tourists towards the expenses made by their citizens in other countries. If Bulgaria is registering a cyclic evolution of this subchapter, were receipts are different from one year to another, Hungary and Poland, since 2007 are benefiting upon an upward trend, with Poland exceeding a net of over 2 billion euro, and Hungary hovering around 1.9 billion euro.

In Romania, the situation is exactly the opposite, the country recorded a surplus in this subchapter only between the years 2005 - 2007, and in the rest of the analyzed period, suffering from a deficit. Since 2008, the deficit starts to become chronic, higher values recording from one year to another. This translates to higher expenditure incurred by Romanians abroad than foreigners do in Romania. The effects can be dramatic for the domestic tourism industry, indicating that Romanians prefer to spend their holidays abroad rather than in their own country.

The revenue group recorded in all four analyzed countries a deficit, fueled mainly by investments made by foreign operators and by the payment of dividends or interest payments. When considering foreign investments it can be seen that Poland is a magnet for foreign investment in the examined countries, followed by Romania and only then by Hungary and Bulgaria.

All the analyzed countries are experiencing a correction in the current account in 2009 compared to 2008, due to the installation of the economic crisis which led to a restriction of consumption of goods and services, the differences are about 5 billion euro for Bulgaria, Hungary with 7 billion euro, 11 billion euro for Poland and Romania. Between the years 2010 - 2012 only Poland and Romania registered increases in current account deficit, Poland widened to around 18, 17 and 13 billion euro, while Romania recorded constant value of about 5 billion euro deficits. Bulgaria and Hungary are able to reduce their deficit, Hungary's current account surplus recorded since 2010, Bulgaria managed this performance only in 2011.

When analyzing the data that counterbalances the results achieved in the current account subsections, Bulgaria, Poland, Romania, and Hungary between 2000 - 2008, are reflecting a financial account surplus. All countries are considered deficient in the subchapter direct investment, all countries benefiting from the investments made by foreign economic agents, to the detriment of investments made by local businesses abroad. Poland is the main destination of foreign direct investment from the countries examined, followed by Romania and only then by Hungary and Bulgaria. In the matter of foreign direct investment inflows, Romania and Poland played for the first ranked in attracting foreign investors, owning this place in 2006 and 2008.

Regarding to the portfolio investment section, the data for all four analyzed countries show a pronounced cyclicality, with periods where there is a deficit, and periods where there is a surplus. For Bulgaria, the recorded deficit periods are between the years 2000 - 2005 and 2007 - 2012, the remainder period recording a surplus. In the case of Hungary, between 2001 - 2006, and 2011 - 2012 is recorded a surplus and the rest of the analyzed period is recorded a deficit. In Poland between 2006 - 2008 it can be spotted a deficit, and in the rest of the analyzed period it is recorded a surplus. Romania is recording a deficit only in 2004, 2006 and 2008, registering a surplus in the remaining years. These surpluses signal that businesses or individuals from abroad have purchased financial assets such as stocks, bonds, certificates of deposit or other financial instruments from the analyzed countries. The only country which has sold more than it bought was Bulgaria, the country recording a deficit at this subchapter in 12 of the 13 analyzed years.

## 2. Balance of payments sustainability indicators

Based on the data above where the current account is the main issue, Roubini (1998) takes into account several elements that lead to a sustainable balance of the current account deficit. Among them the author lists: foreign reserves calculated in months of imports; the share of exports in GDP, expressed as a percentage; openness degree of the economy expressed as a percentage; public external debt relative to exports; the ability to attract foreign direct investment. Calculate data in the following table presents the situation of the four economies analyzed

Table 2: Sustainability indicators of the current account

| Foreign reserves calculated in months of imports | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GEO/TIME | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| Bulgaria | 5,5 | 6,0 | 6,0 | 6,5 | 6,4 | 6,4 | 6,1 | 5,7 | 8,0 | 6,8 | 5,7 | 6,2 |
| Hungary | 3,6 | 2,7 | 2,6 | 2,7 | 3,3 | 3,1 | 2,7 | 3,8 | 6,1 | 5,8 | 5,7 | 5,1 |
| Poland | 5,8 | 5,2 | 5,0 | 4,2 | 4,8 | 4,1 | 3,7 | 3,5 | 5,4 | 5,4 | 5,3 | 5,8 |
| Romania | 3,1 | 3,7 | 3,6 | 4,9 | 6,2 | 6,3 | 5,9 | 5,4 | 8,4 | 8,1 | 7,1 | 6,8 |

| Share of exports in GDP, expressed as a percentage | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GEO/TIME | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| Bulgaria | 37 | 36 | 36 | 39 | 40 | 44 | 44 | 43 | 33 | 43 | 53 | 52 |
| Hungary | 58 | 52 | 52 | 54 | 57 | 67 | 70 | 70 | 65 | 75 | 81 | 83 |
| Poland | 19 | 21 | 25 | 30 | 29 | 32 | 33 | 32 | 32 | 34 | 37 | 37 |
| Romania | 28 | 30 | 30 | 31 | 28 | 26 | 24 | 24 | 25 | 30 | 34 | 34 |

| Openness degree of the economy expressed as a percentage | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GEO/TIME | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| Bulgaria | 89 | 85 | 89 | 96 | 93 | 103 | 115 | 114 | 82 | 97 | 113 | 117 |
| Hungary | 122 | 108 | 109 | 114 | 117 | 136 | 140 | 140 | 126 | 143 | 155 | 159 |
| Poland | 45 | 49 | 56 | 65 | 63 | 70 | 72 | 71 | 66 | 72 | 77 | 77 |
| Romania | 66 | 69 | 70 | 74 | 69 | 68 | 65 | 65 | 58 | 68 | 76 | 76 |

| Public external debt / exports | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GEO/TIME | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| Bulgaria | 1,80 | 1,47 | 1,22 | 0,94 | 0,69 | 0,49 | 0,39 | 0,32 | 0,44 | 0,38 | 0,31 | 0,35 |
| Hungary | 0,95 | 1,11 | 1,10 | 1,12 | 1,06 | 1,03 | 0,95 | 0,98 | 1,27 | 1,09 | 0,89 | 0,95 |
| Poland | 2,08 | 1,95 | 1,78 | 1,71 | 1,67 | 1,50 | 1,44 | 1,25 | 1,70 | 1,62 | 1,42 | 1,52 |
| Romania | 0,86 | 0,73 | 0,66 | 0,62 | 0,56 | 0,49 | 0,50 | 0,51 | 0,96 | 1,00 | 0,99 | 1,11 |

| Ability to attract foreign direct investment, in millions of euro | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GEO/TIME | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| Bulgaria | 808 | 922 | 2089 | 3397 | 3920 | 7805 | 12389 | 9855 | 3385 | 1525 | 1827 | 1899 |
| Hungary | 3936 | 2994 | 2137 | 4266 | 7709 | 6818 | 3951 | 6325 | 1995 | 2163 | 5757 | 13469 |
| Poland | 5701 | 4123 | 4588 | 12874 | 10293 | 19603 | 23561 | 14839 | 12932 | 13876 | 18911 | 3356 |
| Romania | 1158 | 1141 | 2196 | 6436 | 6483 | 11367 | 9921 | 13909 | 4844 | 2940 | 2523 | 2242 |

Source: Authors computations based on Eurostat data.

A first measure examined is the result from computing foreign reserves calculated in months of imports. From the studies conducted by Feldstein (1999) and Rodrik (2006) on the crisis of Asian countries, the authors concluded that an increased liquidity helps countries pass better through periods of economic turmoil. As can be seen in the table, all analyzed countries are stepping up the pace in order to grow currency reserves so that in 2009, due to a sharp fall in imports, it peaks for Bulgaria, Hungary and Romania, with the last recording a reserve to cover about 8 months of imports. Resumption of commercial activity can be observed in the case of a decrease between the years 2010 - 2012 for all states with the exception of Poland, which succeeds in strengthening its foreign reserves. In 2012, the best results are achieved by Romania and Bulgaria, which are the countries with the highest level of imports coverage.

The openness degree of the economy expressed as a percentage and exports as a percentage of GDP are also important indicators. Based on their results, countries will asses and come up with solutions in order to minimize the impact of external disturbing phenomena. In Roubini's (1998) study, the author states that "the ability of a country to pay its foreign debt in the future depends on its ability to generate foreign currency". As shown in the table above, Hungary and Bulgaria are the countries with the highest openness degree, followed by Poland and Romania. The country that records the highest result from the ratio of exports and GDP is Hungary, the country's exports accounting for around 83% of GDP. The lowest share was recorded by Romania, with about 34%. From the above analysis, the country can meet faster its external debt is Hungary. Romania in this case ranks last, because of a poor openness degree.

The ratio of public external debt and exports provides an indicator that measures a country's ability to pay its foreign debt using revenues from international exchanges with other third countries. A result with a value below 1 indicates that the country could, in theory, pay its entire external debt in less than 1 year. If the analyzed coefficient is higher, the possibility of paying its external debt becomes more problematic. Based on this analysis, the Polish case illustrates the situation of a country that requires a longer period of time to pay its foreign debt. Bulgaria can be a good case practice, gradually reducing the country's indicator until it turns negative, reaching 0.35 in 2012. Romania falls around 1 but significant increase was recorded in 2009 compared to 2008 when values have doubled due to a significant drop in exports. If this trend is maintained in the future, it can create sustainability problems.

The sustainability of the current account is offered also by capital inflows as foreign direct investment. These are the safest forms of offsetting the current account at the expense of portfolio investments, which are volatile and difficult to control, or other capital inflows that could be consumer-oriented. From the analysis, the country that managed to attract the most FDI in the years 2001 - 2012 was Poland with about 144 billion euro, followed by Romania with about 65 billion euro 61 billion euro for Hungary and Bulgaria with about 50 billion. These capital inflows are an important source of financing the current account deficit, especially in Poland.

When comparing the total foreign direct investment per capita, Romania is far below neighboring countries. Hungary and Bulgaria have similar values to the volume of foreign direct investment, but reported to a smaller population, the result is clearly in their favor.

## 3. In conclusion

Romania's current account in the period under review has revealed that the economy recorded the highest trade balance historical chronic deficits, with direct repercussions on the balance of payments. The post-accession marked for the first time in Romania's history a trade balance deficit that exceeded 20 billion between 2007 and 2008.

The recovery perspective after a steep recalibration in the difference between the volume

of imports and exports beginning with 2009, its not rooted in any case in an exports explosion, but it is due to a reduction of the domestic consumption with a direct impact on imports reduction.

Regarding the comparison of Romania's balance of payments situation to that of Poland, Hungary and Bulgaria, based on the reasons mentioned above, it might elicit some similarities in the evolution of the balance of payments indicators, but also some discrepancies. As can be seen, Hungary's current account registers a surplus in goods and services between the years 2009 - 2012, while the rest of the analyzed countries record a deficit. Although the trend of deficit reduction was emphasized by the decrease in 2009 by all the analyzed countries, it appears that the upward trend is restored, especially for Romania and Poland.

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# ASSESSING FDI DETERMINANTS IN CEE COUNTRIES DURING AND AFTER TRANSITION

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**Abstract:** *The aim of this paper is to identify if the drivers of inward foreign direct investments' stocks in Central and Eastern European countries changed in the last 20 years, given two substantial economic evolutions encountered in this period: the transition process and the adhesion at the European Union. We are interested if foreign investors are attracted by the quality of institutions, the labour market or by the telecommunications infrastructure, expressed by 10 variables, in the 11 newest EU member states. Therefore, we use a fixed effects panel data approach during 1994-2013 which we apply in two stages. In the first stage, we find the variables that strongly influence FDI in each of the three groups of determinants. In the second stage, the panel data analysis is applied only for the variables previously find as significant for FDI, to which we add traditional FDI determinants, such as trade openness and GDP per capita. Also, the mentioned years are divided into two sub periods, the first representing the transition period (from 1994 until 2003) and the second one the years comprising the EU adhesion process (from 2004 until 2013). The results confirm that there are changes in FDI determinants in these countries. During 1994 to 2003, investors were mostly interested in the quality of institutions, the openness of the economies and the environments capable of growth, where the products can be sold. For the period starting with 2004, the analyzed countries are attractive mainly through their capacity of providing labour force with low costs and created resources, such as the development of the mobile networks. The results obtained are of particular importance for the public policy decision makers, as the changes in FDI determinants require the adaptation of public policies in the CEE countries in order to remain attractive for foreign investors.*

## 1. Introduction

In this paper, we are interested in identifying the advantages of the Central and Eastern European (CEE) countries in attracting foreign investors, as foreign direct investments (FDI) are seen as an important source for economic growth. FDI are not only an inflow of capital, but also of technology, managerial expertise, industrial organization etc., as noticed by Negriţoiu (1996) or Dunning and Lundan (2008). In this respect, FDI could represent a vehicle for bridging the gap between the standard of living of these countries and the Western economies. We are interested in finding the actual determinants of FDI, given these countries' status as part of the European Union (EU).

Very frequently in the literature, these countries were treated as a whole due to a similar history in terms of economic and political regime and to the economic transformations that were carried on in the 1990s, required for adapting to the market economy. In 2004, eight out of the 11 countries analyzed in this paper became members of the EU, followed by other two in 2007 and recently by Croatia, in 2013. The adhesion process implied several

other requirements in terms of alignment with the rules and administrative procedures of the EU. FDI determinants in these countries are frequently assessed for the entire period – containing both the transition period and the one as an EU member state. This rationale is due to the need for expanding the period of analysis in order to have a healthy econometric analysis and also for covering the scarce data regarding the determinants of FDI in these countries. Still, in this period, the literature points to the changes in FDI motivations.

Based on the above, we consider that a distinction between the two periods is necessary for assessing FDI determinants in CEE countries, in accordance with the strands of the literature. The paper is structured as follows: in the next part, we point to distinctions find in the literature as regards the FDI determinants in transition countries. In the second part, we present the methodology employed, while in the next part we discuss the results. Several conclusions are drawn in the last part of the paper.

## 2. Literature review

The studies regarding FDI host countries location determinants are not as old as the first FDI theories. Yet, the dynamics of the economic activity made mandatory the incorporation of home countries' factors in FDI theories. A comprehensive analysis of the changes in FDI theories over time due to incorporation of location factors are described in Popovici and Calin (2014).

The transition process which occurred in Central and Eastern Europe had a special role in the development of theories related to FDI location determinants. The empirical studies in the former transition countries usually divided the factors influencing FDI into two groups: traditional economic factors and factors specific to transition countries (Lopez, 2009; Carstensen and Toubal, 2004; Vasyechko, 2012). For Carstensen and Toubal (2004), FDI determinants are grouped into traditional factors (such as the market potential of the host country, the trade costs, the unit labour costs, the share of skilled labour in total labour and the income tax) and transition determinants: the share of the private market, the political risk and the privatization method.

Traditional variables are not sufficient for explaining the FDI inflows in CEE countries. The authors conclude that transition-specific variables must be taken into account for better explaining inward FDI flows. Moreover, Kinoshita and Campos (2003) consider that FDI determinants in these countries must be grouped into traditional determinants (such as the market size and the cost of labour), new factors (such as the quality of institutions) and transition-specific factors (such as the initial conditions of the country). Analysing the studies on transition countries, the main determinants that are specific for the transition period are the performance in the achievement of the transition process and the dimension and the method of privatization.

The progress in the transition process is generally measured through the capacity to implement reforms which lead to greater civil and political freedom and to the replacement of the administrative economic system with one coordinated by the market. EBRD assesses this progress through eight indicators that measure the size of the privatization of state enterprises, the company restructuring, the price and trade liberalization, the infrastructure development, the legality of reforms, the exchange rate movements and the financial dimension. Several studies are using these indicators for assessing the progress in the transition process. Tondel (2001) concludes that the most attractive countries for FDI in CEE are those that are the most successful in the transition process. The transition index used by Altomonte (1998) is rather assessing the business environment based on the preferential treatment for the domestic companies, the influence of bureaucracy, the continuity of public policies and the enforcement of contracts. The more favourable is the business climate, the higher the level of FDI. Johnson (2006) uses a composite index to analyze the progress made by countries in transition, The author identifies a positive and significant relation between this index and the volume of inward FDI. An alternative to

these measures for the progress of transition to a market economy is the use of the private sector share in GDP. Every time the variable is introduced in the empirical analysis, the results indicate a positive and significant relation between FDI and the share of the private sector in GDP (Holland and Pain, 1998; Bevan et al., 2004; Carstensen and Toubal, 2004; Bellak and Leibrecht, 2005).

The privatizations of national companies represent a fundamental part of transition process, with the aim of increasing the efficiency of the companies. Johnson (2006) notices that privatizations are opportunities for attracting FDI according to the method of privatization used. Similarly, Holland and Pain (1998) and Carstensen and Toubal (2004) conclude that privatization method decisively determine the volume of FDI inflows in the host country. Therefore, the direct sale of national companies is more attractive than the privatization using vouchers, according to Holland and Pain (1998), who analyze the period during 1992-1996. Merlevede and Schoors (2005) extend the analysis to the years 1992-2000 and find a similar result. Yet, when analyzing only the countries in CEE, the privatization method becomes negligible for foreign investors, according to Johnson (2006), who investigates the period 1993-2003.

It is important to add that Holland and Pain (1998) also pointed out that the importance of the privatization method is possible to diminish due to the development of capital markets.

The study of Bevan et al. (2004), developed during 1994-1998, states that any other form of FDI penetration, such as greenfield investment or acquisition, is as advantageous in attracting foreign investors as the direct selling of national companies.

A possible explanation for this result is the fact that Bevan et al. (2004) deal specifically with countries in Eastern Europe to which are added Russia and Ukraine.

Another classification of FDI in this group of countries depends on the type of the foreign investment: horizontal or vertical. Christie (2003) and Geishecker (2004) support the existence of horizontal FDI in CEE countries, searching for potential and developing markets. In this case, FDI flows are determined primarily by the size and the growth of the host country. At the same time, there are vertical FDI, searching for locations with low costs for production factors. The reason for these types of FDI comes from the differences in the endowments with production factors between countries (Markusen and Maskus, 2002, Markusen et al., 1996). Besides this classification, Markusen provides the knowledge-capital model, which integrates both the vertical and the horizontal FDI. The main parameters of the model are trade costs, the differences between countries regarding the relative and absolute endowment with production factors and the obstacles to investments. The model points that the highest level of the host country welfare is achieved under complete commercial and investment liberalization. As regards the situation of the CEE countries, Geishecker (2004) points to the possibility of integrated FDI, both vertical and horizontal, as the main FDI determinants in the period of transition were the dimension of the market (assumed as a specific determinant for horizontal FDI) and the low labour costs (seen as a determinant for vertical FDI). The limits of the model lies in its lack of incorporating institutional and risk variables, also responsible for the FDI patterns (Geishecker, 2004). A positive impact for attracting FDI lies in the competitiveness degree of a country (Popovici and Călin, 2012a).

The entire period – both of transition and EU membership – was strongly influenced by the institutions, with the aim of designing a healthy economic framework. John H. Dunning, the author of the OLI paradigm, was the first to consider the resource structure, the size of the markets and the government policies as location determinants of FDI in the host transition countries (Vasyechko, 2012). The strengths of advanced transition countries lie in their openness to foreign investment, political stability, macroeconomic environment and regulatory framework, while weaknesses include a weak communication infrastructure, unnecessary bureaucracy and lack of transparency in public administration. Subsequently, the importance of institutions in attracting FDI especially in the CEE countries was tested and find significant in several empirical studies (such as Brenton et

al., 1998; Bevan et al., 2004; Popovici and Calin, 2013).


## 3. Methodology

Considering all the above, the main goal of our paper is to assess the differences in FDI determinants during the transition period and in the years of obtaining the EU membership. Secondly, we are interested in the type of FDI determinants and we assess if foreign investors are attracted by a high quality of institutions, a stable macroeconomic environment or by the labour market and better infrastructure. Our hypothesis is that the FDI determinants changed during the two periods already mentioned, which implies the need to adapt public policies in order to attract foreign investment. Also, we expect to find a strong impact of the variables expressing the quality of the institutions on foreign investors.

In this respect, we use a fixed effects panel data approach, which will be estimated by the method of least squares (OLS - Ordinary Least Squares) for the 11 newest EU member states (Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovenia and Slovakia) during 1994-2013. We split the analyzed period into two sub periods: from 1994 until 2003 and from 2004 until 2013. The first sub period represents the transition years, while the second one the years as part of the EU. Although Bulgaria, Romania and Croatia joined later the EU, we can assume that the transition period is over for all the three of them, according to Brada et al. (2005) and to UNCTAD (2014) that no longer include them into the category of countries in transition. Moreover, Bulgaria, Romania and Croatia have increased their efforts for joining the EU in those years.

The general form of the estimated equation is:

$$Y_{it} = \alpha + \beta_{it} * X_{it} + \gamma_{it} + \varepsilon_{it} , \qquad (1)$$

where $Y_{it}$ is the dependent variable, $X_{it}$ represent the k-dimensional vector of regressors, $\alpha$ is the constant term, $\beta_{it}$ is the regression slope, $\gamma_{it}$ is the specific effects corresponding to time periods, $\varepsilon_{it}$ is the error term, i represent the cross-section units (i=1, 2, …, N) observed in each period t, where t = 1, 2, .., T. The use of the panel methodology is justified by the short period of analysis, as it allows maximizing the number of observations and also because there are some lacks in the data series, due to unavailability of official data. Our dependent variable is FDI inflows as percentage of GDP, as provided by UNCTAD. As the transition process is over, we do not consider that transition determinants are necessary to be taken into account; we are interested in the changes suffered in the other types of determinants. We employ 12 independent variables that we divide into three groups, expressing the quality of institutions, the telecommunications infrastructure and the labour market, as provided in Table 1. We have tried to compose the three groups from variables expressing the wide dimension of institutions, labour market and infrastructure, seen in the literature as FDI determinants. Given the period analyzed and the need for finding similarities or disparities among the determinants, we had to limit the number of variables. We are aware that, in some cases, the quantitative part of the determinants should have been more developed, and in other cases, we should have emphasized more the qualitative aspect. For example, it would have been better that the infrastructure group to contain also quantitative and qualitative variables expressing the transport infrastructure.

**Table 1:** Used variables

| Name of the variable | Definition and unit of measurement | Data source |
|---|---|---|
| **Dependent variable** | | |
| **FDI** | Inward FDI stock, % of GDP | UNCTAD |
| **Independent variables** | | |
| *I. Quality of institutions* | | |
| HI | The Index of Economic Freedom | Heritage Foundation |
| CPI | The consumer price indices, index base 2005 | UNCTAD |
| DEF | The government deficit, % of GDP | Eurostat |
| DEB | The government debt, % of GDP | Eurostat |
| *II. Labour market* | | |
| LB | Nominal compensation per employee, thousands euro | Ameco database |
| SC | Total enrolment in tertiary education, % | World Bank |
| UR | Unemployment rate, % | World Bank |
| RS | The number of researchers in research and development, per million people | World Bank |
| *III. Telecommunications infrastructure* | | |
| MOB | The number of mobile cellular subscriptions per 100 people | World Bank |
| NET | The number of internet users per 100 people | World Bank |
| **Control variables** | | |
| GC | GDP per capita, millions | UNCTAD |
| OP | Trade openness, expressing the share of exports and imports in GDP,% | Eurostat |

Data were processed in order to obtain stationarity. The panel data methodology is applied in two stages. In the first stage, we find the variables that strongly influence FDI inflows in each of the three groups by using fixed effects panel data with period fixed effects. We will have three panels for each of the two analyzed periods. In the second stage, we will also apply the panel data analysis but this time only for the variables previously find as significant for FDI, to which we add traditional FDI determinants, such as trade openness and GDP per capita. As a result, we will identify the FDI determinants during transition and after the EU adhesion.

## 4. Results and discussions

For the period 1994-2003, we only find inflation with a significant impact for FDI in the institutions' group of variables. Interestingly, we find a positive relationship between FDI and inflation, meaning that a higher inflation is more attractive for FDI. We employed inflation as a variable for assessing the instability of a country. In similar studies using inflation, the variable is generally not significant for FDI (Kinoshita and Campos, 2003; Nonnemberg and de Mendonca, 2004; Pournarakis and Varsakelis, 2004; Bellak and Leibrecht, 2005). We can assume that inflation is less an indicator for the stability of a country, but more one that points to an environment capable of growth, where products can be sold. The period is characterized by high inflation rates, but also by important privatizations that can be seen as an important source of money for these countries. Not least, inflation allowed companies to sell products at higher prices, increasing the income and the profit of the companies.

As regards the labour market, only the variable representing the number of people in

tertiary education is significant, but having a negative relation with FDI. This point that foreign investors in these countries in the transition years were not interested in qualified labour force. The result is confirmed by the lack of signification between the number of researchers and the FDI inflows.

Finally, for the infrastructure group, we find a strong and positive relationship between the number of internet users and the FDI inflows, suggesting that developed communication infrastructure is more attractive for FDI. The estimations' results are presented in Table 2.

**Table 2:** The results of the panel data estimations in the first stage during 1994-2003

| | Independent variable: FDI inflows, 1994-2003 | | | | | |
|---|---|---|---|---|---|---|
| | Panel I: Institutions | | Panel II: Labour market | | Panel III: Infrastructure | |
| | Dependent variables | | Dependent variables | | Dependent variables | |
| Coefficient | CPI | 0,485470* | LB | 0,004776 | MOB | 0,042499 |
| t-Statistic | | 3,671925 | | 0,021030 | | 0,516900 |
| Coefficient | DEB | 0,167045 | SC | -0,818259 | NET | 0,104152*** |
| t-Statistic | | 1,346992 | | -2,508528** | | 0,087300 |
| Coefficient | DEF | -0,007583 | UR | -0,029486 | C | 0,115773** |
| t-Statistic | | -1,249705 | | -0,208474 | | 0,032700 |
| Coefficient | HI | 0,077418 | RS | -0,131995 | | |
| t-Statistic | | 0,216277 | | -0,740287 | | |
| Coefficient | C | 0,125025* | C | 0,251811* | | |
| t-Statistic | | 5,991292 | | 6,390539 | | |
| Adj. R squared | | 0,313301 | | 0,149860 | | 0,068357 |
| Durbin Watson | | 1,901592 | | 1,958438 | | 1,880124 |

Note: * indicates statistical significance at 1%, ** at 5% and *** at 10%
Source: author's own calculations.

In the second stage, we employ only the significant variables identified below, to which we add the economic openness measured as the percentage of exports and imports in GDP and the GDP per capita. We find that only inflation and economic openness establish a significant and positive relation with FDI, signalling that investors are attracted by fewer restrictions on capital. The results are presented in Table 3.

**Table 3:** The results of the panel data estimations in the second stage during 1994-2003

| Dependent variables | GC | OP | CPI | SC | NET | C |
|---|---|---|---|---|---|---|
| Coefficient | -0,714460 | 0,634621* | 0,174156** | -0,438138 | 0,032974 | 0,207472* |
| t-Statistic | -1,079694 | 3,332623 | 2,309045 | -1,640483 | 0,588096 | 3,647383 |
| Adj. R squared | 0,247307 | | | | | |
| Durbin Watson | 1,744078 | | | | | |

Note: * indicates statistical significance at 1%, ** at 5% and *** at 10%.
Source: author's own calculations.

For the period 2004-2013, we do not find significant variables for institutions' quality. The lack of significance may be due to significant changes in the institutions' quality as a result of EU adhesion but also of the economic crisis, taken into account the variables used for assessing the quality of institutions. Between FDI and nominal compensation per employee we find a negative relationship, pointing that low labour costs are attractive for foreign investors. On the contrary, there is a positive relationship between the number of mobile subscription and FDI, indicating therefore that a high level of mobile infrastructure development is attractive for FDI (see Table 4).

**Table 4:** The results of the panel data estimations in the first stage during 2004-2013

| | Independent variable: FDI inflows, 2004-2013 | | | | | |
|---|---|---|---|---|---|---|
| | **Panel I: Institutions** | | **Panel II: Labour market** | | **Panel III: Infrastructure** | |
| | **Dependent variables** | | **Dependent variables** | | **Dependent variables** | |
| Coefficient | CPI | 0,767218 | LB | -0,477739** | MOB | 0,423261** |
| t-Statistic | | 1,533496 | | -2,702462 | | 3,306772 |
| Coefficient | DEB | -0,091224 | SC | -0,159194 | NET | 0,092416 |
| t-Statistic | | -1,196167 | | -0,568811 | | 0,655659 |
| Coefficient | DEF | -0,008509 | UR | -0,016568 | C | 0,009254 |
| t-Statistic | | -1,374565 | | -0,228083 | | 0,533363 |
| Coefficient | HI | -0,552599 | RS | -0,160619 | | |
| t-Statistic | | -1,273330 | | -1,054422 | | |
| Coefficient | C | 0,031640 | C | 0,098212* | | |
| t-Statistic | | 1,326671 | | 5,425173 | | |
| Adj. R squared | | 0,642235 | | 0,650424 | | 0,672318 |
| Durbin Watson | | 1,918813 | | 1,778193 | | 2,198286 |

Note: * indicates statistical significance at 1%, ** at 5% and *** at 10%.
Source: author's own calculations.

In the second stage, in which we employ only the previous significant variables, the GDP/capita and the economic openness, we find that nominal compensation per employee has a negative and significant relationship with FDI and a more developed mobile infrastructure is attracting more FDI, pointing to mixed horizontal and vertical FDI variables (see Table 5).

**Table 5:** The results of the panel data estimations in the second stage during 2004-2013

| Dependent variables | GC | OP | LB | MOB | C |
|---|---|---|---|---|---|
| Coefficient | -0,113887 | 0,024944 | -0,518992** | 4,189708 | 0,048321** |
| t-Statistic | -0,339894 | 0,105255 | -2,778675 | 0,048321** | 2,666698 |
| Adj. R squared | 0,707008 | | | | |
| Durbin Watson | 2,118621 | | | | |

Note: * indicates statistical significance at 1%, ** at 5% and *** at 10%.
Source: author's own calculations.

We also find interesting differences in the level of adjusted R squared between the two analyzed periods, although we use the same determinants in the first stage of the econometric analysis. For example, the model for institutions quality is more suited for the period 2004-2013 than for the first period, having a higher adjusted R squared. The same is valid for the labour market group and the infrastructure group. This result could also mean that we are omitting variables that are specifically describing the transition period – such as the ones described in the literature as transition specific determinants.

## 5. Conclusion
Our results are partially confirming the ones identified in other studies in the literature. Transition countries were attractive for foreign investors mainly for the size of their markets, the cheap labour and the natural resources endowment (Holland and Pain, 1998; Bevan and Estrin, 2000; Carstensen and Touba, 2004; Kinoshita and Campos, 2004; Johnson, 2006 etc). However, the literature points to a change in FDI determinants for this group of countries. Lankes and Venables (1996) have certified the existence of market seeking FDI in the first half of the ninety decade. Subsequently, in the last half of the decade, foreign investors were searching for low cost labour (Bevan and Estrin, 2000). Grcic and Babic (2003) add the purchasing power of the local market, the macroeconomic stability, the infrastructure development, the abundance and quality of human and natural resources and institutional development to the fundamental determinants for the investment decision in CEE countries. Later, Kinoshita and Campos (2006) demonstrates

that no market size, neither low labour cost are significant for attracting FDI, once the quality of institutions and other variables related to policy formulation are taken into account.

Comparing the results obtained in the two periods in this study, we conclude that there are different FDI determinants, confirming our first hypothesis. The variables regarding the institutions' quality are only significant for the transition period in one of the models, mostly as a result of the variables employed. During 1994-2003, investors were mainly interested in open economies, for diminishing the transaction costs. The trade openness facilitates both the import of intermediate goods required for the production and the export of finished goods. At the same time, they are interested in an environment capable of growth, where their products can be sold.

For the period starting with 2004, the main advantages of CEE countries rest in their capacity to provide labour force with low costs. As the countries are already regionally integrated, their main advantage rested in cheap labour force and created resources – in our case, in developing their mobile networks.

The results obtained are of particular importance for the public policy decision makers. The changes in FDI determinants require the adaptation of public policies in the CEE countries. Paul et al. (2014) point that each of the CEE countries should apply a mix of policies aiming to improve infrastructure, increase the institutional quality, enhance the flexibility of labor market and keep a low level of taxes in order to attract FDI. In the short run, tackling infrastructure and institutions' quality is the recommended measure for increasing FDI inflows. A similar result is found in Popovici and Călin (2012b). The present study supports this result, as we found significant impact of infrastructure development and economic openness in attracting FDI. Also, Cho (2003) highlights the continuing need to improve the attractiveness of advantages related to localization, which requires complex and comprehensive policy approach. Even if this represents a challenge for policy makers in developing countries, the success in creating a favorable environment for business development are the keys for attracting investors.

## 6. Acknowledgement

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# WAREHOUSE TRANSFERS AND FISCAL FRAUD

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**Abstract**: *The fraud and fiscal evasion phenomenon generate indisputable negative effects, which are felt directly on the level of fiscal receipts earnings, determining major distortions in the market's functioning mechanism. If in the European Union, the contribution of the three large tax categories (direct tax, indirect and social contributions) in forming revenue are relatively close, in Romania, fiscal and budget revenue are directly dependent on the indirect tax and duties, especially on VAT and various sales taxes. If there is reductions in the fiscal evasion as to what these taxes are concerned, the premises for creating budget resource needed to fund the economic growth are created. In judicial literature, tax evasion is considered as being the logic result of all defects and inadvertencies of an imperfect legislation, of broken application methods, as well as a lack of foreseeing and lack of skill on the law-maker's side, with their excessive tax system is as guilty as those who contribute in creating it. Regardless of how this phenomenon is defined, fiscal evasion represents the lack of fulfillment by the taxpayer of his fiscal obligation. The field in which tax evasion acts is as widespread as the different taxes, manifesting especially in the direct and indirect taxes, influencing their efficiency.*

**Keywords**: *tax evasion, fiscal fraud, sales tax, VAT, over the border operations.*

**JEL classification:** E62, H21

## 1. Introduction

In Romania as well as in the European Union, tax evasion and fiscal fraud have a negative impact on the budgets of member states and their system of resources, leading to violations of the correct and transparent taxation principle. It also affects the functionality of the internal market, by distorting competition.

Tax evasion has a direct and instant effect on tax revenue, which leads to imbalances in the market's mechanism, as well as to the illicit gathering of wealth by those who practice these fraud methods, which affect the state but also the tax payers.

Tax evasion is defined by the Law nr. 87/1994 as being "embezzling, by any means, in its entire sum or in part, from paying taxes or other sums owed to the state budget, local budgets, social security budgets and special extra-budget funds, by natural and legal persons, Romanian or foreign, named taxpayers" (http://www.legex.ro/Legea-87-1994-5073.aspx , http://codfiscal.net/21775/legea-2412005-prevenirea-si-combaterea-evaziunii-fiscale).Some elements that were lacking from this law have been corrected by the Law nr. 241/2005

In judicial literature, tax evasion is considered as being the logic result of all defects and inadvertencies of an imperfect legislation, of broken application methods, as well as a lack of foreseeing and lack of skill on the law-maker's side, with their excessive tax system is as guilty as those who contribute in creating it. Regardless of how this phenomenon is defined, fiscal evasion represents the lack of fulfillment by the taxpayer of his fiscal obligation.

The most well-known sense given to tax evasion is "the art of avoiding falling into the field of attraction of the fiscal law"

(http://www.revistapentrupatrie.ro/index.php?option=com_content&view=article&id=1222:evaziunea-fiscal-sau-fuga-de-impozite&catid=2:actualitate&Itemid=52)- a concept which belongs to M. C. de Brie and P. Charpentier. Tax evasion is fraudulent when the taxpayer who is obliged to give data in support of his fiscal declaration, resorts to forging the taxable object, under evaluating the quantum of its taxable value or using ways of not paying the taxes that are due. In general, it is hard to determine all tax evasions of this type.

The economic globalization tendencies, social and political, have led, in the last decade, to the encouragement and support of fiscal dispositions avoiding actions, actions which have moved more and more from the interior of the national tax system, to the exterior, outside the field of action of the national tax law. In this new context, one of the most important criteria In this new context, one of the most important criteria after which the manifestation forms of tax evasion is represented by the reference space, based on which national level tax evasion and international level tax evasion can be identified.

## 2. The transfer of good between two tax warehouses

For the goods that come from internal production or from import, especially ethylic alcohol, wine, beer, other fermented drinks, intermediary products, processed tobacco, energetic products and electric energy, sales tax are due.

These are special taxes levied directly or indirectly on the alcohol consumption and alcoholic drinks, processed tobacco, energetic products and electricity. These taxes become payable when the goods are put on sale and in the country where they are put on sale. The payable conditions and level of taxation which is to be levied are those applicable at the date at which they can be paid in the member state in which the goods are put on sale. The moving of taxable goods from one tax warehouse to another one from Romania or in a member state is not considered putting these goods on sale.

According to the specific law for taxable products, these cannot be kept outside a tax warehouse, only after paying the sales taxes.

The authorized tax warehouse representative is the natural or legal person authorized by a competent authority, which during its activity, can produce, transform, own, receive or send taxable products in a way that could halt the sales tax in a tax warehouse.

During the moving of the taxable goods, the sales tax can be suspended, if the conditions of the law are respected.

According to the Fiscal Code, during the moving of a taxable product, the sales tax is suspended if the following requirements are completed: moving takes place between two tax warehouses, between a tax warehouse and a registered operator, between a tax warehouse and a non-registered operator. The moving of the products without the sales tax being issued is allowed only when the goods have an administrative document, based on the model in the EC Regulation nr. 2719/1992, in regards to the administrative document for the circulation of goods without sales tax, with later modifications.

The administrative document is an instrument for checking the origin, the transport, the delivery and admission of such taxable products without the added sales tax from one tax warehouse to another, or to a registered/non-registered operator. When the products arrive in the receiving tax warehouse or at the registered/non-registered operator, they must fill in all administrative document copies in the fields reserved for the receiver. Before de-sealing and unloading the products, the receiver must inform the fiscal territorial authority from the area they activate it, so that the fiscal authority can provide a representative who, in 48 hours from receiving the notice, will check and certify the data recorded in the administrative document. During the moving of the products, the sales tax can be suppressed if the conditions mentioned in the law are observed, including in the case when the taxable products are moved from a tax warehouse in Romania to another member state.

## 3. Fiscal Evasion when the transfer between authorized warehouses takes place, through over the border activities

When Romania became a part of the European Union, a part of the economic agents in Romania have quickly assimilated the criminal evasion practices from fiscal obligations, used for many years in the European economic space. The mechanism is structured on the present transitory regime of intra-community exchanges, which sets as a general rule, the taxation of intra-community good exchanges, made by taxable persons, in the destination state.

- As to what taxable goods are concerned, the actual laws create problems when it comes to storing them in a non-taxable regime, a fact that leads to the postponing of the moment the payable tax obligation to the state budget arises, as well as the transfer from one tax warehouse to another. This situation, in most cases, leads to creating a written document circuit. The legal aspects referring to taxes are stated in the methodological application norms of Law 571/2003 regarding the Fiscal Code:
- Outside the tax warehouse, only those taxable products can be kept for which the sales tax has been registered as a payment obligation, and through the economic circuit, it can be seen (by the control authorities) that the products come from an authorized tax warehouse, from a registered sender or from an importer.
- When for taxable products kept outside a tax warehouse the sales tax cannot be settles as registered as a payable obligation, then the tax is exigible , the payment obligation falling on the person who cannot justify the legal source of the products.
- Owning taxable products and the exigibility of products is mentioned in the Law 571/2003 regarding the Fiscal Code:
- Owning taxable products outside the tax warehouse, for which proof of tax payment cannot be mate, brings the obligation of paying the due taxes;
- It is forbidden to own a taxable product outside the tax warehouse, if the sales tax for that product has not been paid.

According to Law 571/2003, the sales taxes become exigible when the goods are sent for consumption, this meaning owning said products outside a non-taxable regime, for which taxes have not been collected, according to the law.

The level of harmonized sales tax is the level mentioned in Annex 1, Title VII of Law 571/2003, art. 176 paragraph 1.

Diesel deliveries, without determining and charging VAT have been mentioned at art. 144 paragraph 1, letter a, point 8 from the 571/2003 Law, meaning that: "the goods that are to be stored in a VAT tax warehouse , are exempt from the sales tax as follows: for taxable products, any location situated in Romania which is defined as a tax warehouse in the meaning of art.4 letter (b) from the 92/12/CEE Directive, modified and completed (Legea nr.571/2003, regarding the Fiscal Code).

The level of sales tax for 2009, for diesel fuel, which is the subject of our analysis, has been of 336 euro/ton and the exchange rate used to calculate the tax in 2009 has been of 3,7364 RON/euro. The value in RON of the tax is determined by transforming the expressed sums into euro equivalents, based on the exchange rate set on the first working day of October, last year, published in the Official Union Journal, according to the regulations of Law 571/2003, regarding the Fiscal Code.

This type of fraud need a chain of successive selling and buying operations to work, made on the territory of Romania and on the commune market, made by a group of economic operators, with the purpose of "reducing" the price of the goods that are the object of such transactions. As a consequence, they are creating a comparative advantage on the market, because of the selling price. They usually use "ghost" companies in the banking and document circuit.

Most of the times, the "ghost" companies do not function from their declared social headquarters and are an important supplier of fiscal documents in which unreal commercial operations are written, the sums being taken out of accounts through

successive operations for cash, or through ATM, by controlled persons. The normative framework defined these fake operations as being "the dissimulation of reality by creating the apparent existence of an operation which actually does not exist".

**4. Fraud regarding intra-communitarian deliveries**
Starting with 2007, fiscal evasion related to intra-communitarian deliveries has become a presence that cannot be ignored in the EU space. Its dimensions are worrying, according to specialists in the field.

One method which has been successfully applied in Romania in avoiding paying sales tax and VAT for petrol products is based on the transfer between an authorized tax warehouse to another warehouse, from a different member state.

Methods of fraud regarding payment obligations for intra-communitarian operations are multiple, but in the 2008-2012 period, among the most used ones, dissimulating sales of energetic products on Romania's territory by transferring from one warehouse in Romania to another warehouse of a member state, following false papers that prove the completion of some trans-border deliveries – was the most common.

For this to work, a company A Srl from Romania buys in 2009, during April and March, a total quantity of diesel of 5.565,71 tons (6.647.626 liters), worth 10.420.275,29 RON, from two companies SC X SRL and SC Y SRL from Romania, being suspended from paying the sale tax and the VAT, by using the cover of two authorized warehouses.

The representatives of SC A SRL have made all necessary steps to authorize the company as a tax warehouse, in order to benefit from buying fuel (especially Euro 5 diesel) without having to pay the sale tax and VAT. Until the start of these activities, the company had little other activity, the situation being the same after the diesel had been bought.

After obtaining the warehouse authorization, during April-May 2009, SC A SRL has bought diesel fuel without paying the sale tax and VAT, based on the administrative documents from the tax warehouse SC X SRL and the SC Y SRL operator.

Following this, SC A SRL has bought between 03.04.2009 – 16.05.2009, based on the receipts, a total quantity of 5.565,71 tons EURO 5 diesel (6.647.986 liters), which have appeared in 27.10.19.41, as such:
▪       From Sc X Srl, 5.403.144 liters Euro 5 diesel;
▪       From Sc Y Srl, 1.244.842 liters Euro 5 diesel.
From the paperwork, SC A SRL has proven through its bills and receipts and administrative documents which prove the shipment of the diesel, without the need to pay the sale tax and VAT, to the client SC Z Slovakia, who is declared as a tax warehouse.

Because SC Z SRL Slovakia is an authorized taw warehouse, the goods delivered over the border by SC A SRL will travel without the need of paying the sales tax and VAT. Through this mechanism, the suspects have dissimulated the illegal sale of the entire quantity of fuel on the Romanian territory. Taking into account that the sale tax and VAT was not paid, this gave the opportunity to the company to eliminate good-will commercial agents through practicing a reduced price. This price did not contain the taxes that needed to be paid.

The company owned and sold taxable products outside its tax warehouse, for which there was proof that it originated from another tax warehouse, from a registered sender, but for these products a sale tax and VAT should have been paid. Since it was not paid, the norms and provisions of the Fiscal Code have been broken.

Following these actions, the company has to pay the sale tax for the petrol products from the buying receipts from the two suppliers (SC X SRL and SC Y SRL).

The diesel bought by SC A SRL had not left the Romanian territory, being sold illegally to other commercial entities inside the country. Moreover, following the sums that have been paid for the goods, it was settled that these sums come from the accounts of the beneficiary.

Company A's account has been accredited by companies B and C. these sums of money have been transferred on the same day by the two suppliers, who would proceed to load the diesel wagons only after the money was sent. Referring to companies B and C, it was found out that they did not operate at their declared offices and fiscal checks could not be done for these companies, nor did they have papers which to prove the origin of the goods that were later sold.

Further research have revealed that the diesel that has been bought without paying the taxes has been sold in Romania without legal documents, by the final beneficiary – companies that usually sell highly taxed petrol products, mainly car fuels, in gas stations.

The diesel has been received by SC A SRL, the receipts passing through the accountants, while their value has been paid to the supplier by bank transfer. The sums of money came from companies B and C, during the same day.

SC B SRL was established in 2008, with a single associate, a citizen of a different member state. The company and all the legal needs were done by a lawyer. The company does not show to have filed the 390 Declaration, regarding intra-communitarian buying activities. Although it had not filed Declaration 394, 58 Romanian tax payers have bought or sold something to and from this company during the second semester of 2008 and the second semester of 2010. According to the situation regarding transactions made by card at ATMs nationwide, it has been seen that during January 5 2009 and August 21 2009, the card attached to the account of the company, issued in the name of the person in charge of the company, has been used to make withdrawals from ATMs in Oradea, Bucharest, Cluj-Napoca, Târgu Mureş, Tulcea, Sibiu, Slobozia, Constanţa, but also from abroad, in Hungary and Austria.

SC C SRL was established in March 2009, with a single associate, a citizen of a different member state. The company and all the legal needs were done by a lawyer. The company does not show to have filed the 390 Declaration, regarding intra-communitarian buying activities. Although it had not filed Declaration 394, 26 Romanian tax payers have bought or sold something to and from this company during the first semester of 2009 and the second semester of 2010. According to the situation regarding transactions made by card at ATMs nationwide, it has been seen that during April 30 2009 and August 21 2009, the card attached to the account of the company, issued in the name of the person in charge of the company, has been used to make withdrawals from ATMs in Oradea, Bucharest, Cluj-Napoca, Târgu Mureş, Tulcea, Sibiu, Slobozia, Constanţa, but also from abroad, in Hungary and Austria.

As we have shown, although the diesel has been delivered by beneficiary entities from the country, based on receipts issued by SC B SRL and SC C SRL, the diesel was not registered by SC A SRL as being delivered to SC Z SRL Slovakia..

Because SC Z SRL Slovakia did not confirm the receiving of the goods, it has led the authorities to believe that the goods have been sold in Romania. Regarding diesel transports for SC A SRL, the authorities have found that the transports have been made with rented vehicles from three transport companies from Romania, which have taken the diesel from SC X SRL and SC Y SRL to the warehouse of SC A SRL, where, following the confirmation of the administrative papers by the representatives of the supervising authority, the diesel has been transported with the same vehicles, or in some case, after boarding, in other vehicles registered in Hungary, by beneficiaries from Romania who were gas station owners.

Between April 3 2009 and May 16 2009, SC X SRL has delivered 4.522,306 tons of Euro 5 diesel (5.403.144 liters) to SC A SRL, based on receipts, waybills, conformity declarations, trial reports and administrative documents – with a value of 8.489.974 RON.

Energetic products – Euro 5 diesel – delivered by SC X SRL to SC A SRL have been moved from a warehouse to the client, without the need of sale tax and VAT payment, based on the administrative documents, respecting art. 144, paragraph 1, letter a, point 8 from the 571/2003 Law, modified.

SC X SRL has received through bank transfer the sum equal to the value of the receipts for the deliveries of energetic products – Euro 5 diesel, with a total value of 8.489.973,62 RON (not including sale tax and VAT).

Between April 22 2009 and May 8 2009, SC Y SRL has delivered 1.043,402 tons of Euro 5 diesel (1.043.402 liters), based on receipts, waybills, conformity declarations, trial reports and administrative documents – with a value of 1.930.300,50 RON, to SC A SRL, which has paid in full, through bank transfer. In this value, the sale tax and VAT was not included.

The tax level in 2009 for diesel, which is analyzed in this report, was of 336 euro/ton and 283.92 euro/1000 l.

The exchange rate used to calculate the tax in 2009 has been of 3,7364 RON/euro. The value in RON of the tax is determined by transforming the expressed sums into euro equivalents, based on the exchange rate set on the first working day of October, last year.

From the public data processed and analyzed in this paper, it turns out that in 2009, economic operators involved in state budget fraud regarding sale tax and VAT, have bought a total quantity of 5.565.71 tons of diesel (6.647.626 liters) worth 10.420.275,29 RON, for which taxes worth 10.294.810 (2.455.921 euros at the exchange rate of BNR on the date in which it should have been paid) out of which sale taxes were equal to 6.987.359 RON ( 1.666.851 euro) and VAT3.307.451 RON(789.061 euro). The calculation of the fiscal obligations that company A, with its offices in Romania, should have paid to the state budget are presented in the table below:

Table 1. The calculation of fiscal obligations for company A

| Nr | Name | Sale tax/lei | VAT/lei | Total damages /lei | Total damages/euro |
|---|---|---|---|---|---|
| 1 | SC X SRL | 1.309.919 | 615.642 | 1.925.561 | 458.121 |
| 2 | SC Y SRL | 5.677.440 | 2.691.809 | 8.369.249 | 1.997.791 |
| | **TOTAL** | **6.987.359** | **3.307.451** | **10.294.810** | **2.455.912** |

Source: made by the author

Through the selling of taxable products that were exempt from tax and VAT, **company A** has induced damages to the budget totaling 10.294.810 RON (2.455.912 euro) as it can be seen in the table above, which in the end made a damage almost equal to the value of the goods. (10.420.275,29 RON). According to data available for 2012, Romania is situated on the 6th position in a list of new European member states regarding the efficiency of VAT collection, with a total efficiency of only 57%, which is still a better position than in 2010, when it was situated on the 9th place and in 2011, when it was situated on the 8th place. But this leap in the list does not mean much, because Romania's VAT collection efficiency has been constant, around 56%-57% (Fiscal Council, *Yearly Report 2013*).

Table 2. Evolution of VAT taxation 2012-2013

| Eficienţa taxării TVA ( 2012-2013) | | | | | | |
|---|---|---|---|---|---|---|
| Ţara | Standard VAT amount (%) | | Implicit taxation rate (%) | | Efficiency (%) | |
| | 2012 | 2013 | 2012 | 2013 | 2012 | 2013 |
| Bulgaria | 20 | 20 | 14,2 | 14,6 | 71 | 73 |
| Czech Republic | 20 | 21 | 14,2 | 15,4 | 71 | 73 |
| Estonia | 20 | 20 | 16,9 | 16,2 | 84 | 81 |
| Latvia | 21,5 | 21 | 11,3 | 11,6 | 53 | 55 |
| Lithuania | 21 | 21 | 11,8 | 11,8 | 56 | 56 |

| Eficienţa taxării TVA ( 2012-2013) | | | | | | |
|---|---|---|---|---|---|---|
| Ţara | Standard VAT amount (%) | | Implicit taxation rate (%) | | Efficiency (%) | |
| | 2012 | 2013 | 2012 | 2013 | 2012 | 2013 |
| Hungary | 27 | 27 | 17,0 | 17,2 | 63 | 64 |
| Poland | 23 | 23 | 11,7 | 12,0 | 51 | 52 |
| Romania | 24 | 24 | 13,7 | 13,5 | 57 | 56 |
| Slovenia | 20 | 20 | 14,3 | 15,4 | 71 | 77 |
| Slovakia | 20 | 20 | 10,4 | 11,2 | 52 | 56 |

Source: http://www.consiliulfiscal.ro/ra-2013.pdf

As an example of bad tax collection in Romania, in 2013 only 8.5% of the GDB came from VAT, as in the case of Estonia. But the standard VAT is higher in Romania (24% compared to 20%). Besides, Bulgaria, with a similar economic structure as Romania and a smaller VAT value (22%) has collected 9.2 of its GDP from its VAT. According to data from the Fiscal Council, based on INS (National Statistics Institute) tax evasion is at a very high level in Romania, equal to 16.2% of the 2013 GDP. If Romania would collect the maximum amount of its taxes, it would have budget revenue (as GDP percent) higher than the European average, given the fact that the main legal level of taxes in Romania is higher than the European average (In Europe, Romania has the third highest standard VAT and is placed 7th in a list of countries that place a burden on the employee through a high value of social contributions; in the same time, Romania has one of the smallest levels of profit and personal revenue taxation from the European Union, but this has a minor role in budget revenues).

Approximately 75% of tax evasion is generated by not paying VAT, reaching a 12,34% of the 2012 GDP, while in 2013 it will be of 12,21% of the GDP (Fiscal Council, *Yearly Report 2013*).

Romania's problem is the contrast between the relatively large legal level and its reduced application, compared to former socialist states which have joined the EU.

Thus, countries like Estonia, with an 89% taxation efficiency or the Czech Republic, Slovenia and Bulgaria – each with a 71% taxation efficiency, which all have a 20% VAT level, have a better collection degree than Romania.

## 5. Conclusions and propositions

SC A SRL did not respect the laws when it received the taxable products, even though they were in a non-taxable state at that point, meaning that the tax is still suspended when receiving a product of this state, if the norms required by law are respected. In this case, the product has been placed in a tax warehouse and sent to another warehouse, according to art 186, paragraph 2 of the Fiscal Code, but in reality, the goods were sent back to the companies where they came from, within the country. This is an illegal practice, according to article 168, paragraph 2 of the Fiscal Code, if the sale tax has not been paid. The company did not pay this tax but also delivered the goods back to the companies it received them from; it also has made false documents (receipts, administrative papers) from which we could understand that the goods were sent to SC Z SRL Slovakia (warehouse), which would mean they were exempted from the sale tax and VAT.

Fiscal evasion leads to a gathering of less than half of the entire value of VAT for the Romanian budget: instead of 21 billion euros, only 11 billion are collected.

Fiscal evasion is visible in Romania at its microeconomic level, but enormous sums are found in inter-company trade, where the loopholes of the law are exploited and fiscal evasion is being made directly, with the protection of control authorities and political decision factors.

Fiscal Evasion can be reduced if there are laws and, of course, punishments that will scare. The increase of VAT made tax evasion even more profitable, especially on bordering areas with Bulgaria and Hungary. The problem starts from the inside, from the control mechanisms.

The state does not observe the companies from which it should be collecting taxes. It is like a financial institution would no longer manifest interest in the situation of its clients. Although they have enough staff and they exist, local fiscal offices do not have the expected efficiency, in many situations due to the way in which these institutions work, a local level consolidation being needed. Also, because of the delays in control and paperwork efficiency, it is recommended to use and improve informatics systems. In order to increase the level of tax collection, a profound reform of how taxes are administered must be done.

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

# PUBLIC POLICIES TO R&D IN ROMANIA IN THE CONTEXT OF THE EU STATE AID POLICY

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**Abstract:** *From an economic perspective, the importance of EU state aid policy refers to correcting "market failure" situations that may occur in the economy, aiming at maintaining an undistorted competition in the economic environment. In the context of the Commission focusing its efforts towards promoting R&D investment through Europe 2020 strategy, Romania is a modest innovator and is facing a relatively low level of economic competitiveness. The present paper aims at providing a contribution to the literature on public policies to R&D in the EU, developing both a quantitative and a qualitative analysis of public policies to R&D in Romania in the context of the EU state aid policy. Our research hypothesis considers that public policies to R&D in Romania, as in other Central and Eastern European countries, are following a convergence process with the practices from the EU level. Based on data provided by Eurostat, we have stressed that the existing gap between the national level and the EU level tends to maintain in the state aid field even in the future, in spite of Romanian government sector R&D expenditure tending to converge with the EU level, which highlights the potential of catching up with the European model. We believe that the success of the convergence process will depend in the future, to a large extent, on the implementation of the modernised legal and institutional framework of state aid policy, as well as on the capacity to build consensus by policy makers around the necessity to structure future economic development around R&D investment. In order to successfully address these structural R&D problems, the National Strategy for Research, Development and Innovation aims to establish R&D as engine for increasing economic competitiveness, while at the same time strengthening strategic areas with comparative advantages, supporting public-private partnerships, funding clusters in areas of smart specialisation, developing intellectual property and marketing capacity for products and services etc. For a successful implementation of these initiatives, we believe there is a strong necessity for an integrative policy mix aiming at coordinating the innovative system as a whole and a consistent political vision to support economic competitiveness through R&D investment.*

## 1. Introduction

From an economic perspective, the importance of EU state aid policy refers to correcting "market failure" situations that may occur in the economy, aiming at maintaining an undistorted competition in the economic environment. Although maintaining undistorted competition is the only objective which is explicitly mentioned in the Treaty establishing the European Community and also confirmed by decisions taken by the Commission, state aid policy can not be reduced to the removal of distortions caused by anti-competitive practices, since economic literature constantly argued in favour of an integrative approach

which relates state aid policy to improving resource allocation and supporting economic development.

In the context of the European integration process, state aid policy evolved from promoting national objectives and subsidising Member States' industries towards a "level playing field" approach aiming at harmonising national state aid policies through supporting horizontal state aid and creating potentially favourable conditions for all economic actors of the market. This policy development has been highlighted by the Lisbon European Council of 2000 that suggested both the importance of reducing the general level of state aid and moving the priority from sustaining individual sectors or companies towards horizontal objectives of common interest ("less and better targeted state aid").

State aid to research and development (R&D), as part of horizontal state aid, represents one of the main instruments used by public policies in order to support R&D, as well as innovative activities and to reach the goals specified by Europe 2020, the strategy targeting to increase the competitiveness of the European economy and to promote sustainable development in the long term.

In the context of the Commission concentrating its efforts towards these objectives in the post crisis environment, Romania is facing a relatively low level of economic competitiveness, which determines a small contribution from the high-tech and medium-tech sectors to the trade balance and negatively affecting the overall R&D system. According to the methodology used by the Commission, Romania is a "modest" inovator, having one of the lowest levels of investment in R&D in the EU (Europan Commission, 2014d), while World Economic Forum considers Romania, along with Bulgaria, as "efficiency driven" countries, while other EU Member States are either in transition stage or are already "innovation-driven" countries (World Economic Forum, 2014).


## 2. Methodology

The present paper aims at providing a contribution to the literature on public policies to R&D in the EU, developing both a quantitative and a qualitative analysis of public policies to R&D in Romania in the context of the EU state aid policy. Our research hypothesis considers that public policies to R&D in Romania, as in other Central and Eastern European countries, are following a convergence process with the practices and realities from the EU level, however the existing gap between the national level and the EU level in state aid field tends to maintain in the future, in spite of the progress in the government sector R&D expenditure, which highlights the potential of Romanian public policies to "catch up" with the European model.

In order to forecast the future evolution of government sector R&D expenditure, as well as state aid to R&D in Romania and the EU, we have developed a linear equation that estimated the evolution of these indicators in the following three years. The estimation has been based on the historical values of the indicators from the reference period (2002-2013). We consider useful to mention that the results provided by the quantitative analysis should be correlated with the insights provided by the qualitative analysis, since the success of the convergence process will depend in the future, to a large extent, on the legal and institutional reformation of state aid policy, as well as on the capacity to build consensus by policy makers around the necessity to structure future economic development around R&D investment. The data on R&D expenditure was presented as % of GDP and was provided by Eurostat.

The paper is structured in the following manner: the third section presents an overview of the related literature in the field of state aid and public policies to R&D; the fourth section presents a quantitative analysis of the government sector R&D expenditure and state aid

to R&D; the fifth section presents a qualitative analysis of public policies to R&D in Romania in the context of the modernization process of EU state aid policy and, finally, the sixth section concludes.


## 3. Literature Review

The role of European public policies in promoting economic development and innovation has been provided in the related literature mainly by the evolutionary theory, which considers that the economic development process is technologically driven and it includes a multifactorial model across time and geographical space e.g. Chiaromonte and Dosi (1993: 39-63), Geels (2004: 897-920), Silverberg and Verspagen (1995: 209-227).

During the 1980s, state aid granted to industry and services by EU Member States represented about 2% of EU GDP and gradually decreased to approximately 1% in the following decade (European Commission, 2011). The overall decreasing trend registered by state aid in the EU continued until 2007 when it reached the value of 0.4% of GDP. The quantitative amount of state aid granted by Member States increased in the context of the financial and economic crisis, reaching to a level of 0.6% in 2008, which represented a 50% higher value than the year before. These developments have proved that state aid tends to have a counter-cyclical component which is used by governments to subsidise their economies e.g. Ouyang (2011: 542-553), Paunov (2012: 24-35).

The role of R&D investment for promoting sustainable development has been emphasised by the Barcelona European Council of March 2002 by setting the objective for expenditure on R&D to 3% of GDP by 2010. In the context of this target not being achieved due to the negative effects of the economic and financial crisis, the interest shown by the Commission in the field of R&D investment has intensified in the context of the new Europe 2020 strategy (European Commission, 2010).

While in Western Europe, state aid policy has been largely determined by the European integration process, in Central and Eastern Europe, the introduction of a state aid policy was done in the context of the transition process from a central planned system to a market economy. In this area, state aid was used mainly as an instrument of the centralised economic system in the communist period and has become an important policy instrument during the transition to the market economies, targeting both the restructuration of their traditional industries as well as the stimulation of new foreign investments (Atanasiu, 2001: 257-283).


## 4. Quantitative Analysis

In terms of the funding sources, data provided by the Commission suggests that in 2011, 54.9% of the total amount of R&D expenditure in the EU was granted by the business sector, while 33.4% was granted by the government sector and a further 9.2% came from foreign sources. The large role played by the business sector in R&D investment is stressed by the fact that in 2011, it represented about two thirds of the total gross domestic expenditure to R&D in Germany and Finland. However, the government sector has granted the majority of the gross domestic expenditure on R&D in Cyprus and Poland in the same year, while relatively large amounts of R&D came from external sources in case of Latvia, Bulgaria, Lithuania, Luxembourg, Ireland, the Czech Republic, the United Kingdom, Austria and Malta (European Commission, 2013).

While government sector R&D expenditure in the EU reported a relatively flat evolution in the reporting period (2002-2013), in Romania this indicator registered an increasing trend before the economic and financial crisis and reported lower values in the post crisis period.

This confirms the pro-cyclical character of R&D activities during periods of recessions (Barlevy, 2007: 1131-1164, Mulas-Granados, Koranchelian and Segura-Ubiergo, 2008: 1-39) in spite of the fact that promoting R&D investment during recessions can positively support countries in achieving sustainable economic development in the long run.
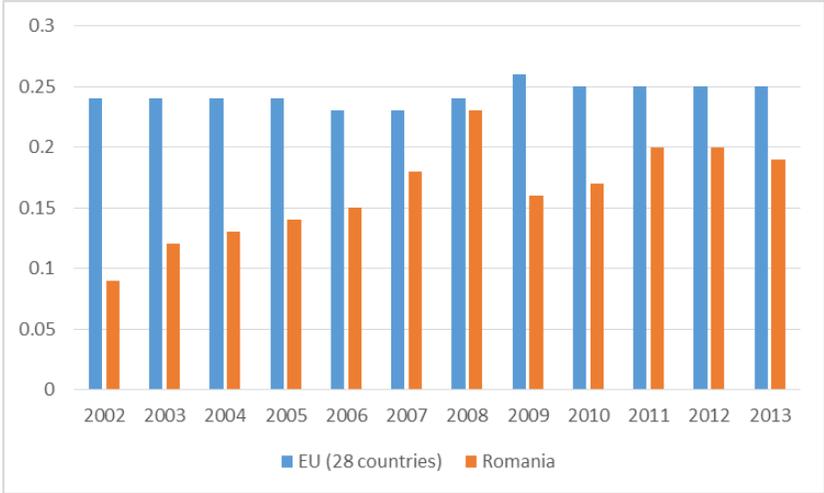


**Figure 1:** Government sector R&D expenditure in Romania and the EU as % of GDP
Source: author's own contribution based on data from
http://ec.europa.eu/eurostat/eurostat/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsc00001

Based on existing data, we have estimated that government sector R&D expenditure in the EU will continue to report a stable trend in the following period and will most probably evolve around 0.25% of GDP. Moreover, the relatively high value of R squared (0.65) means that the statistical significance of the equation is strong.

On the other hand, we estimate an increasing trend for the Romanian government sector R&D expenditure in the following period, which will most likely evolve between 0.20 and 0.25% of GDP by 2016. However, a lower R squared value (0.35) shows a moderate statistical significance, which may suggest a relatively small level of predictability in the evolution of this indicator. We consider that, in order to continue the convergence trend with the EU level of governement expenditure, a sustained focus of public policies is required in the future, as well as a better coordination of actors and policies targeting R&D in the Romanian society.

y = 0.0089x + 0.1056
R² = 0.6532

y = 0.0015x + 0.2338
R² = 0.3558

0.3
0.25
0.2
0.15
0.1
0.05

2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016

— EU (28 countries)    — Romania
······· Linear (EU (28 countries))  ······· Linear (Romania)
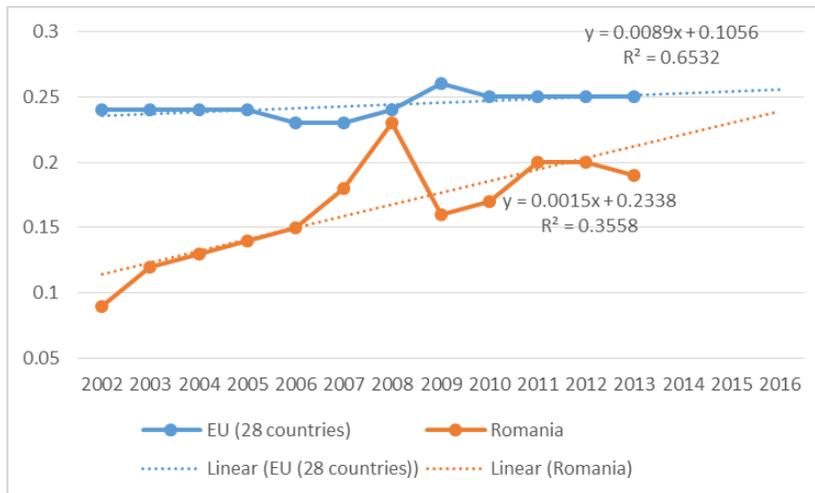
**Figure 2:** Government sector R&D expenditure in Romania and the EU as % of GDP - forecast

Source: author's own contribution based on data from
http://ec.europa.eu/eurostat/eurostat/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsc00001

State aid to R&D represents one of the main public instruments used by Member States in order to reach the objectives set by Europe 2020 strategy, due to its capacity to promote the economic competitiveness of the EU and to ensure sustainable economic development.

State aid to R&D reached a level of approximately 4% of total R&D expenditure in 2011, with more than 50 % of this amount being invested by Germany, France and Spain. In the Central and Eastern Europe, countries reported a lower level of investment in this field while trends varied within the region due to national particularities e.g. while the average EU value for state aid to R&D during the period 2002-2013 was 0.07, most of the countries from Central and Eastern Europe reported values lower than EU average. After reporting no investments for state aid to R&D in the first two years of the reference period, Romania reached an average value of 0.02 during 2002-2013.

In the context of the financial and economic crisis, Romania reported significantly lower values than in the previous period. It is relevant to mention that, in spite of a decreasing trend reported by state aid to R&D at the EU level, the gap between the spendings reported by Romania and the general EU expenditure became larger in the post crisis period, suggesting that factors influencing the amount of state aid to be granted by public authorities are connected to a large extent with particularities from the national level.
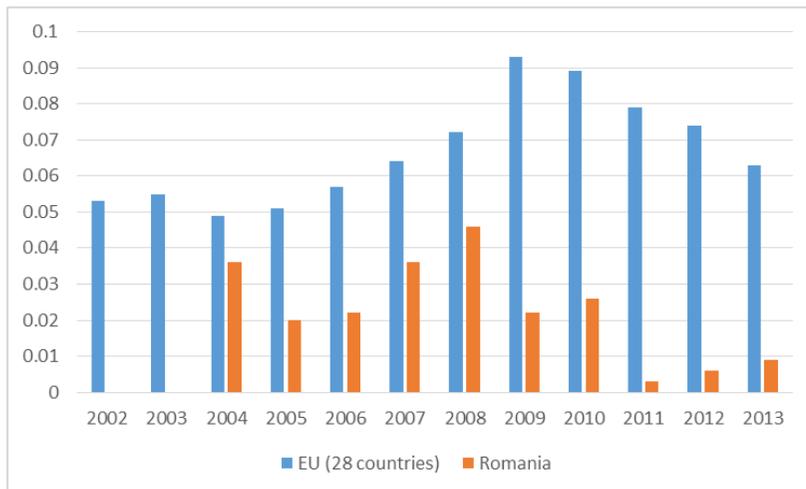
**Figure 3:** State aid to R&D in Romania and the EU as % of GDP
Source: author's own contribution based on data from
http://ec.europa.eu/eurostat/tgm_comp/refreshTableAction.do?tab=table&plugin=1&pcode
=comp_ho_sa_02&language=en

Based on historical data from period 2002-2013, we can estimate that the general evolution of state aid to R&D at the EU level will register an increasing trend in the following period, although there was a decreasing trend in the last four years. We can further estimate that by 2016, state aid to R&D will reach 0.09 of GDP, however this will depend to a great extent on the successful implementation of the modernisation process of state aid policy to R&D.

In the same time, we can notice that the general trend followed by state aid to R&D in the Romanian economy was marked by larger fluctuations than at the EU level. While it is expected that the future level of state aid to R&D will be around 0.02 in the following period, we can further assume that the very low level of R squared suggests that this evolution has a low level of predictibility, that will most likely continue in the following period. In the same time, the corresponding R squared reported a moderate value at the EU level (0.45), showing a higher statistical significance of the equation when compared to the one estimating state aid to R&D in Romania.
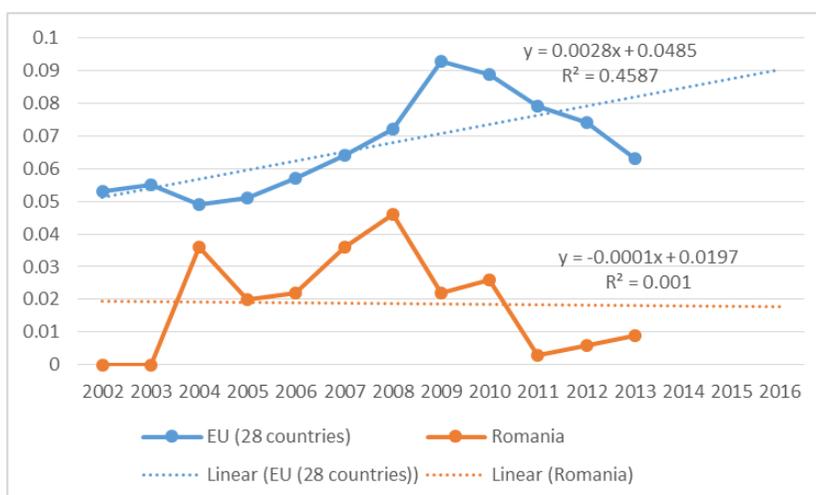
**Figure 4:** State aid to R&D in Romania and the EU as % of GDP - forecast
Source: author's own contribution based on data from http://ec.europa.eu/eurostat/tgm_comp/refreshTableAction.do?tab=table&plugin=1&pcode=comp_ho_sa_02&language=en

## 5. Qualitative Analysis

In the context of the Europe 2020 strategy, the Commission has focused its reformation efforts around the Communication on EU State aid modernisation ("the SAM initiative"), with three main objectives: to stimulate growth in the Internal Market; to focus enforcement on cases with the largest impact on the market; and to streamline rules and enable faster decisions (European Commission, 2012; European Commission, 2014a).

The Commission also extended the scope of the General Block Exemption regulation ("GBER") by reducing the administration involved in granting state aid through increasing the number of categories of state aid that do not have to be notified to the Commission. The new state aid framework is meant to facilitate an appropriate treatment of "good" state aid (designed for specific market failures and general objectives of common interest, proportionate and least distortive) and prevent the granting of "bad aid" (which distorts competition, negatively impacts innovation and favours specific actors of the market) (European Commission, 2014b).

While the main challenge for the future of EU state aid policy to R&D is related to increasing the level of transparency together with creating a legal and institutional framework designed to practically support state aid to R&D and to transform the EU in a more competitive actor on the global arena, in Central and Eastern Europe, the modernisation of R&D state aid policy imposes additional challenges in terms of developing sustainable institutional frameworks for stimulating R&D investment while ensuring that these initiatives are constantly supported by political consensus.

For Romania, the main problems arise from its status as modest innovator with one of the lowest values for R&D intensity and business R&D investment. This situation represents the result of insufficient public investment in the science base and higher education system, which determined a relatively low science and technology output in the market. Inefficient public incentives for promoting business R&D and the reduced cooperation with the business sector led to a brain drain, which further diminished the attractiveness of the business sector (European Commission, 2014c).

In order to successfully address these structural problems, the National Strategy for Research, Development and Innovation aims to establish R&D as engine for increasing economic competitiveness, while at the same time strengthening strategic areas with comparative advantages, supporting public-private partnerships, funding clusters in areas of smart specialisation, developing intellectual property and marketing capacity for products and services etc. For a successful implementation of these initiatives, we believe there is a strong necessity for an integrative policy mix aiming at coordinating the innovative system as a whole and a consistent political vision to support economic competitiveness through R&D investment.

## 6. Conclusions

The present paper provided a quantitative and a qualitative analysis of public policies to R&D in Romania in the context of the EU state aid policy. While our research hypothesis considered that Romania has the potential to converge with the EU model in terms of government sector R&D expenditure and state aid to R&D, the quantitative results highlighted the fact that the gap between government sector R&D expenditure in Romania and the government sector R&D expenditure in the EU is decreasing. In terms of state aid to R&D, Romanian expenditure level is below the EU level and the gap is likely to maintain in the future, showing that state aid granting in Romania follows a different pattern when compared to the European model.

Furthermore, we consider that these results should be effectively correlated with the insights provided by the qualitative analysis, meaning that the successful convergence process with the European model will significantly depend on the nature of the economic policies developed by decision makers and their capacity to support a long term strategy built around R&D investment as engine of the future economic development.

National Strategy for Research, Development and Innovation 2007-2013 has taken a number of positive steps that have opened the possibility of a reform in this area. These initiatives have been continued in the current Strategy for Research, Development and Innovation 2014-2020, which sets research in a priority position for economic and social development. In the future, a sustained increase in the role of private R&D investment is required, which should be complemented by public policies in order to ensure a continuity of efforts in this area. Successful achievement of convergence with European practices in R&D is, in our view, a historical necessity in the current situation, but on the other hand the implementation of this process will be a difficult task that requires both long term political will as well as a coordination of the actors and policies in the Romanian society.

## 7. Acknowledgements

Subsemnata prof. dr. Cristiana Cristureanu menţionez că am luat la cunoştinţă de participarea bursierului posdoctorand Nicolae Băcilă cu lucrarea "Public policies to R&D in Romania in the context of the EU state aid policy" şi sunt de acord cu conţinutul în vederea publicării și/sau susținerii ei.

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# EQUAL OPPORTUNITIES IN THE ITALIAN LABOUR MARKET

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**Abstract:** *The integration of persons with disabilities and with reduced work capacity in the labour market represents one of the biggest challenges for labour market policies. The non-integration of disabled people in the labour market causes huge costs for the countries' economy. The European Union's aim is to transform passive social support into active support by means of labor market policy measures, to help people to obtain gainful employment and to raise employment levels of people with disabilities and with reduced work capacities. Earlier this target group has to work in the sheltered employment. But it changed from the 90's years because of the social model of disability definition. Nowadays the main goal to help this target group integrates in the open employment. The members of European Union imagine this aim on other way. The Scandinavian countries or England prefer the equal opportunities and the personalised mainstreaming programmes and services. Other European countries, as Germany, Austria or Italy prefer the rehabilitation quota system. Thus, the labor force participation and employment rates for people with disabilities and with reduced working capacities are strong differences between the European countries. But lot of other options also influence the member of countries' policy and employment system. Since the Amsterdam Treaty the European Union has devoted exceptional attention to the equal opportunities of disabled people, the enforcement of equal treatment, and the reduction of the dangers of discrimination, as it is, a significant part of persons with disabilities and reduced work capacity do not have a full-time job, they become unemployed two or three times more frequently than their abled-counterparts, and dispose of lower salary, therefore they need the help of their family and the community. This study examines the Italian situation. It bases on statistics on the Italian target group and provides comparisons with people without disabilities, Italian and international studies, researches. Applying a secondary research method, it aims at discussing the labour market and employment characteristics of target group. The research shows the people with disabilities and with reduced working capacities' labor force participation and employment rate, as well as the labor forces institutional services in Italy.*

**Keywords:** disability; reduced working capacity; Italian labor force services; rehabilitation; quota system; employment;

**JEL classification:** J79

## 1. Equal opportunities and protection against discrimination

In accordance with the open method of coordination, particular national traditions and the institutional system, which was developed earlier, the member states of the European Union carry out the above mentioned principles in the framework of distinct national programs. According to the data of the OECD countries, there appear to be big differences among the countries' financial expenditures compared to the GDP of the given country. In the light of the data, the Hungarian expenditures show an outstanding value, but this high volume expenditure does not manifest itself positively in the economic activity of persons with disabilities. There are countries Europe-wide, such as Italy, at the end of the rank regarding the expenditure, although their employment rate does not indicate a less favourable picture than the other member states'. Studying the international data, it is visible that the employment rate of target group in Italy is of average value Europe-wide (OECD, 2014) (Figure 1).
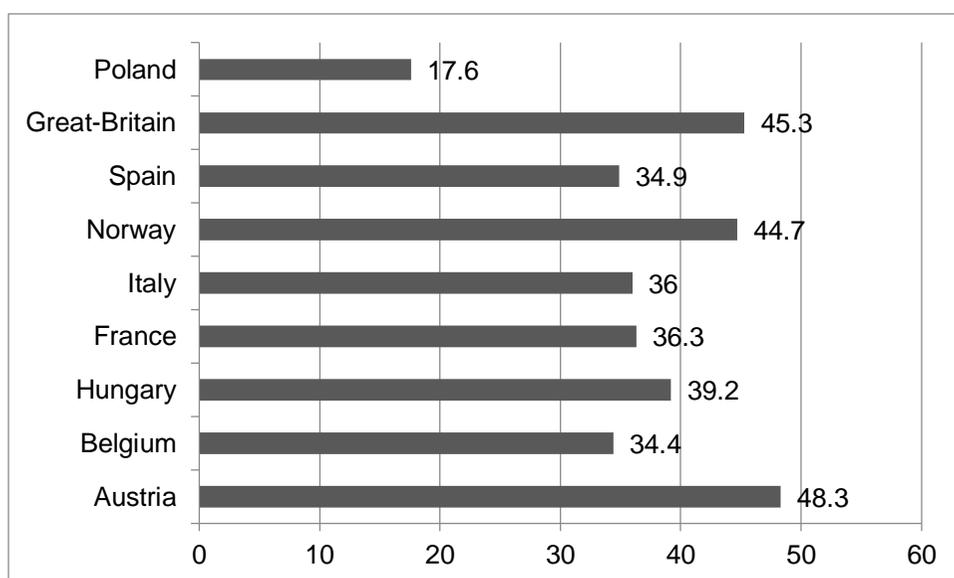


**Figure 1:** The employment rates of working age persons with disabilities in some selected OECD countries between 2004-2006 (%)

Source: Compiled by the author, according to OECD, 2014

According to Maschke (2010) in Italy those persons are considered disabled whose ability to work is permanently reduced due to physical, mental or sensory impairment. In accordance with this definition, the active social participation is connected with the ability to employment. This economic model of disability focuses on the ability to work. It says that the ability to work can fall under the following categories: general or limited incapability of earning and reduced work capacity (Maschke, 2010:42), therefore the incapability of earning is not qualified as reduced work capacity.

According to the study of Maschke (2010) in Europe three approaches are applied to assess whether it is the state of health or another labour market factor (e.g. low

qualification) that is in the background of unemployment of the person with health disability: procedural approach, ability profile approach, as well as, reduced ability based approach. The procedural approach examines the reasons why the employee stopped working and explores the barriers and hindrances of returning to the labour market. The ability profile approach compares the individual's abilities to the labour market requirements, which does not allow the person to start working. Assessing the remaining abilities, this model assigns those scopes of employment and fields of activity where the person would be able to work. The reduced ability based approach, in accordance with medical view, measures the reduced work capacity of a particular person with disabilities by applying a percentage table enacted by the law. Maschke (2010) claims that in Italy the ability profile approach prevails to asses the disability.

The European Commission (2002) suggests that in Italy the offices, which carry out the examination do not apply a percentage table enacted by the law to categorise the reduced work capacity, but these institutions have elaborated their own assessment and evaluation methods. This method connects the medical data, which concern to the diagnosis and ability reduction, to those particular disabilities that are present in the work and everyday life (European Commission, 2002:46). Due to the fact that the examination methods and equipment were developed by the specialists working for the institutions, instead of the rigid state standards, the committees can take the personal specifications better into account, such as the accommodation situation that may impede going to work, or the employment difficulties that derive from the economic features of the region.

The reduction in the work capacity and the degree of the disability are assessed by the Health Committees with special examinations and an interview which evaluates the remaining abilities (European Commission, 2012). The aim of the assessment is to create the detailed profiles of the applicants, as well as, to improve the match between the disabled workers in the register and the possible workplaces (European Commission, 2002:51).

This model helps to reduce the selections that are used when choosing employees. Consequently, the quota system fits better in the anti-discrimination practice. However, it does not fully insure the discrimination exemption of the persons with disabilities. On the other hand, there is a bigger emphasis from the part of the disabled persons to find a job that suits their aspirations and preferences (Könczei, 2006).

The Italian system aims to accomplish the employment integration of the target group by taking the situation of the open labour market into consideration.

As member of the European Union, Italy obeys and abides by the regulations and recommendations, which ordain a prohibition of discrimination and exclusion of target group on the labour market and other areas. In terms of the Italian law, the definition of the disability is the equivalent of the social model of disability, which says that the barriers and disadvantages experienced by the persons with disabilities derive from the peculiar functioning of the society.

Provisions against discrimination foster breaking down these social barriers and reducing the negative discrimination.

In the Italian society both high and low level legislations regulate the issue of equal treatment and the protection against discrimination, thus the Italian Constitution, Law No. 67 of 1 March 2006, Law No. 104 of 5 February 1992, as well as, Law No. 216 of 9 July

2003 (Council Directive 2000/78/EC establishing a general framework for equal treatment in employment and occupation). These legislations promote the implementation of the principles of equal treatment and equal opportunities in the civil, political, economic and social sphere.

In accordance with the definition of the Law against discrimination No. 104/1992, a person with disabilities and reduced work capacity is someone who has such stable or developing physical, psychological or sensory impairment that can cause problems with learning, social relationships or occupational integration which may bring about a disadvantageous and marginalising process (Internet 1).

Persons with disabilities and reduced work capacity have to apply for a disability employment status at the competent authority so that they can benefit from the protection in the labour market and employment (Law No. 68 of 12 March 1999).

Statistical data suggest that this employment status guarantees positive discrimination and equal treatment for persons with disabilities and reduced work capacity, especially in the public sector.

In 2000 the Italian government passed a national action plan, which aimed at improving the living conditions of persons with disabilities including their occupational integration and the elimination of the barriers that hinder it. The objective of this program was to raise attention on the discrimination practices against target group.

Law No. 67 of 2006 guarantees the protection against all discrimination including both direct and indirect discrimination and regulates the right to equal treatment and the issue of the victims of discrimination. In accordance with the legislation, discrimination practices are unlawful and can be brought before the courts of justice.

A survey made by Italy's National Research Institute in 2010 suggests that in the list of 'discrimination in the workplace' disability based discrimination stands in the fifth place and has had a continuously decreasing tendency since 2002 (Giaccone, 2014). It means that a positive process has started in the labour market regarding discrimination of persons with disabilities. On the other hand, this tendency is not clearly positive regarding other factors such as gender, age, ethnic background (Figure 2).
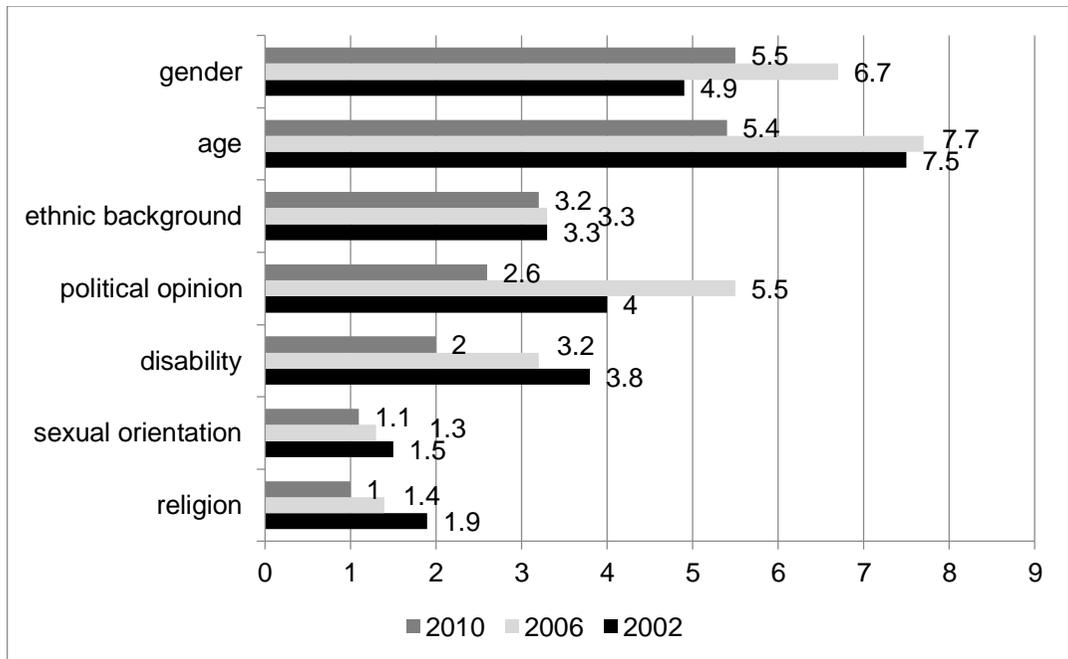
**Figure 2:** Forms of discrimination in the workplace, 2002, 2006, 2010 (%)
Source: Giaccone, 2014

Besides the anti-discrimination legislation of the state, the Italian trade unions, which have great traditions, play an important part in the reinforcement of the rights and economic activity of target group. As early as the 1970s, the trade union of the metal and textile workers initiated various interventions in the occupational interests of persons with disabilities and reduced work capacity. Their main objective was to create personalised schedules and eliminate the barriers which would prevent them from carrying out their tasks. This tendency continues at present as well, because there are several agreements made between the confederation of employers and the trade unions of employees to protect the interests of persons with disabilities and reduced work capacity. They also provide programs and trainings to facilitate the employment of the target group.

## 2. The employment situation as expressed by statistics

According to data of the Italian Statistical Office, the population of Italy is almost 58.5 million. Of these, the number of persons with disabilities is almost 2.6 million people, i.e. 5.6% of the total population. These data are remarkable considering that according to the latest WHO research 15% of the population of the Earth are affected by disabilities or reduced work capacity (WHO – World Bank, 2011). According to data recorded in 2005, the number of persons with disabilities of employment age (15-64 years) is 526 thousand (Apostolos et al., 2007).

The ratios of persons with disabilities of employment age show considerable variations according to regions: while 36.6% of the target group are constituted by people living in the southern provinces and on the islands, the corresponding ratio in the north-eastern provinces is only 16.7% (Apostolos et al., 2007).

There are significant differences as regards distribution according to age as well. The most affected age group is between 50-64 years of age. While only 6.1% of persons living with some disability are aged between 15-29, 59.5% are between 50-64 years of age. (Apostolos et al., 2007) (Figure 3).
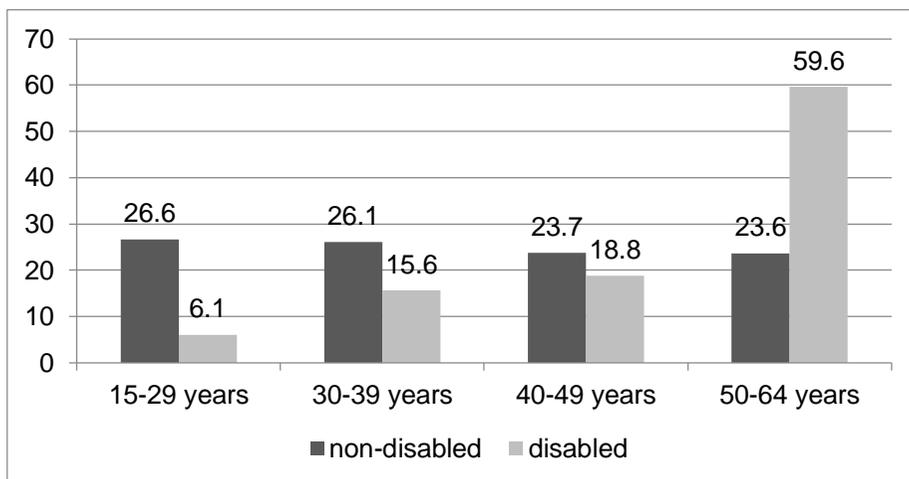


**Figure 3:** The distribution of the disabled and non-disabled population according to age (%)
Source: Apostolos et al., 2007:12

As regards the distribution according to gender, a difference of 14% can be discovered in the age group 25-64. The ratio of 57% of men is outstanding when compared to that of women (43%) (Addabbo and Sarti, 2014) (Figure 4).
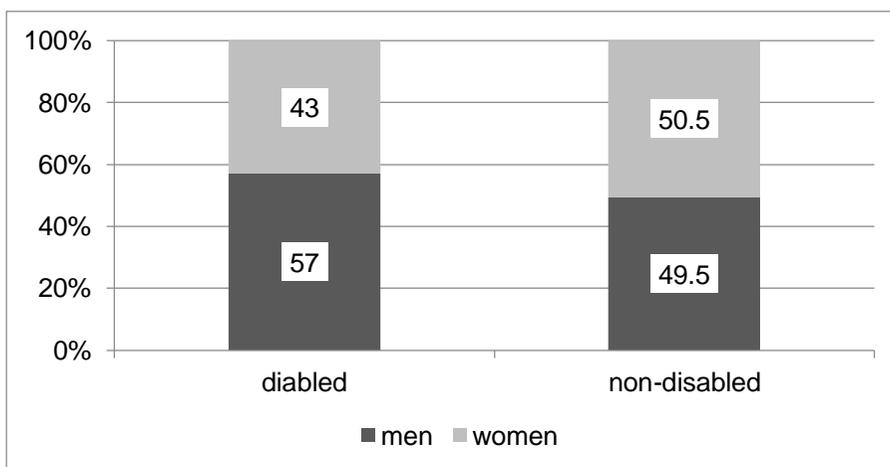


**Figure 4:** The distribution of the disabled and non-disabled population according to gender (25-64 years) (%)
Source: Compiled by the author, according to Addabbo and Sarti, 2014:8

As regards the distribution according to the types of disability, 73% of disabled persons suffer from physical and sensory disabilities while 27% from mental disabilities. In this

respect there are no significant differences between the genders (Addabbo and Sarti, 2014) (Figure 5).
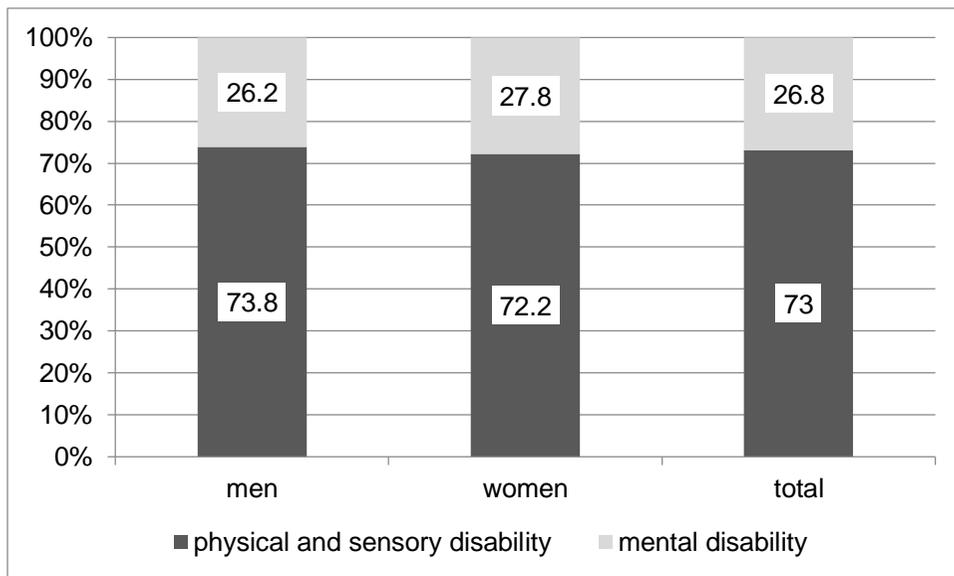


**Figure 5:** The distribution of the disabled population according to types of disability and gender (%)
Source: Compiled by the author, according to Addabbo and Sarti, 2014:8

Examining the level of qualifications we can see that the most remarkable difference between persons with and without disabilities is as regards educational attainment. While 28% of persons with disabilities have a higher education degree, the corresponding ratio among non-disabled persons is 51%. Among persons with secondary education there is no considerable difference between the disabled and non-disabled population. As regards the ratio of disabled and non-disabled persons among persons with low qualifications, disabled persons are overrepresented. The ratio of persons with low educational attainment is especially high among people with mental or intellectual disabilities (Addabbo and Sarti, 2014) (Figure 6).
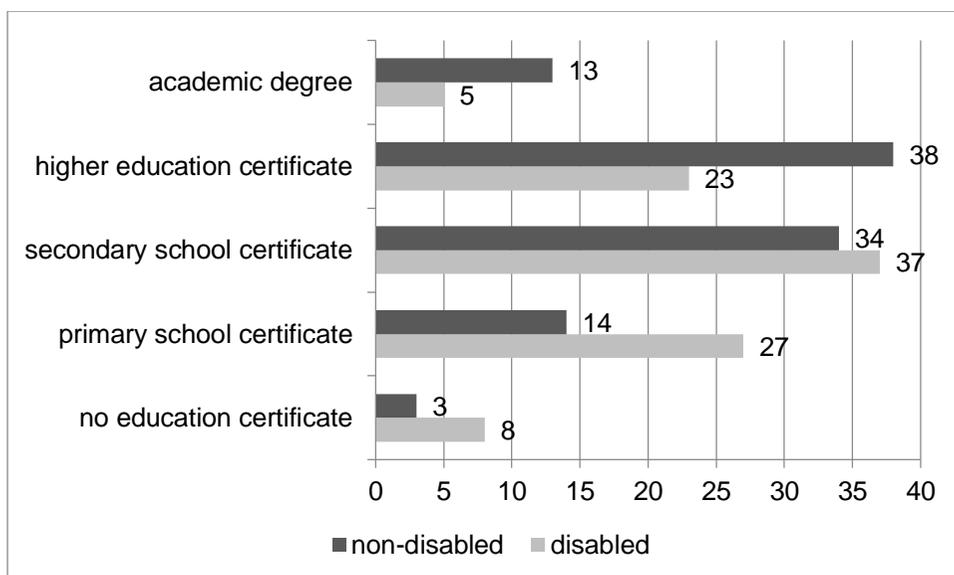
**Figure 6:** Educational attainment of the disabled and non-disabled population (%)
Source: Compiled by the author, according to Addabbo and Sarti, 2014:9

The situation of Italian disabled persons is apparently made more difficult by low schooling, which adds to the difficulty at successfully finding a job and permanently staying at the employment market.

Examining the positions that disabled and non-disabled persons have at the employment market we can see that the employment rate of the disabled population is 35%, while that of non-disabled persons is 66%. As regards the entry to the labour market, there is a significant difference (20%) between disabled women and men, although this difference reflects the same tendency among the non-disabled population as well and can thus probably be attributed to Italy's national cultural characteristics (Addabbo and Sarti, 2014) (Figure 7).
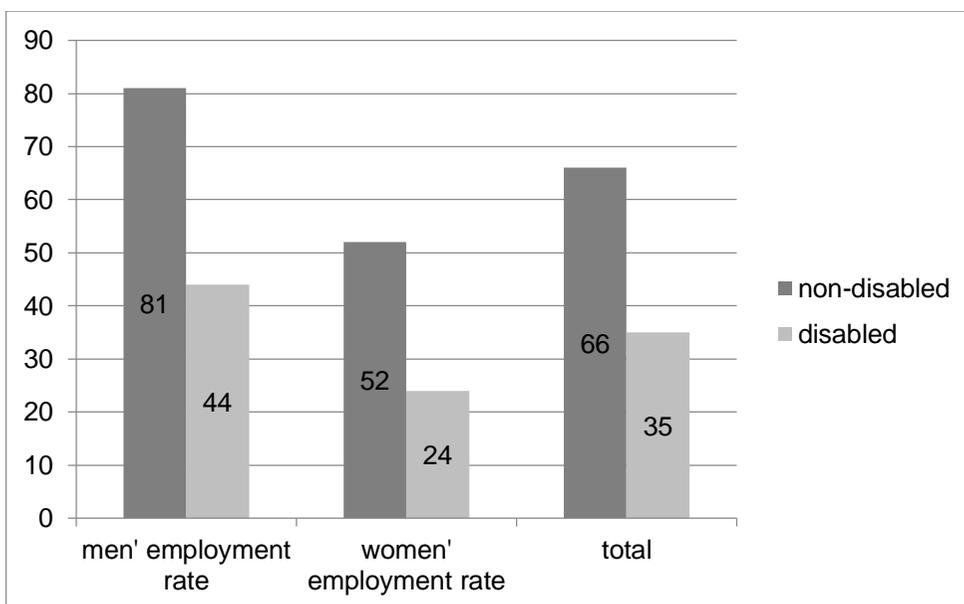
**Figure 7:** The employment rates of disabled and non-disabled persons according to genders (25-64 years) (%)
Source: Compiled by the author, according to Addabbo and Sarti, 2014:10

When examining the data of the following table it is apparent that parallel with the increase in age, the ratio of employed persons and jobseekers sharply falls, while the ratio of retired persons is outstanding above the age of 45 (Micangeli et. al, 2012). While a higher age does not necessarily involve increased unfitness for work, employment data reflect a falling trend nevertheless.

Characteristically the chance for becoming disabled rises with age, and persons above 45 have decreasing motivation and chance for employment. Even bigger differences can be discovered as regards the genders. The number of the employed or jobseekers is especially low among women and the rate of inactivity is higher since, probably due to the Italian traditions, many of them are active as homemakers (Micangeli et. al, 2012) (Table 1).

**Table 1:** The economic activity of disabled persons according to age (%)

|  | 15-44 years | 45-64 years | more than 65 | total |
|---|---|---|---|---|
| **occupied** | 18,4 | 17 | 0,5 | 3,5 |
| **women** | 13,9 | 10,4 | 0,3 | 0,4 |
| **men** | 22,3 | 24,6 | 0,9 | 6,8 |
| **seeking employment** | 8,1 | 2,6 | 0 | 0,9 |
| **women** | 5,9 | 0,8 | 0 | 0,4 |
| **men** | 10 | 4,8 | 0 | 1,9 |
| **retirements** | 0,3 | 20,9 | 50,5 | 43,9 |
| **unable to work** | 50,9 | 39 | 17,1 | 21,8 |
| **housewife** | 10,3 | 18,3 | 21,4 | 20,3 |

Source: Compiled by the author, according to Micangeli et. al, 2012:5.

Significant differences are revealed in the employment of disabled persons according to sectors. The highest employment rate is in the fields of education, health care and public offices. This is probably due to the legislative environment protecting the interests and rights of disabled employees (Apostolos et al., 2007:14.) (Figure 8).
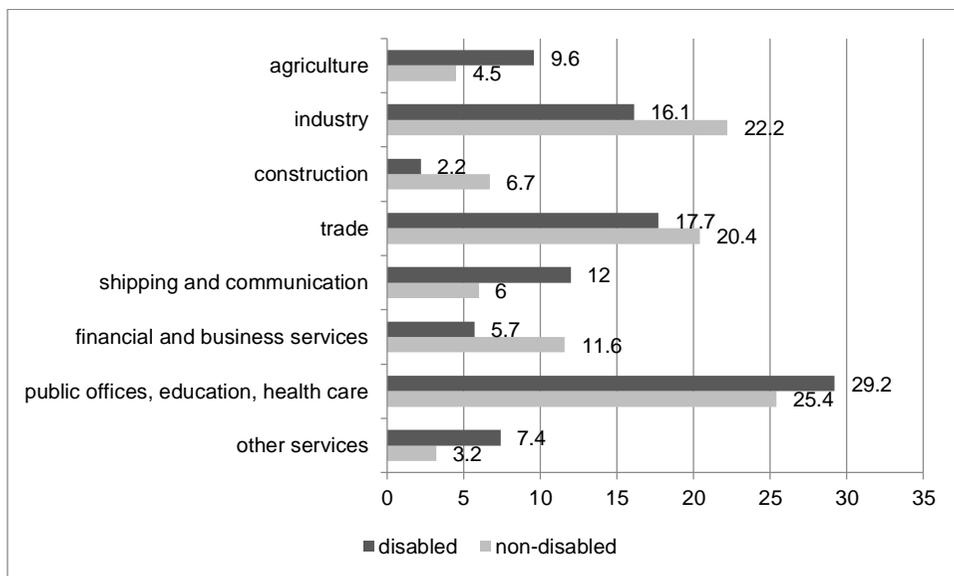


**Figure 8:** The employment rates of the disabled and non-disabled population according to sectors (%)
Source: Apostolos et al., 2007:14

Persons with disabilities and reduced work capacity characteristically join the labour market by applying to newspaper advertisements, sending off ad hoc CV applications or attending state assessment examinations (50%) on the one hand and through informal personal relations (35.6%) on the other hand. The number three alternative is work opportunity attained through public employment services (11%) and the last one is (3.4%) work found with the help of private employment services (Apostolos et al., 2007). This indicates that labour market services do not offer efficient methods or solutions to jobseekers through which they could successfully join the world of employment.

### 3. The employment of persons with disabilities or reduced work capacity
In compliance with the EU directives, the main state objective in Italy is to increase opportunities of employment for persons with disabilities or reduced work capacity at the open labour market. There are several employment services helping persons with disabilities or reduced work capacity to find a job.
A programme similar to supported employment is targeted employment, which you can join with the help of the employment service. Targeted employment helps finding a job at the open labour market. There are significant differences between provinces as regards the success and efficiency of the operation of the targeted employment programme. There are provinces (primarily in the northern regions) where good practices are characteristic, while

in other provinces (in the southern regions) no efficient set of tools have been put in place (European Commission, 2012).

The Italian government stimulates the employment of people with disabilities or reduced work capacity by broad-scale and active employment policy tools. Such tools are: transport subsidy, support for the purchase of technical equipment, special tax allowances and exemptions, personal assistants, eligibility for disability pensions also in the case of part-time employment, incapacity support, positive discrimination when filling vacancies in the public sector as well as an employment quota system (European Commission, 2012).

With reference to the labour market programmes the legislation provides for the principle of person orientedness as well as for the need to target workplace adaptation and the efficient elimination of potential obstacles. The application of tailored programmes and methods is especially important in the case of targeted programmes designed for disabled persons where workplace integration is made more difficult by serious and complex health restrictions (Apostolos et. al., 2007). In the case of severe disability consultation and mentoring opportunities must be ensured as well.

When employing persons with disabilities or reduced work capacity, employers are eligible for financial subsidies for e.g. designing the workplace environment or flexible work schedule (European Commission, 2012). When employing persons with disabilities, employers are granted tax exemption and tax allowances. Employers may be relieved of all taxation for a period of up to 8 years if the employees concerned have 79% disability or a combination of physical and mental disability. If the employee has 67-79% disability, the employer may be granted partial tax exemption for up to 5 years. The employer is eligible for support for the adaptation of the work environment or the purchase of special communication tools (the amount of the subsidy being determined by the severity rate of the employee's disability and the extent of the adaptation required).

After the abilities of the disabled person are assessed, a personalised plan is developed. This plan may lay down requirements of professional experience, the necessity to acquire certain competences or participate in certain retraining. In the case of the lack of professional experience or competence, an organisation specialising in the employment of the disabled person ensures the acquisition of the required professional practice. If the employee's retraining is required, the related expenses are borne by the state (Apostolos et. al., 2007).

Persons with disabilities and reduced work capacity are granted special employment law protection in the world of labour. Employers must not have expectations of disabled employees that they are unable to meet due to their disabilities. In case the health condition of a disabled employee worsens, s/he may ask to be transferred to a position that better suits their work performance capacity. Persons with disabilities or reduced work capacity also have the right to go on unpaid leave until they regain their work performance capacity. In the course of this period the employer must not dismiss the employee (Apostolos et. al., 2007).

The main tool of the Italian employment policy is the quota system. Opinions vary as to how efficient a tool obligatory employment quotas are for enhancing the employment of persons with disabilities or reduced work capacity. It is characteristically widely used in several European countries (Austria, France, Spain or Germany) as an active labour market tool which nevertheless has adverse effects on the employment of the disadvantaged group concerned in many respects. For one reason because employers typically employ persons with disabilities or reduced work capacity only to the extent required by the relevant provisions, without considering further employment opportunities at the organisation (European Commission, 2012) and, on the other hand, because the directives do not foster the elimination of but, on the contrary, may worsen the prevalence

of discrimination at the employers'. In Scandinavian and Anglo-Saxon countries, antidiscrimination legislation, the methods of monitoring and mentoring as well as corporate responsibility are regarded as efficient tools, while obligatory employment quotas have much more of a coercive or punishment nature than antidiscrimination legislation and therefore fail to have the required permanent effect (OECD, 2010:135).

Up to the 1990's, the legislation on the quota system in Italy made it possible for employers to use selectivity (Könczei, 2006). This meant that employers could choose from the disabled persons seeking employment on the basis of their work performance capacity. As a consequence, employers chose to employ less "problematic" persons, i.e. those who were likely to take on more workload and were in a better health condition. The enforcement of Act 68 of 1999 was meant to improve this employment practice in Italy.

The restriction of selection could be implemented through the control of Employment Services, too, but as suggested in the statistical data on employment assistance tools it can be assumed that the offices fall short in terms of efficiency and effectiveness.

According to the current legislation employers active in the public and private sectors are obliged to employ persons with disabilities and reduced work capacity of the following categories:

- Persons with bodily, sensory, intellectual or mental disabilities, of employment age whose work capacity is reduced by over 45%.
- Persons with restricted vision or hearing.
- Persons disabled as a consequence of war, civil war or accident at work.
- Persons disabled as a consequence of accident at work whose disability is over 33%.

Pursuant to this act organisations operating both in the private and the public sectors are obliged to employ employees with disabilities or reduced work capacity of a certain percentage, depending on the number of their employees. There are 3 categories differentiated in the legislation as regards obligatory employment:

- employers with more than 50 employees must employ persons with disabilities and reduced work capacity to make up 7% of their employees,
- work places with 36-50 employees must employ at least 2 employees with disabilities;
- organisations with 15-35 employees must employ at least 1 person with disabilities in case they recruit one more person.

Employers meet their statutory obligations only if they hire persons with disabilities or reduced work capacity for the longer run. The target group hired with a temporary contract for less than 9 months are not to be considered here.

If employers fail to meet the obligator employment requirements, they have to pay a compensation fee to a special fund. This fund coordinates and helps the labour market integration of employees with disabilities or reduced work capacity at the regional level (Internet 1).

Despite the statutory obligations, companies of smaller sizes typically either do not employ more than 1 or 2 persons with disabilities and only for shorter periods merely so as to meet statutory obligations, or prefer paying the fine. For these reasons, persons with disabilities are unable to work for the long run and are permanently excluded from the labour market (Saroglia, 2009).

The principle of positive discrimination is reflected in measures that help certain types of disabled persons find a job. Blind or impaired vision people are granted preferential treatment in the following jobs: phone operators, rehabilitation specialists and

physiotherapists, computer programmers, teachers, musicians, jurists, journalists, psychologists and public employees.

In the public sector, certain ratios of both advertised and directly recruited positions must be made available to employees with disabilities and reduced work capacity. For instance, 2% of teachers' positions must be reserved for impaired vision people. Private and public hospitals must employ at least one therapist with impaired vision and must reserve 5% of all positions for this category (Internet 1).


**Conclusions**

As a way of summary we can establish that the Italian employment policy system orientates people with disabilities and reduced work capacity towards the open labour market instead of protected employment. It typically applies the method of rehabilitation quotas for realising this goal. In addition they put great emphasis on the implementation of equal opportunity and non-discriminatory attitude, which mean a legally imposed protection of people with disabilities and reduced work capacity at the labour market. All these comply with the spirit of EU regulations and directives.

The effects of the protection and positive discrimination granted at the labour market are especially apparent in public health care and education as well as in the public sectors. In these fields, the economic activity of the target group is higher compared to other sectors. As a good example it is to be noted that a wide range of protected positions are specified where, when filling certain positions, persons with disabilities or reduced work capacity must be granted preferential treatment or these protected positions are reserved for them up to a certain percentage.

It is another characteristic feature of Italy that, thanks to the interest representation efforts of persons with disabilities and reduced work capacity and the solidarity between employees working in the same sectors, Italian trade unions paid special attention to the increased protection of their colleagues with disabilities and reduced work capacity from the 1970's already, much preceding the attitude of our time. This attitude can, in my opinion, serve as a good basis for a successful implementation of workplace integration and inclusion.

Another typical feature of Italy comprises reasons underlying employment differences between the genders, which reflect the traditional attitude of the Italian people. As regards the perception of distinct gender roles there are no differences between the disabled and non-disabled population.

The legislative environment in Italy makes eligibility for subsidies and allowances possible and allows for participation in various labour market services. There are significant differences as regards the efficiency of the employment services offered to jobseekers with disabilities or reduced work capacity considering the various provinces. This implies that provincial employment services have their own competence to decide on the priority of labour market tools. This autonomy enables the services to design and implement a set of tools adjusted to the economic and labour market features characteristic for the respective provinces.

In the Italian employment system it is primarily the method of the rehabilitation quota system by which the economic activity of persons with disabilities and reduced work

capacity and the inclusive attitude of employers are to be enhanced and fostered. These are complemented by tailored labour market services that develop employees' competencies and skills according to employers' expectations. It is thus the duty of employment services to coordinate employer demands and employee abilities. At the same time employers do have the opportunity to select jobseekers and choose employees in the best health condition.

On the whole it can thus be concluded that the employment quota system in itself is an insufficient tool for enhancing employment unless it is complemented by efficient labour market services or by enhancing the educational attainment of people with disabilities or reduced work capacity.

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# CRAVING FOR BALANCED PUBLIC DECISION-MAKING ON MARKET FAILURE PERTAINING TO THE INTERVENTIONIST ECONOMIC POLICIES' STRAINER

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**Abstract**. *The research proposes a topic of very high interest for both our national economy and the European economy as it refers to the negative externalities and their role in the economic theory of subsidiarity developed as part of the multilevel governance. The case of the negative externalities represents one of the six situations of market interventions (due to the non Pareto efficient status) and, moreover, their specific case (pollution) is on the priority list of the European Union (Treaty establishing the European Community (Art. 174/130r – EC Treaty establishing the polluter pays principle (PPP)). Romania does not have a broad experience in this area (as it is also a new Member State) or if it has it is one that has confirmed our lack of expertise (e.g. the case of the eco-duty). In order to contribute to knowledge building in this field, the project aims at developing a methodology in the area of public decision-making for a particular market failure (externalities/spillovers) by appealing to the instruments provided by the multilevel governance vision and its subsidiarity principle so to provide a more efficient relationship between the costs and the benefits of a solid environmental policy. This methodology, imagined as a decision map, must provide a correspondence between the procedural part of the decision-making (correlating the national and the European level) and the formal part consisting in a formula that weights the elements that the research finds important. This particular manuscript is a work-in-progress as it puts forward the results we have reached so far as part of a post-doctoral research. The work proves valuable as it substantiates the theoretical framework needed for the final part of the research, which will be testing the decision map. Consequently, this research was undertaken by foraying the field literature and challenging the findings on a theoretical level. It must be underlined that the findings are purely speculative and shall be listed as valid only after performing the data testing. At the same time, we should also add that part of the model has been already validated in a previous research, but the test only targeted a niche-case, namely the eco-duty.*

**Keywords:** market failure, regulation, public decision

**JEL classification:** H23; H83; K23

## 1. Background

The most striking feature of today's communities is their constantly changing nature. Decade after decade the demographic changes have turned villages into cities, cities into metropolises and those into regions. The physical features are subjected to changes, often the once known areas become unrecognizable. Less obvious, but equally important are the structural changes within a society that comes with the growth or decline measured in terms of both population and facilities. From an institutional point of view, more and more innovations of the local public administration are being designed so to catch-up with the problems created by the greater complexity of mainly the urban life (Dinu, 2011). For example, the public education or health

system had to expand their coverage over the past decades, and, at the same time, have been taking different forms so to provide the citizens with a broader choice. The public institutions and authorities must answer these needs for social organization of the local communities triggered by the above mentioned changes. Thus, as a good administrator, its mission is to find a balance between the three Cs, namely coverage, choice and cost.

Many of the changes that seem so abrupt are triggered by ecological processes and the state, through its regulatory function aims at reducing this negative externality (like pollution). The citizens and the private organizations, as part of their individual development make decisions that when collectively taken they deeply affect the physical and social community structure (Edwards, 1954). The market or distribution decisions of an industrial organization can either bring prosperity or damage a certain community. At the same time, the individual migration decision can either depopulate an area or flood a labor market. Such changes, though they make sense on the individual's level or on the level of the local community, they are senseless on the above regional level but, nevertheless, the impact of such decisions can be quite grand.

In order to substantiate the *importance* of the problem nowadays, the aim is to review the research in the field of public decision-making pertaining to negative externalities, choice of alternative actions directed towards the institutions on both regional and central or local level. The negative externalities give a focus to this research due to their role in the economic theory of subsidiarity developed as part of the multilevel governance. In this regard, the negative (trans-frontiers) externalities represent an assigning criterion based on the subsidiarity principle, especially referring to the `beggar-thy-neighbor` policies, namely air or water pollution and commercial protection (Pelkmans, 2006: 5).

The *question* raised in this particular case mainly concerns one of the state's four functions, namely the distribution function, which embodies the decisions made to ensure equity, social justice and income distribution. Aiming at such a sensitive issue like equity, it can be said that in fact the public decision-making pertaining to this distribution function is strongly influenced by the political factor, more than other decision stages like building knowledge on public sector activities and design of operations (financing method, expenditures and local and central duties), anticipating the consequences (the effects of a tax on return – price increase, wage cut, increasing the retirement age), or assessing the alternatives (Matei, 2006: 63). These stages apply for all public decisions taken in the framework of the other state's functions. For example, in the case of the allocative function, due to the fact that the public decisions pertaining to this function aim at the government's intervention in the market's allocative function so to correct its negative effects (*e.g.* negative externalities), the stage referring to consequences' anticipation proves to be quite important (Matei, 2003: 26-27). A similar situation can also be found in the decision context of the stability function, which intervenes in case of macroeconomic imbalances seen in the case of inflation, unemployment, economic downturn, deficits of the trade balance and balance of payments etc. (Ailenei, 2002: 29). In turn, the public decisions pertaining to the regulatory function aimed at reducing the tendencies towards monopoly or, in the context of this research, the negative externalities refer to setting limits for the discretionary behavior and freedom of individuals by imposing certain rules (through a functional juridical system), thus emphasizing the decision-making stage that aims at building knowledge on the public sector activities and organization.

Going back to the public decision-making, no matter to which state function pertains to, the decision variables specific to the field where the decision is applied are difficult to be defined. In the public decisions' case the problems at stake are specific to both the private sector (efficient allocation, productivity, performance (Constantin et al., 2011)) and to the issues that only concern the public field (provision of public goods and services, collective choice, externalities). All in all, the public decision-makers dilemmas can be formulated as follows: What is to be produced? How is to be produced? For whom is it to be produced? How are these decisions made? (Stiglitz, 1999: 14). Therefore, the influence of each variable become important, be it

contextual (organisational culture, strategy, stakeholders, legislation, and so on) or which intervenes in the decision efficiency (economic and social status, technical parameters, so on and so forth). Thus, the answer to the first question (What is to be produced?) lies in the resource allocation, underlined in the field literature with the help of the Production Possibility Frontier (PPF) instrument. The second dilemma must search its answers in the combination of the production factors (labor, land and capital) captured by the governmental policies (e.g. the environmental policy adopted as a response to a specific negative externality may affect at least one C (namely, Choice of technology). The target group (For whom is it to be produced?) is defined by the distribution, which is equally influenced by the fiscal policy (*e.g.* eco-duty) or by the public goods provided so to satisfy the needs of certain groups – free rider problem (e.g. the Romanian Jalopy Program) (Dinu, 2011: 32-37). The decisions are collectively made (`tragedy of the commons`) and, as mentioned above, have different stages: building knowledge on the public sector activities and operations, anticipating the consequences, assessing the alternatives and the influence of the political factor (Matei L., Dinu T., 2011).

The problem's elements of difficulty lay within the implementation of the policies avoiding or correcting the negative externalities. The multilevel governance system of climate policy presents both opportunities and challenges for policy makers […] the capacity of decision makers operating at any one level can be enhanced or (more frequently) constrained by the policies at other levels (National Research Council, 2010: 318), e.g. the case of the Romanian tax-register (Dinu, 2011: 25-39). The same problem pertaining to the subsidiarity and the environment is underlined by Pelkmans (2003: 53) namely whether competencies should be assigned on the European Union's level with regard to following a certain environmental policy. Pelkmans best emphasizes the core of the problem in the case of the trans-frontiers negative externalities (most of them are from the environmental field): should the European Union have an exclusive competence considering the fact that the EU countries have different national characteristics? It would probably not happen mainly because at least a part of the environmental problems are local, regional or national, and their differences are best considered on those administrative levels.

Therefore, the same author reveals that when establishing the objectives, one must distinguish between three levels of externalities: bi- or trilateral, community and world. This approach of the collateral effect (externalities) narrows in a way the limits of the field research. It takes us to the above stages, namely cooperation, and when that fails (and it usually does when there are more than two actors involved) it comes down to the bargaining powers (Dinu, 2011: 28-30). In fact, the integration process is led by the collateral effects from a policy field to another (Molle, 2009: 34), as we shall present the case of the collateral effect from the fiscal policy to the environmental one.

## 2. The research aims

The overall aim of the project is to design a map of the public decision-making for a particular market failure (externalities or spill-overs) by appealing to the instruments provided by the multilevel governance vision and its subsidiarity principle so to provide a more efficient relationship between the costs and the benefits of a solid environmental policy. This map – as entitled in our project refers in fact to a specific methodology) – must provide a correspondence between the procedural part of the decision-making (correlating the national and the European level) and the formal part consisting in a diagram that weights the elements that the research finds important (e.g. the formula establishing the method of calculus for the eco-duty has led to its suspension for reason of conflict between decision level and stakeholders, as it does not take into account both the contextual variables and the technical indicators).

The *challenge* is to foray into both the field literature and the case study archives pertaining to the particular case of the eco-duties on both national and European Union level, following

*actions* like establishing fiscal rules either to give in to the bargaining power of the negative externalities' `producer' or to the bargaining power of the negative externalities' `consumer`, thus reaching the *result* of keeping the cost of regulation to a minimum level so the market failure does not turned into a regulation failure.

The case of the negative externalities was picked out of the six situations in which the markets are not Pareto efficient - (1) Failure of competition, (2) Public goods, (3) Externalities, (4) Incomplete markets, (5) Failure of information and (6) Unemployment, inflation and imbalance – firstly because of its topicality and the intense debates that has been triggering in the EU-27 (Community guidelines on State aid for environmental protection 2008/C 82/01; Treaty establishing the European Community (Nice consolidated version) - Part Three: Community policies - Title XIX: Environment - Article 174 - Article 130r - EC Treaty (Maastricht consolidated version) establishing the polluter pays principle (PPP), and so on) and, secondly, for sensitive issue that the most well-known negative externality (pollution) has proven to be. The reason for its highly sensitive feature, which in fact allows the intervention, refers to both sides of a failure. One is that the best possible result was not reached followed by the necessity to act, and the other is that the actors involved are unable to cooperate.

The *outcome* of the project refers to a regulation strategy that can lead to the best framework in which the internal market can function, so that it reaches all three types of efficiency (technical, allocative and dynamic), effectiveness, economy, and equity. It goes without saying that the regulation strategy shall be defined only after establishing whether the regulation in itself can be justified, namely whether the market failure is overrun, the regulation is in its lowest cost version and its net benefit is positive (Dinu, Socol, Marinas, 2004: 142).

In order to reach the overall objective of the project, a number of six derived research *hypotheses* are formulated:

1) The economic theory of the European Union multilevel governance, with its core consisting in the subsidiarity principle, puts more pressure on the national distribution decisions, as they also include the integration costs, though it interferes with all state's functions and their specific decisions.

2) For the subsidiarity principle to be applied in the environmental field the European Union must have competence in the environmental policy field.

3) Though the integration led to a single market, it cannot be considered as governed by a single authority like is the case for a federation, but it is still a fact that it must deal with trans-frontier issues.

4) There is a growing awareness that the positive effects of a single market are offset by negative externalities.

5) The negative (trans-frontiers) externalities represent an assigning criterion based on the subsidiarity principle (Treaty establishing the European Community (Nice consolidated version) - Part One: Principles - Article 5 - Article 3b - EC Treaty (Maastricht consolidated version)), especially referring to the `beggar-thy-neighbour` policies, namely air pollution, and this provision is in itself a reason for the national economies to act should certain negative externalities occur.

6) The public decision on negative externalities' coverage, made in accordance with the economic approach of subsidiarity in the multilevel governance provides a balanced solution for all interested parties – citizens, economic agents and the government (establishing a map to cover the social costs created by the negative externalities should be in line with both the national and European decisions, but, at the same time, suspending that map when it is conflictive is not an answer; it would leave the social costs uncovered).

Therefore, the above hypotheses are formulated as a tether to the project's *secondary objectives (SO)* that help reach the overall objective. The research project is designed for a two year period and it follows a structure in line with these six objectives and their connected

activities. An overview of the field literature as well as aspects that have not been researched yet and we consider them relevant are provided. The first *SO* aims at analyzing the national distribution decision framework (e.g. decision on covering social costs) and its folding to the European framework. The second *SO* aims at estimating the impact of the subsidiarity principle in a field relevant for our research (Radu, Constantin, 2007), namely the environmental field. The third *SO* searches to identify the nature of the problems covered by the application of the subsidiarity principle in the environmental field (e.g. trans-frontier issues) and identify the specific sources of their creation. The forth *SO* pulls us from the existent literature and takes us to the analytical part of the project, namely the one aiming at testing the stakeholders perception on the project's main concern (i.e. the negative externalities) in the framework of the single market's effects. The fifth SO is the one aiming at already sketching a part of the project's conclusions and it examines the capacity of the European and national decision-making level to jointly address the negative externalities, thus covering the social costs they triggered for both parties. The sixth *SO* consists in designing and delivering a specific methodology (entitled a *map* in the project, Figure 1) for identifying both the cause and the effect of the public decisions on negative externalities' coverage.
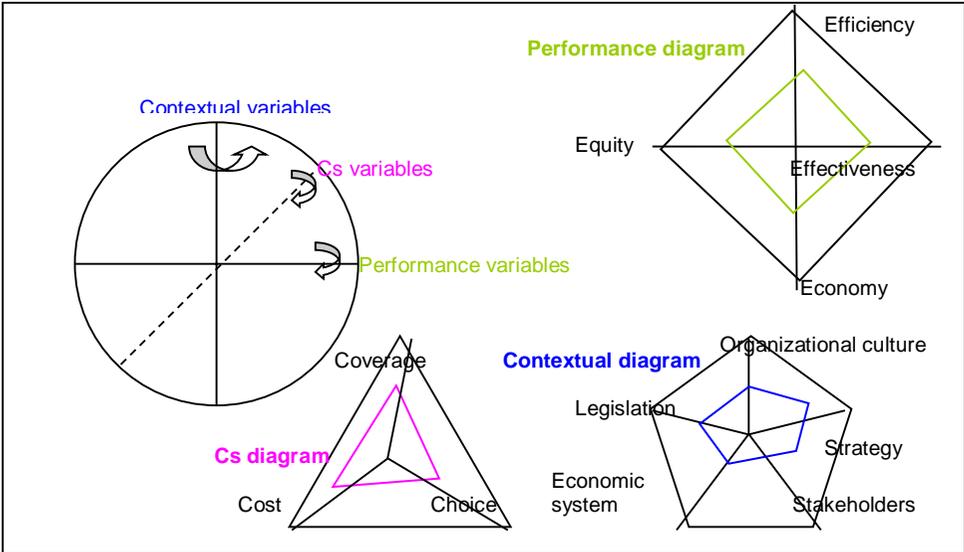


**Figure 1.** Decision map
Source: own elaboration using the graphic method to pinpoint the variables and polar diagrams to calibrate each variable

In terms of *innovation*, the project draws attention to the cause and only after to the cure. In other words, it appeals to the adverse method and therefore looks in-depth of the negative externality, namely the pollution, so that it will better provide a regulating solution. The adverse method implies a clear analysis of the negative externality so that the decision makers know what they are dealing with when designing public policies and implementing decisions in order to reduce the phenomenon. First look at the cause, not at the cure. The field research shall prove the focus of the current policies on the cure (fiscal policies, multilevel governance) (Blank, 2010; Pelkmans, 2003: 54-55; Termeer, Dewulf, Lieshout, 2010; Ostrom, 1990, Dietz et al., 2003; Dinu, Socol, Marinas, 2004: 142-146; Molle, 2009: 34-42; Miron, 2002: 453-465) and not on the cause (negative externalities) (Martinas, Matica, Srbljinovic, 2010:104-110; Pelkmans, 2003: 53-54).

The targeted *impact* is upon the public decisions pertaining to national fiscal issues triggered by the necessity to correct the market failure issue, namely the negative externalities and the failure of competition (like green taxes or Eurovignettes, and the cartels). Government's intervention is seen as a remedy only if it provides a net benefit that outruns the costs of intervention. Otherwise, the necessity to take action becomes the necessity to justify inaction.

## 3. Methodology

The investigation methods and instruments were selected so to best validate or invalidate all six derived research hypotheses. Their integration is accomplished in accordance with the 'zoom in' approach, from the big picture provided by the economic theory on subsidiarity in the multilevel governance to the narrow image of the national public decision on negative externalities.

Therefore, the first three research hypotheses had been tested by using a methodology consisting in a broad bibliographical study so that the reason behind the paper is clearly emphasized. Further, the research makes use of direct observation and analysis of legislative texts with regard to the public decisions in the fiscal and environmental fields.

The qualitative research had been greatly improved by using the search engines provided by the Legislative Council of Romania and by EUR-Lex, which allowed us to correlate the national public decisions with the ones made on an European Union level, go in-depth of the adoption, motivations and implementation timelines.

The forth hypothesis involves the use of a structured interview. This method was chosen because it allowed a reliable comparison between sample subgroups and survey periods. Giving the difficultness of the selected topic, a simple questionnaire would not have been a better instrument as the respondents may be in need of further clarifications. At the same time, in order to avoid unreliable answers, the sample had been selected only from public servants who were employed by units directly dealing with this matter. It must be underlined that the hypothesis that has been tested refers to the awareness of the field specialists. The respondents had been selected both from the national fiscal authorities as well as from the environmental and competition authorities. Testing the perception of the stakeholders becomes more and more important in the context of the current struggle to deliver a single market for consumers and citizens (2010/2011(INI)).

The fifth research hypothesis aims at an interpretativist work based on the documents gathered and the performed text analysis. Should the hypothesis be validated, an additional goal is to promote this type of methodology based on interpretativist research as a way to facilitate a better understanding of concepts, which will allow the transition from theory to practice. *This is still a work in progress.*

The sixth research hypothesis finds itself in the practical side of the project and is meant to become a case study fit for the seminars of the course held by the project leader (Public Economics and Public Law, in line with the field on interest of the authors). The used methodology also involves a qualitative research and takes the form of an interview. The interviewees shall come from all three areas that the public decision on negative externalities and failure of competition reaches: citizens, economic agents and government (the ministries and authorities in charge).

## 4. Limits and implications

*The risks* mainly referred to changes in legislation, both on a European level and on a national level. In order to cover these risks a careful monitoring of the field legislation was required. Moreover, for the methodology use, there were several risks involved and they mainly referred to a slight rejection of the investigation methods by the target group. For example, in the case of an interview, which can be considered a dull instrument by the interviewees, they tended to avoid the answers for reasons like time consumption or political pressure. In this sense, the

selection of the sample had been taken the main lead in the interviewing process. Field interviewers dedicated more time to closely select the interviewees. At the same time, the project leader reserved the right to also add other methodological instruments if needed. There were also risks concerning the scheduled timeframes, the research stages or the work visits that involve maintaining a contact with the host institution. To cover that risk a permanent dialogue had been established through a permanent contact in the Ministry of Finance and the Competition Council.

At first site, the lack of a clear understanding of the impact that the public decision on covering social costs triggered by negative externalities and the failure of competition could suggest a rather high risk regarding the project completion and revaluation of the result. Nevertheless, the way it is designed brings the risk to almost zero considering the competences of the Principle Investigator, Mentor, and fellow researchers' thorough structure, timelines and resources involved.

## 5. In conclusion

Public decisions pertaining to the regulation function on the state, aiming at reducing the monopoly tendencies or, in this particular case, the negative externalities, mainly refer to establishing the limits for the discretionary market behavior, by setting rules as part of a functioning legal system. This is an important step in the decision making process aiming at better knowing the public sector's activities and operations. The research topic is original through the perspective it offers by analyzing both the micro and macro effects that calibrating the economic policies to the complexity of the market failure have on the current conditions, thus adding to the traditional studies only examining the capacity of the economic policies to fulfill the criteria established by the economy's cyclical nature.

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# IMPLICATIONS OF CSR ON CORPORATE STAKEHOLDERS

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**Abstract**: *Companies' strategies and values must be in accordance to stakeholders' expectations and needs because their role and influences on companies' activity are decisive for companies future development. Corporate Social Responsibility is a meaningful way through which companies can pursue sustainable development by having a coherent economical, social and environmental perspective on how the business should be managed. CSR must become an integral part of corporate management system, because it has a major role in distressing the relation between company and major stakeholders, both internally and externally. CSR is a global phenomenon, which draws the attention of a growing number of partisans, from public private and social sector. To demonstrate the applicability of the theoretical approaches deduced from the existing literature, the authors recourse to an empirical qualitative research, conducted through a questionnaire implemented to top managers, HR managers and heads of CSR departments within large companies that operate in Romania. The research is based on the analysis of a number of 87 questionnaires and aims to highlight major stakeholders and finding how companies' responsible activities can influence stakeholders. This study is designed to highlight how prioritization of stakeholders influences CSR initiatives within large companies that operate in Romania, and to present a perspective of company's approach towards shared value influence major stakeholders. The conclusions drawn have a greater relevance both theoretically and especially practically because provides insights on how large companies perceive CSR and how stakeholders influence responsible initiatives in emergent country like Romania where stereotypes are difficult to manage.*

## 1. Introduction

Sustainable development became a topic of major concern because of the abusive consumption of resources, global warming, environment pollution, over production factors that led to devastating consequences on the whole society.  Both, organizations and consumers need to address the issue of sustainability, by setting a balanced relation between responsible consumption and quality of life. As in the past century, companies were oriented on rising productivity, now the future trends are to increasingly reducing footprints on environment and society, through innovative solutions and effective methods of production (Dunphy, 2003).

The capitalist system was considered to be the main factor of economic, social and environmental degradation, companies playing just the role of prospectors, while community is the one that pays the real price for the disequilibrium created (Porter & Kramer, 2006). However many negative examples demonstrate that there is a mismatch between how companies achieve financial and economical results and how they address social and environmental problems. Unfortunately, several corporations in their unstoppable growth due to unethical practices, have determined serious crises with tremendous negative effects: e.g. financial crisis of 1997 that impacted severely the

economy of Thailand, Indonesia, South Korea, Malaysia and the Philippines (Achbar et al., 2004); the Enron and WorldCom scandal that trigger the collapse of companies such as Arthur Andersen, Global Crossing and Tyco; toxic emissions of Motiva refinery from Port Arthur, Texas, with deadly effects on the local community (Held, 2002).

International organizations such as the United Nations Conference on Trade and Development (UNCTAD), United Nations Development Program (UNDP), the World Trade Organization (WTO), the World Bank and the Organization for Economic Cooperation and Development (OECD), have proposed various ways in which poverty can be reduced, corporations having a major role in poverty alleviation. According to the International Labor Organization, poverty is a consequence of low wages and lack of job opportunities for vulnerable persons. United Nations Industrial Development Organization claims poverty alleviation relay on the way companies decide to solve social problems for those in need, providing job-opportunities, paying fair wages, providing proper working conditions.

Michael Porter introduced the concept of "shared value" that imposes to companies more than developing their business using the premises of economic, social and environmental principles, but extending CSR practices to the status of a company core value, in order to increase the company's competitiveness (Porter and Kramer, 2011). Shared values involve delivering social and for community's interest, focusing on identifying and developing partnerships between for profit and non-profit sector. According to Deshpandé et al., (1999) reaching "shared value" requires special skills and knowledge such as deeper recognition of society needs, a better understanding of the main elements of productivity, and collaborative predisposition with non-profit sector.

Corporate social responsibility (CSR) becomes a main topic on the agenda of companies that want to become appreciated on the market. Studying why corporations become socially oriented and what factors influence their approach toward CSR provides insights of how strategic development is in pursuit to achieve sustainable development. CSR must become an integral part of corporate management system, because it has a major role in distressing the relation between company and major stakeholders both internally and externally. Thus, any company that wants to become a relevant actor on the market, should struggle to combine commercial practices with social values.

According to Corporate Social Responsibility Ranking, Global CSR Reptrak (2014 ) Top 5 ranked out of 100 companies are: Google, Microsoft, Wald Disney Company, BMW, Apple, demonstrates that performing and profitable companies have been able to redesign their market approach in a sustainable way, by successfully linking corporate performance to CSR. To sustain practices in the meaning of ensuring companies' sustainable development, the state should play a decisive role by providing coherent instruments and designing organizations meant to sustain companies' social and environmental value creation. Needs of current society and of the new generations are becoming more complex, while consumers, employees and the society expect more implication from both public and private sector in solving social problems.

In the next section we underline the results of our research, by observing how companies approach towards CSR influence company's stakeholders.

## 2. Prioritizing Stakeholders

Stakeholders tend to exert constant pressure on economic and social programs initiated by business sector, making them to become more sensitive to their needs and expectations, setting companies' overall strategy values and moving from coincidental CSR practices to complex, consistent and long-term approaches (Corporate Citizenship, 2012). Thus, company's stakeholders approach is a meaningful source of documentation that should be addressed to acquire understandings of how the companies should relate their activity to reach better performances, better risk management and easier identification and

development new opportunities. Therefore, Stakeholder engagement is a tool recommended by most international standards for sustainability reporting: G4 GRI, AA1000, ISO 26000.

Nevertheless, considering the variety of stakeholders that have different expectations and needs, developing a sustainable strategy might become not only challenging to reach in terms of economic targets but also makes difficult to set CSR strategies. On the other side, those companies that are not clearly consistent with ethical and moral principles, impacting negatively society and the environment, will be renegade by stakeholders such clients, unions, employees, local community.

Thus, setting the premises of a good relation with major stakeholders for positive long term effects imposes the establishment of commitments allowing the development of close relations with employees, suppliers, clients and local community that will actively contribute to the organization's performance.

CSR practices will draw companies' attention on moral and ethical norms in relation with the economical parameters (Nelson, 2003). The stakeholders perspective on how CSR initiatives influence company's activity and relationship with them is drawn, by analyzing the relation between CSR, corporate strategy and performance achieved (McWilliams et al., 2006). Also addressing the motivations behind these CSR initiatives will reveal companies responsibilities and obligations (Basu&Palazzo, 2008). How companies choose its' major stakeholders and the methods implemented to serve their expectations and needs, reveal companies' priorities and future perspective of the business. When setting CSR strategy it is mandatory to consider stakeholders' expectations, because this approach will avoid losing focus on major stakeholders and the costs required to satisfy their needs.

Shareholders show a growing interest towards corporate social involvement, because it provides premises for companies' sustainable development, being considered a way for strengthening companies' foundations. On the other side, media, civil society, are forceful critics when it comes of assessing performance, ethical and moral behaviour. CSR provides the instruments through which shareholders may determine executives to reach their expectations (Mathiesen, 2002), but management and board of directors, should accurately report data, relaying on ethical and moral principles, so shareholders interests will be pragmatically addressed. On the other way companies need to develop a close relation with the community from where it drowses not only customers but also employees, suppliers. The employees play a key role in business activity especially by influencing customers' image of the company (Belbin, 2011). Companies should consider using CSR to create a two way relation that is mutually advantageous, this being possible only if CSR will be seen as a necessity rather than an obligation.

CSR practices oriented to improve people's life bring major benefits to the company in terms of reputation and the increase of the customers' gratitude for the actions that help improve the consumers' life conditions (Hopkins, 2004). Company's association with CSR practices exercise a strong influence on the image perceived by the customers (Brown and Dacin, 1997), influencing clients' preference for a particular product or service (Sen and Bhattacharya, 2001).

According to European Union, CSR's definition encompasses company's approach towards its main stakeholders that take the form of assumed commitment to have a responsible and ethical conduct, contributing to community economic, social and environmental development (EU, 2011). In this context, CSR is not a mandatory mechanism, but a way of aligning voluntarily to a number of practices that are beneficial both for society and for the company that implements it. Thus, developing a coherent legal framework, designed to ensure the relationship between the company and stakeholders

might enable corporations to set future strategies in accordance to major stakeholders' needs and expectations.

Due to stakeholders' constant pressure on economic and social programs initiated by companies, results are visible in the implementation of CSR policies, becoming increasingly more significant part of the overall strategy of the company, moving from sporadic and coincidental practices, to practices that are complex, consistent and long-term aimed (Nelson, 2007).

## 3. Research methodology

This study is designed to highlight how prioritization of stakeholders influence CSR initiatives within large companies that operate in Romania, and to present a perspective of company approach towards shared value influence major stakeholders.

The research is based on the analysis of 87 questionnaires, and the respondents were top managers, HR managers and heads of CSR departments within large companies that operate on Romanian market. The implementation process took place from November 2014 to January 2015, and has reached 1146 large companies operating on Romanian market, via e-mail. We got 87 valid answers and a response rate of 13.17%. Although this is a low percentage, due to the topic addressed, the results can be very well generalized and clear strategies might be highlighted.

*Objective and hypothesis*

O1: Identifying major stakeholders and their contribution in companies' long term development plan

H 1. Companies' clients are considered to be the most important type of stakeholder due to the significant impact on business development

H2. Companies' development rely significantly on clients, employees and shareholders.

The limits of this study is given by the small number of respondents, which stems from the method used to disseminate the research instrument, the low availability of respondents in filling in the questionnaire, the lack of readiness and of social awareness, and the difficulty of finding suitable respondents to provide reliable answers.

## 4. Results interpretation

Based on a predefined list of the major stakeholders that can influence CSR initiatives, the respondent had to point from 1 to 12, where 1- is the most important and 12-least important, the most representatives stakeholders that influences companies decisions. Thus, they had been able to remember those stakeholders that otherwise would have been difficult to spontaneously remember.

**Table 1.** Stakeholders Repartition according to their importance

| Stakeholders | Mean |
|---|---|
| Own employees. | 3,11 (SE= 3,234) |
| Customers. | 4,30 (SE= 3,3319) |
| The local community. | 5,30 (SE= 3,130) |
| Business partners. | 5,89 (SE= 2,513) |
| Public authorities. | 6,00 (SE= 3,234) |
| Shareholders. | 6,01(SE= 3,563) |

| Stakeholders | Mean |
|---|---|
| NGOs. | 6,53 (SE= 7,795) |
| Investors. | 6,72 (SE= 3,034) |
| Press/Journalists. | 7,33 (SE= 2,763) |
| Financial Analysts. | 7,48 (SE= 3,477) |
| Competitors. | 7,48 (SE= 3,577) |
| Unions. | 7,55 (SE= 3,508) |

Source: Own research

The first stakeholder, in terms of importance, was considered to be the employees that demonstrates respondents' considerations for the human resources. Nevertheless, the employees play a tremendous role in companies' activities, and the progress and development relay on employs skills, abilities, capacities to produce value for the companies' purposes and to create synergy. Actually without having a proper human resource, no company will be able to reach not only economic objectives but neither environmental nor social objectives. Customers are considered to be the second stakeholder as importance. This finding is justified by the fact that every company has as a main objective to be profitable, by selling goods and services to a larger number of clients. So companies in their struggle to reach competitive advantage must understand customers' expectations, needs and perceptions. Considering local communities as a major stakeholder demonstrates that companies tend to be very attentive not only to community's reactions towards companies' activities, but also in assessing companies' impact on local environment and local society.

Less important are considered to be the unions, this can be out of two reasons, either employees rights are respected and the active involvement of unions is not needed, either unions are not interfering to much in companies' activity.

Next step was to identify how companies' managerial decision meant to reach shared value impacts stakeholders. Considering that top management decisions and strategies influence stakeholders perceptions and expectations, knowing which of them has a greater influence on specific activities that strenghen the company, is of a major importance in prioritizing stakeholders and future perspective of how the company should be managed finding common interests that led to the same result. Thus we have considered four main variables that from our point of view play a major role in companies' development in a sustainable waym, not only economicaly but also social and environmental like: "activities meant to reach sustainable development", "CSR contribution to general strategy consolidation", "companies notoriety on the market developed through social and environmental campaigns", "social companies continuity developed by companies" (see table 2). Actually, following respondents' perceptions of how these action developed by companies impact major stakeholders, will provide insights of stakeholders' perceptions enabling strategic decisions of how companies should use social responsible practices to meet main stakeholders' expectations, all these leading to benefits that in the end impacts company's development, recognition and continuity.

**Table 2.** The role of major Stakeholders

| | Sustainable Development | CSR contribution to general strategy consolidation | Companies' notoriety on the market through social and environmental campaigns | Social companies continuity developed by companies |
|---|---|---|---|---|
| Shareholders. | F=8.372; **** | F=9.407; **** | F=4.280; *** | F=11.188; **** |
| Unions. | F=3.928; * | F=.365; n.s. | F=3.475; * | F=.691; n.s. |
| Business partners. | F=2.414; n.s. | F=6.972; **** | F=4.088; *** | F=10.744; **** |
| NGOs. | F=3.824; * | F=4.243; *** | F=3.771; ** | F=10.97; **** |
| Investors. | F=5.543; *** | F=.295; n.s. | F=2.551; n.s. | F=8.933; **** |
| The local community. | F=12.471; **** | F=4.902; *** | F=6.309; *** | F=24.199; **** |
| Competitors. | F=.288; n.s. | F=1.030; n.s. | F=.948; n.s. | F=9.498; **** |
| Public authorities. | F=7.354; **** | F=9.750; **** | F=2.672; n.s. | F=7.110; **** |
| Own employees. | F=5.920; *** | F=12.483; **** | F=5.514; *** | F=8.188; **** |
| Customers. | F=9.489; **** | F=8.317; **** | F=2.261; n.s. | F=3.152; ** |
| Press/Journalists. | F=9.938; **** | F=1.198; n.s. | F=.777; n.s. | F=5.871; *** |
| Financial Analysts. | F=3.020; n.s. | F=.450; n.s. | F=9.962; **** | F=9.332; **** |

*****$p < 0.001$;   ****$p < 0.010$ ;   ***$p < 0.05$;   **$p < 0.1$;   n.s.=nesemnificativ;   p=significance level; F=ANOVA test*

Source: Own research

Developing activities meant to reach sustainable development besides social and environmental effects, we observed that these practices influence the greatest majority of stakeholders. Greatest correlations have been established with local community, the press/journalists, customers and stakeholders. According to customers' perceptions, the practices meant to reach sustainable development strongly influence them because this can be reached out not only through new innovative products, better quality, but also with the aid of their active involvement in the process by buying these companies' products. Business partners are not influenced by company's sustainable development, that can demonstrate that once making businesses together this aspect do not play a significant role in the collaboration and criteria such as price, quality, costs are more important. Also, companies sustainable development do not influence competitor approach of the market that could lead to the conclusion that CSR is not seen as being a core factor in gaining competitive advantage.

The greatest influence of CSR to general strategies' consolidation can be seen on the employees, shareholders, and customers that is justified due to their role in companies' decision making process. What surprised us was that insignificant correlations that were established with competitors that makes us to conclude that the majority of the companies that operate on Romanian market do not consider CSR an important differentiating factor from major competitors.

Analysing the influences of companies' notoriety reached through social campaigns on stakeholders, we can see correlations are not so intense, except one established with the financial analysts. Also a significant correlation but with a lower intensity was established with „local comunity", „employees" and „shareholders". Newerthless, compared with previouse cases we can conclude that companies' nothoriety through social and charitable actions do not strongly influences stakhoders perceptions of the company.

The last aspect considered was identifiyng how companies continuity in developing social companies impact the stakeholders. Thus we observe major correlations with the greatest majority of stakeholders except unions. This underlines that once companies consider CSR a core value this must be sustained through continuous and persuasive actions, because only so stakeholders will associate the company with social activities.

## 5. Conclusions

The national competitiveness has determined companies to find new ways of differentiation, CSR becoming more and more important, not only in developed countries but also in developing ones. Stakeholders play a significant role in the decision making process, influencing the priorities of strategic managerial decisions. Thus, companies should rely on clear set of values meant to enable companies to prioritize them considering its vision, expectations, strategies, and core values. Knowing how stakeholders are influenced by companies social responsible decisions, will enable company not only to redesigning CSR strategies in order to have a major impact on those relevant ones, but it will make easier to forecast stakeholders' perceptions and reactions towards the company.

A major question addressed by this article is referring to the identification of the most relevant stakeholders perceived by representatives of the companies that operate businesses on Romanian market, and how are they influenced by those strategies.

Studying how CSR is perceived and approached by companies on emerging markets like Romania is a topic of interest both for theoreticians and academicians, because provides insides of how shared value can be achieved through CSR providing a point o view, of how should social, economic and environmental components be integrated, in the companies' overall strategy.

Currently there is a significant lack of structure and rules to guide clearly social responsible practices and most companies end up to superficially treat CSR. In this framework, the state must learn how to play the decisive role, this can be achieved by building legislation to support value creation. Needs of our society and those of the new generations are getting greater and much more complex.

## 6. Acknowledgments

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# STATE AID AND COMPETITIVENESS COMPOSED INDICATORS FOR ROMANIA AND SLECTED EU MEMBER STATES. A COMPARATIVE ANALISYS

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**Abstract:** *Despite the proclaimed revival of the industrial policy, state aid granted by the EU still remain at a concerning low level. This may be explained by EU's unique institutional achitecture, that allows the European Commission to monitor and restrict state aid related activities in the member states. Relying on 2007 –2013 statistical data published by Eurostat, AMECO and OCDE data bases, the main purpose of this paper refers to determining the corelation between state aid authorised by the European Comission for Romania and some selected member states and their competitiveness level, in the period 2007 – 2013.*
*Even if the member states government would know which industry of company should br supported, the actual allocation of the public fund is strongly influenced by legitime interests. Therefor, state aid allocation is usualy dependent on political considerations and on the negotiation power of the involved parties, rather than on economic objectives.*
*The main purose of this paper is the following: firstly to determine the relation State Ais – Competitiveness, analysing the cases of Romania, Germany, France, Austria and Poland between 2007 and 2013; and secondly t determine if there is a measurable impact at national level, and to identify new growth possibilities of state aid efficiency.*
*Our main hypothesys is analysed with the help of an original system consisting in competitiveness agregated indicators and their corespondents from the state aid field, and the results obtained are graphicaly presented. This paper is based on the research for the PhD thesis entitled Competition versus competitineness. State aid impact in Romania in the context of EU integration context*

**Keywords:** state aid, competitiveness, aggregated indicators, allocation, Romania

**JEL classification:** O52; R58

## 1.Introduction

Despite the proclaimed industrial policy, state aid granted by the EU to the member states still remain at a concerning low level This may be explained by EU's unique institutional achitecture, that allows the European Commission to monitor and restrict state aid related activities in the member states. Relying on 2007 –2013 statistical data published by Eurostat, AMECO and OCDE data bases, the main purpose of this paper refers to determining the corelation between state aid authorised by the European Comission for Romania and some selected member states and their competitiveness level, in the period 2007 – 2013.
Considering the availability of statistical data as well as the main objective of this paper – to determine the corelation between horizontal state aid and the competitiveness level of the selected member states, we can organise the competitiveness indicators as follows:

- Aggregated Indicators– Income Pillar (IAV);
- Aggregated Indicators – Social Pillar (IAS);

- Aggregated Indicators – Environmental Pillar (IAE);

In the following section we will consider $I^*_j$ - the indicators that need to be transformed and we will express the transforming relation for entity (i) at time (t)

$$(I^t_{ij})^* = \frac{I^t_{ij} - \min(I^t_{ij})}{\max(I^t_{ij}) - \min(I^t_{ij})} \tag{1}$$

The aggregated competitiveness indicator for entity (1) will be expressed as follows:

$$IAC^t_i = \frac{\sum_{j=1.1}^{1.4} p_j (I^t_{ij})^* + \sum_{j=2.1}^{2.4} p_j (I^t_{ij})^* + \sum_{j=3.1}^{3.4} p_j (I^t_{ij})^*}{\sum_{j=1.1}^{1.4} p_j + \sum_{j=2.1}^{2.4} p_j + \sum_{j=3.1}^{3.4} p_j} \tag{2}$$

The aggregated state aid indicator for entity (i) at time (t) will be expressed as follows:

$$IAS^t_i = \frac{\sum_{j=1.1}^{1.3} p_j (I^t_{ij})^* + \sum_{j=2.1}^{2.2.} p_j (I^t_{ij})^* + \rho_{3.1}(AS^t_{i3.1})^*}{\sum_{j=1.1}^{13} p_j + \sum_{j=2.1}^{2.2} p_j (I^t_{ij})^* + \rho_{3.1.}} \tag{3}$$

## 2.Aggregated competitiveness indicators

In this particular section we will present the values for the aggregated indicators, structured in three important pillars - IAV, IAS, IAE for every single selected member state, in the period 2007 – 2013.
Based on the values presented in the next Tabel, we will express graphicaly the evolution of the aggregated competitiveness indicator (IAC)- that will be regarded as representative for presenting and describing the general level of competitiveness for each member state and that will be used in analysing the relation between competitiveness and state aid.

**Tabel no. 1: Aggregated indicators evolution in the selected member states, during 2007 – 2013**

| MS | Indicator agregat | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|---|---|
| **Romania** | IAV | 6,93 | 6,13 | -1,5 | 2,56 | 2,62 | 1,08 | 1,10 |
| | IAS | 4,04 | 4,04 | 3,97 | 3,92 | 4,22 | 3,85 | 3,79 |
| | IAE | 4,06 | 3,81 | 3,96 | 4,02 | 3,98 | 4,07 | 4,19 |
| **Germany** | IAV | 2,34 | 4,35 | 3,54 | 5,61 | 5,68 | 4,12 | 4,08 |
| | IAS | 3,34 | 4,09 | 4,09 | 3,99 | 3,84 | 3,86 | 3,79 |
| | IAE | 3,74 | 3,38 | 3,94 | 4 | 4,07 | 4,38 | 4,39 |
| **France** | IAV | 5,67 | 3,09 | 2,86 | 4,44 | 4,25 | 4,09 | 4,05 |
| | IAS | 3,94 | 3,76 | 4,07 | 4,01 | 4,07 | 3,97 | 4,09 |
| | IAE | 3,86 | 3,89 | 3,99 | 4,01 | 4,02 | 4,06 | 4 |
| **Austria** | IAV | 3,96 | 3,97 | 3,20 | 4,66 | 4,51 | 4,57 | 4,58 |
| | IAS | 3,86 | 3,90 | 1,13 | 4,04 | 4,04 | 3,98 | 4,02 |
| | IAE | 3,92 | 3,98 | 3,99 | 4,03 | 3,95 | 3,99 | 3,84 |
| **Poland** | IAV | 3,98 | 4,27 | 2,93 | 3,7 | 4,09 | 4,19 | 4,21 |
| | IAS | 4,26 | 3,91 | 3,79 | 3,98 | 4,04 | 4 | 4,04 |
| | IAE | 3,61 | 3,7 | 4,08 | 4,08 | 4,09 | 4,58 | 5,01 |

Source: Authors calculation according to own model and based on the statistics avaliable at the following link http://ec.europa.eu/eurostat
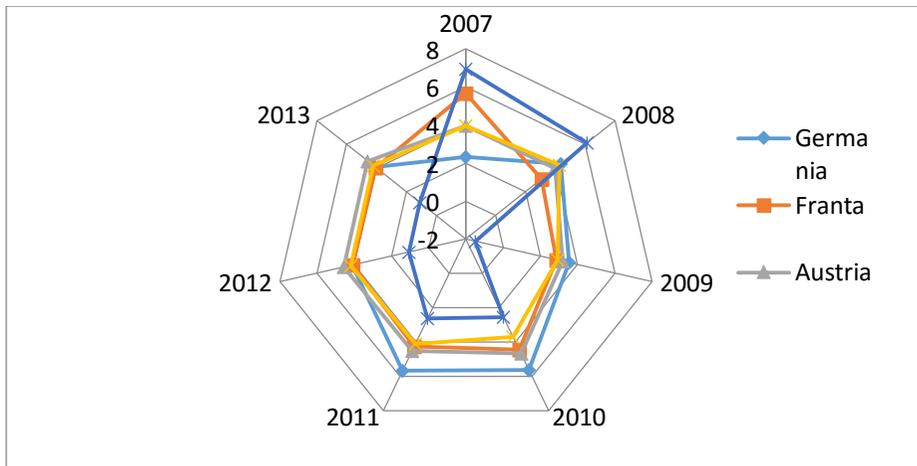
**Figure no. 1: Income Aggregated Indicator (IAV) in the selected member states during 2007 – 2013 î**

Source: Authors calculations according to own model and based on the data available at the following link http://ec.europa.eu/eurostat/web/national-accounts/statistics-illustrated

In the above figure we can analyse each member states competitiveness evolution from the Income Pillar perspective.

Analysing the above figure we can determine the ranking of the most competitive economies from the Income Pillar perspective as follows: the first position is occupied by Germany, followed by Austria, France and Poland.

The case of Romania is concerning regarded from this point of view, because our country occupies the last position, ranked at a significant difference from the other analysed states, and more concerning in 2009 Romania registred negative values for IAV. Even if this event was fvollowed by an ascending trend between 2009 and 2011, it is not sufficient to compete with the other member states.

Regarded from the Income Pillar perspective, France stagnated lately, although, the government promised „a competitiveness shock". They also tried to implement several measures for supporting the business environment and to simplify the administrative procedures in order to encourage economic growth and to reduce the unemployment rate.

Poland tried to maintain itself regarding general aspects, and this is expressed ny IAS evolution in the analysed period. Poland concentrated on improving the institutions and infrastructure to remain competitive.
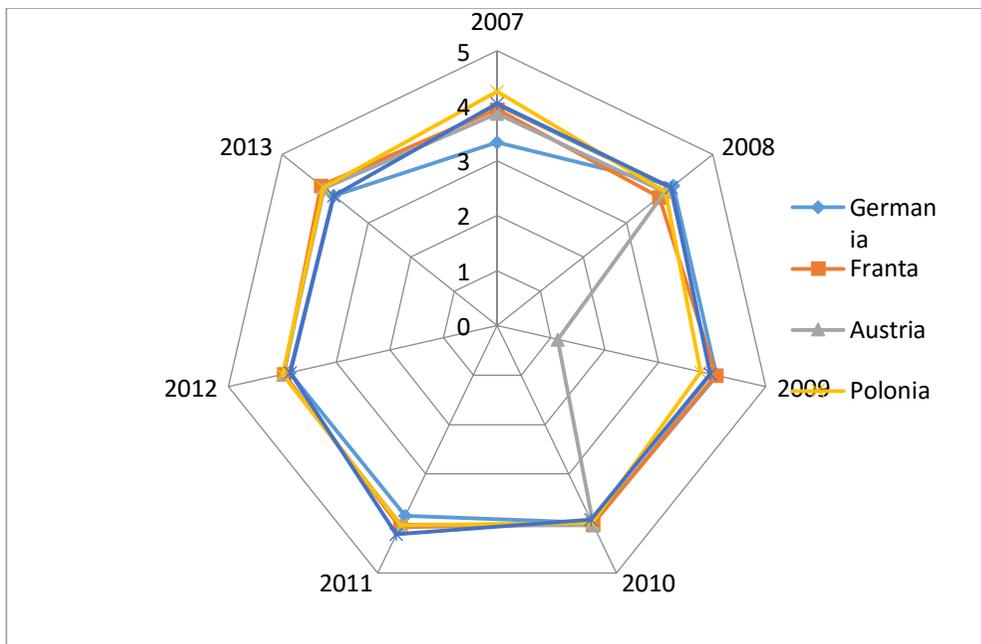
**Figure nr. 2: Social Aggregated Indicator (IAS) in the member states during 2007 - 2013**
Source: Author's calculation based on data available at the following link
http://ec.europa.eu/eurostat/statistics-explained/index.php/Europe_2020_indicators_-_executive_summary

In the above figure, we can analyse the IAS evolution for each member state during 2007 – 2013, and we can note the competitiveness level from the social perspective.
It is obvious that the competitiveness level regarded from the social perspective is simillar for the majority of the analysed states.
The case of Austria is remarkable, because during 2008 – 2009 this country registred much lower valuse compared to the other member states, but it recovered and registres a strong increasing trend during 2009 –2010, reaching the others in the following period of time 2010 – 2013.
France registred a positive evolution regarded from the social perspective, because this country is remarkable through the quality and quantity of education at all levelsand of course through it's social policy oriented to the citizen's benefit.
Poland is trying to maintain it's citizen's educational level, although it's a difficult objective, considering that it is the largest economy from it's region. Poland is trying to concentrate on improving the employment market's efficiency, and this is expressed through the IAS constant trend in the analysed period.
Despite the harsh international economic environment, Germany managed to reduce the emplyment rate remaining constant in the analysed period. Regarded from the IAS perspective, Germany oriented it's efforts to ensuring the life standards improvement, especially in in the context of new developing social challenges and the European demography, and their efforts were paid back as Germany registred the highest employment rate, especially qualified work force.
The situation of Romania is not the most expected, being less competitive compared to the reat of the analysed member states. Regarded from the IAS perspective, Romania is not positively remarcable.
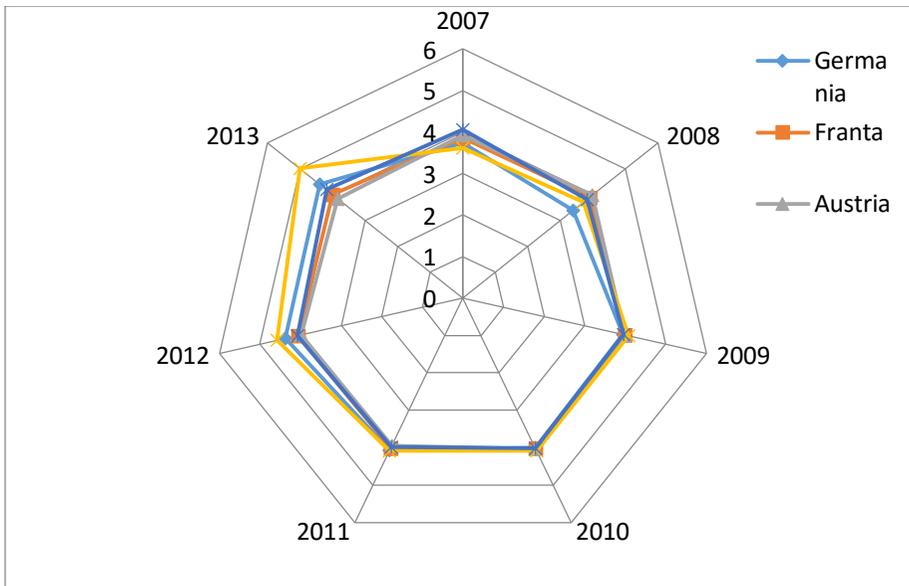
**Figure nr. 3: Environment Aggregated Indicators (IAE) in the member states in the period 2007 – 2013. în SM în perioada 2007 - 2013**
Source: Author's own calculation, according to data available at the following link
http://ec.europa.eu/eurostat/web/environment/statistics-illustrated

In the above figure we can observe the competitiveness evolution from the Environment Pillar perspective in the period 2007 – 2013.
As well as in the case of IAS, a simillar trend and evolution could be noticed.
Poland, tried to concentrate on implementing some reforms based on ecosystem innovation according to the private enviroment, their main objective remaining to determine the development of a sustainable growth of the renewable energy sector. Out of the analysed member states, Austria and Germany are more experienced in this area compared to the others, but that doesn't mean that Romania for instance is not an important player., on the contrary, we consider that Romania has a competitive advantage from this pillar's perspective, the problem remaining an important investment adressed to the renewable energy sector. Germany is one of the most efficient economies regarded from the IAE perspective, because in the analysed period it managed to maintain accessible prices for energy and also to maintain it's economic prosperity. The rigurous implementation of the environment policy supported the energetic sector and energetic intensity of the German economy. In the following section of this paper, we calculated the Competitiveness Aggregated Indicator based on the three pillars mentioned above, according to the appointed methodology, and in the next section we presented its values during 2007 – 2013, for each member state.

**Tabel nr. 2: Competitiveness Aggregated Indicator for the selected member states during 2007 -2013**

| MS | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|---|
| Germany | 3,14 | 3,94 | 3,85 | 4,53 | 4,53 | 4,12 | 4,08 |
| France | 4,49 | 3,58 | 3,64 | 4,15 | 4,11 | 4,04 | 4,04 |
| Austria | 3,91 | 3,95 | 2,77 | 4,24 | 4,16 | 4,18 | 4,14 |
| Poland | 3,95 | 3,96 | 3,6 | 3,92 | 4,07 | 4,25 | 4,42 |
| Romania | 5,01 | 4,66 | 2,14 | 3,5 | 3,60 | 3,00 | 2,44 |

Source: Author's representation based on own calculation according to data available at the following link http://ec.europa.eu/eurostat
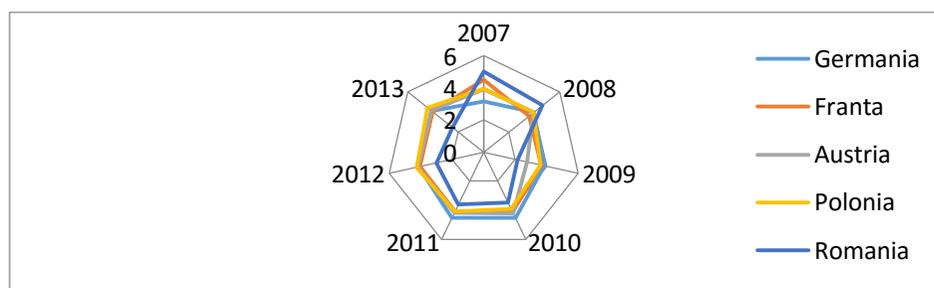


**Figure nr. 4: Competitiveness Aggregated Indicator (IAC) in the selected member states during 2007 – 2013**
Source: Author's calculation exposed in Table nr 2 and according to data available at the following link http://ec.europa.eu/eurostat

In the above figure we tried to express the competitiveness situation in the selected member states in the period 2007 – 2013, and we managed to rank the economies we analysed and the top looks linke this: first position is occupied by Germany, being followed by Austria, France, Poland, and Romania.

## 3.Correspondent state aid categories

### a.Main State Aid indicators regarded from Income Pillar perspective

In the following section we will present the evolution rate for the simple indicators for state aid categories ($AS_{1.1} \div AS_{1.3}$) linked to the Income Pillar in the analysed period 2007 – 2013 for each selected member state.

**Tabel nr. 3: ASO for Regional Development–$AS_{11}$, ASO for RDI – $AS_{12}$ and ASO for supporting SMEs – $AS_{13}$, from the Income Pillar perspective during 2007 – 2013, million Euro**

| ASO | MS | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|---|---|
| $AS_{11}$ | Germany | 3.125 | 3.479 | 4.929 | 2.144 | 2.000 | 2.085 | 1.608 |
| | France | 3.024 | 3.337 | 4.451 | 4.396 | 3.544 | 3.052 | 2.812 |
| | Austria | 70,3 | 71,43 | 185,46 | 116,65 | 114,7 | 124,43 | 101,44 |
| | Poland | 426 | 469,47 | 608,49 | 748,06 | 548,99 | 693,88 | 708,31 |
| | Romania | 56,3 | 55,93 | 52,96 | 101,85 | 144,6 | 94,39 | 155,46 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **AS₁₂** | **Germany** | 3124 | 3479,15 | 4929,57 | 2144,97 | 2000,22 | 2085,81 | 1608,70 |
| | **France** | 1765 | 1878,81 | 2230,11 | 1963,6 | 2185,76 | 2130,7 | 1521,06 |
| | **Austria** | 203 | 299,51 | 351,78 | 537,07 | 271,92 | 231,50 | 250,30 |
| | **Poland** | 31,27 | 37,94 | 36,79 | 70,19 | 25,42 | 93,21 | 68,39 |
| | **Romania** | 63,7 | 66,95 | 30,26 | 34,29 | 4,29 | 8,82 | 12,31 |
| **AS₁₃** | **Germany** | 1321 | 1472,45 | 958,08 | 357,90 | 359,68 | 461,82 | 312,95 |
| | **France** | 1126 | 1814,67 | 1698,17 | 1619,99 | 1442,95 | 1196,16 | 1166,03 |
| | **Austria** | 234 | 289,18 | 174,39 | 76,95 | 124,09 | 107,03 | 78,16 |
| | **Poland** | 41,23 | 41,23 | 41,23 | 41,23 | 41,23 | 41,23 | 41,23 |
| | **Romania** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Source: Authors calculations based on data available in State Aid Scoreboard, available at the following link http://ec.europa.eu/competition/state_aid/scoreboard/non_crisis_en.html#overview

The above table presents the authorised ASO – for regional development, CRI and SMEs support evolution, that we consider corespondent to the Income Pillar, during 2007 – 2013 for each member state selected.

What we can firstly notice is the major gap between ASO authorised by the European Comission for France and ermany, compared to the rest of the member states analysed, a gap intending to be reduced.

The case of Romania and Austria is simillar, both of the countries registering very low values of authorised State Aid for regional development and RDI. Even if both countries registres simillar low values for ASO, there is an important difference between them regardng their economic competitiveness.

Reported to the analysed member states, Romania benefited from lower state aid authorised by the European Comission in the analysed period. From the ASO – Regional Development perspective, the difference between our country is incomparable with the other member states.

From the ASO – for RDI, Romania occupies one of the last positions after Germany, France and Austria and from the ASO – for SME's support perspective, Romania did not benefit at all from this kind of state aid, compared to the selected member states.

State Aid for Regional Development and for RDI plays a very efficient role only if they are used moderately and in proportion and if they are oriented to the most disadvataged regions of the EU or member state. In addition, they can contribute efficiently to the economic development of the disadvantaged areas only if they are oriented to encouraging more investments or economic activities to those regions.

If we are trying to make a connection between state aid level authorised by the European Commission for Germany and its competitiveness level regarded from the Income Pillar perspective we can state that they are directly proportional.

Our available data state that Germany is the most competitive economy out of the selected member states and it is the country that benefited the most from state aid for regional development and RDI. Germany's economy is a performant, dinamic, production driven economy and the fact that the german state focused on developing industrial parks and clusters is an explanation for the economic results and implicilty for the connection between state aid for regional development and RDI and competitiveness.

This type of policy referes to government's efforts to develop and support clusters from a certain region, and the instruments used to influence the behaviour of a certain industry are the following: import tariffs, certain sectors subsidies and schemes for promoting investments into RDI.

In our opinion, it is ideal if the governments would be oriented to supporting and developing clusters activity, rather than on authorising subsidies for certain industries. A policy that is oriented to creating new clusters still implies a certain form of targeting.

So, competitiveness implies a certain form of selectivity. To support a regions competitive advantage , the authorities must decide what kind of economic activities should support, and what are the economic activities left to manage with the market forces.

Inspired by the Sillicon Valley phenomenon, most of the governments tend to concentrate on high – tech clusters to improve their competitiveness level and in general this type of activities are considered advantages and therefor are stimulated. (Drucker, P. 1985)

The Romanian experience so far shows that clusters introduced favorable measures for certain industries and SMEs, but on the other side, there are few cluster initiavesthat function, although there is potential. For instance „Guidelines for implementing innovative clusters"financed by the Economis Ministery (2009) sets a list of industrial parks, innovation and technology transfer entities, universities, foreign and local investors, that by association may benefit from the cluster advantages. Even so, we can notice that at national level, this kind of initiatives are rare, and if there exists, there are just for accessing funds without a medium or long term strategy.

### b. Main State Aid indicators regarded from Social Pillar perspective

In the following section will be presented the values for State Aid categories regarded from the Social Pillar perspective: State Aid for employment and State Aid for training ($AS_{21.}$ – $AS_{22}$) during 2007 – 2013, for each selected member state.

**Tabelu nr. 4: ASO for employment  –$AS_{21}$, ASO for training – $AS_{22}$ evolution regarded from the Social Pillar perspective, during 2007 – 2013, million Euro**

| ASO | MS | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| $AS_{21}$ | Germany | 7,12 | 7,21 | 6,49 | 68,65 | 34,89 | 52,72 | 0,44 |
| | France | 453,7 | 518,05 | 528,99 | 500,96 | 582,95 | 558,57 | 613,31 |
| | Austria | 5,05 | 5,96 | 4,29 | 0 | 0 | 0 | 0,36 |
| | Poland | 654,7 | 701,53 | 700,34 | 732,38 | 679,49 | 723,12 | 781,86 |
| | Romania | 0,62 | 0,69 | 0,21 | 0 | 0,05 | 0,18 | 0,03 |
| $AS_{22}$ | Germany | 71,43 | 78,10 | 118,65 | 154,55 | 171,40 | 185,97 | 177,72 |
| | France | 27,65 | 30,63 | 102,31 | 82,13 | 96,74 | 58,87 | 83,59 |
| | Austria | 10,12 | 18,01 | 27,66 | 32,32 | 29,62 | 28,66 | 26,76 |
| | Poland | 13,21 | 19,85 | 105,53 | 54,70 | 105,35 | 72,97 | 75,26 |
| | Romania | 0,71 | 0,79 | 0,03 | 0 | 0,56 | 0,61 | 0,09 |

Source: Author's calculations based on data available in State Aid Scoreboard, available at the following link
 http://ec.europa.eu/competition/state_aid/scoreboard/non_crisis_en.html#overview

Tabel nr. 4 setss out the ASO for employment and ASO for training authorised by the European Commission evolution process, in the analysed period 2007 -2013.

At EU level, ASO for employment refer to state aid granted for recruiting disadvantaged workers taking the form of salary subventions, for hiring disabled workers taking the form of salary subventions and for covering the costs for employing disabled persons.

In this case we can notice a slightly change compared to the previous case, France and Poland have benefinted of ASO for employment higher values compared to the other member states.

The case of Poland is very relevant from this point of view. Poland is a country with significant disparities, but anyways, the most competitive Polish regions are fetured  by a highly human capital level. Poland's situation is justified by it's ability to atract innovativ and creative human capital, and with the help of state aid granted for employment and training, Poland offers high quality cultural facilities and encourages social conections development. From the ASO regarded from the Social Pillar, the situation of Germany is different from that of France and Poland, that both encourage human capital investments. From the IAS perspective, Germany oriented its efforts to ensuring the improvement of life standards, especially in the context of developing social challenge. A special characteristic of the German economy is promoting entrepreneurship for young people, through offering support for the creation of entrepreneurial connections, through integrating some methods based on the experience of entrepreneurial education and developing new business academies. Promoting entrepreneuship with the young people helps rising the employment rate.

**c. Main State Aid indicators regarded from Environmental Pillar perspective**

In the next section, there will be presented the values registred for state aid categories regarded from the Environmental Pillar perspective - ($AS_{3.1}$) in the analysed period 2007 – 2013, for each of the selected member states.

**Tabel nr. 5 : $AS_{3.1}$ - ASO for environment and energy evolution during 2007 – 2013, million Euro**

| MS | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|---|
| Germany | 5543,02 | 6237,78 | 5968,69 | 5790,92 | 3745,04 | 4115,39 | 4705,59 |
| France | 154,65 | 154,65 | 154,65 | 154,65 | 154,65 | 154,65 | 154,65 |
| Austria | 702,54 | 702,54 | 702,54 | 702,54 | 702,54 | 702,54 | 702,54 |
| Poland | 217,29 | 217,29 | 217,29 | 217,29 | 217,29 | 217,29 | 217,29 |
| Romania | 14,21 | 14,21 | 14,21 | 14,21 | 14,21 | 14,21 | 14,21 |

Source: Authors calculations based on statistical data available in the State Aid Scoreboard, link http://ec.europa.eu/competition/state_aid/scoreboard/non_crisis_en.html#overview

From this indicator perspective, at EU level there are certain „objectives and targets to reach a sustainable growth for supporting the shift to an efficient economy from the resources point of view, competitive and with lower emissions. The main objective of state aid in this sector, is to ensure a competitive energetic system, inside a functional European energy market. Regarding this indicator, we can notice that at EU27 level there are important differences between the selected member states during the analysed period.

The European Commission, authorised the highest ASO for environment and energy, compared to the other member states, followed by Austria, France, Poland and Romania.

In the case of Romania, we can notice a slight increase of state aid authorised between 2011 – 2013, with important differences compared to the previous periode.

From IAE perspective, Germany aspires to being one of the most efficient economies from energetic perspective, to respect the environment protection rules and to maintain accessible prices for energy.

The rigurous implementation of the environment policy was an important step for maintaining the competitiveness of this sector.

## 4.Conclusions

The most important conclusions of this paper are the following:
- based on the evolution of the aggregated indicators we stated a competitivness ranking, the order being: Germany, France, Austria, Poland and Romania..
- as proposed, we managed to determine the relation between competitiveness of the Income Pillar and the corespondant state aid, analysing the evolution of the selected member states. This consists in applying a cluster policy, that referes to the governments efforts to develop and support clusters from a certainregion, and the instruments they are using are actualy the instruments used for state aid: import tariffs, certain sectoral subventions, schemes for promoting RDI investments.
- the majority of governments tend to concentrate on high tech clusters to improve their competitiveness level, so they are granted state aid for regional development, RDI and for SMEs support and this is revealed from the perspective of the three pillars: income, social and environmental.
- at the selected member states level there are significant differences between authorised state aid. a nivelul SM studiate, există diferențe semnificative între AS autorizate de Comisia Europeană, acestea observându-se și în cazul competitivității SM analizate dine perspectiva celor trei piloni: venituri, social și ecologic.
- from IAV competitiveness perspective, Romania occupies the last position also being the member state with less granted state aid for regional development and RDI and also the state withh the least clusters. We may state that cluster initiatives are considered an instrument for improving the national and regional competitiveness. Cluster's „umbrella" concept, referes to the idea that with the help of clusters a nation may force economic development and promotion of cooperations between companies, universities, research institues, clients, competition and suppliers from a certain geographic region.
- at the oposite pole, Germany benefited the most from State Aid for regional development and RDI, reaching values 55 higher Romania. And of course, the competitiveness level is also the highest.
- from the Social Pillar perspective we determined a close connection between ASO for training and employment and the social competitiveness level for the analysed member states.
- this may embrace certain forms: in the case of Germany ASO for training expressed in promoting young entrepreneurship and integrating methods based on experience in entrepreneurial education and developing business cademies.
- from the social perspective, France and Poland are remarcable for high state aid granted, Poland offers high quality cultural facilities and encourages developing social connections.
- from IAE perspective, Romaia has a positive position, owing a competitive advantage in this field, that unfortunately isn't exploited at its maximum capacity. State aid granted for environment and energy follows o positive trend in the case of Romania, and a slight improvement of the environmental competitiveness was also reached.
- the successfull experiences of Germany and Austria from the environmental perspective (both competituveness) are coreleated to the authorised state aid, taht promotes and support a certain policy and a series of interesting programmes with major impact for environment and energetic sector, especially for sustainable energy field.

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# ANALYSING ROMANIAN INDUSTRIAL COMPETITIVENESS REGARDING THE RECENT DYNAMICS OF THE INTERNATIONAL INDUSTRIAL TRADE BALANCE

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**Abstract:**
*The industry remains the most important sector of the national economy, although in the other member states the services have a more important share of GDP. In this context, the level of industrial competitiveness is essential for the national competitiveness. This is a characteristic feature for Romania, where the industry has an important share in the GDP, in comparison with the other member states. The international trade balance is an important indicator for measuring the economic competitiveness, especially the industrial competitiveness. Our country has an obvious deficit regarding the international trade balance and thus the analysis of this subject is very relevant at a sectorial level and at national economy's branches level, when identifying solutions for raising the competitiveness. This paper is dedicated to studying Romania's industrial competitiveness analysis throughout the recent values of the imports and exports, generated by the industry and its branches. After identifying this concern utility, this article presents the methodology used, defining and experiencing the indicators proposed for characterising the level of industrial competitiveness and also the level and dynamic of the industrial trade. In the practical part of this paper, we presented the recent evolution of the values of imports and exports for the industrial products, the share of industrial sectors in the international trade balance, particularizing the manufacturing industry – the most important industrial sector – at branch level. In the analysis of the manufacturing industry we proposed a classifying methodology divided in six levels of competitiveness, associating and characterizing the branches. The conclusions present the possible solutions for improving the Romanian international industrial trade balance.*

**Keywords:** competitiveness, trade balance, industry, indicators

**JEL classification:** F1, L6.

## 1. Introduction

When describing the national and regional competitiveness for characterizing the sectorial and industrial competitiveness, certain indicators may be used: independent indicators (simple), grouped in categories and aggregated in synthetic indicators. (Banica, 2009)
For grouping the industrial competitiveness indicators some of the following criteria may be used:

- Qualitative and quantitative aspects:
  - ➢ Subjective indicators;
  - ➢ Objective indicators
- According to their implications on competitiveness:
  - ➢ Direct impact indicators
  - ➢ Indirect impact indicators
- According to Time variable (t):
  - ➢ Static indicators

- ➤ Dynamic indicators;
- According to the complexity of analysis, the indicators that present an interest to the economic sectors:
  - ➤ Economic indicators;
  - ➤ Social indicators;
  - ➤ Indicators with a strong environment impact;
  - ➤ Indicators presenting the education level.

The appropriate indicators for evaluating the industrial competitiveness in the context of sustainable development, are the following (Felea, 2013):

- GDP ($I_1$);
- GDP annual growth rate ($I_2$)
- Employment rate ($I_3$);
- Work productivity ($I_4$);
- Exports ($I_5$);
- Total emissions of greenhouse gasses ($I_6$);
- Energetic intensity ($I_7$);
- Sustainable energy resources share in the total primary energy ($I_8$);
- Waste recycling performance ($I_9$);
- RDI/GDP Expenses ($I_{10}$);
- Engineers and exact sciences specialists share ($I_{11}$);
- Professional training degree at working place (Continuous learning) ($I_{12}$)
- TIC training degree index ($I_{13}$);
- Generated foreign direct investments (FDI) stock/ Received FDI stock ($I_{14}$)

The majority of the indicators listed above are independent indicators [$I_1 – I_9$], the indicators [$I_{10} – I_{13}$] are input indicators and indicator $I_{14}$ is a composed indicator with 2 components: input (received FDI stock) and output (generated FDI stock). All of the chosen indicators are appropriate for the static and dynamic description of the industrial competitiveness.

Similar to the EU, Romania hasn't got an official and unitary Industrial Development Strategy. In 2010 the Romanian Government representatives were announcing an official public debate of the document regarding our country's reindustrialisation process, a document based on GEA conducted study. In 2013, the actual Government announced its intention to frame and launch a new strategy called Romanian Reindustrialisation Strategy (RRS), but it only remained in this state.

Some general observations regarding the Romanian industry made by ASPES (Statistical and Socio - Economic Forecasting Association) emphasize the following:

- In the last 20 years, Romania went through a des - industrialisation process determined by the profound system crisis;
- In the last 20 years hundreds of thousands of jobs in the industrial sector were lost;
- Foreign capital represents nearly 80% of the turnover in the industrial sector – a progress factor not found in the international trade balance, that remains imbalanced;
- In the last 20 years Romania hasn't had any coherent industrial policy;
- Romanian economy is based on investments that do not insure the normal function of the production factors, natural resources and low cost workforce, and innovation has a lower role than the other competitive economies;
- On average, the industrial share of our country's GDP decreased every year with 1 %;

- The employment rate share in the Romanian industrial branches, except construction, decreased continuously since 1990 until now, the dismissed employees being assumed by the constructions and services sectors.

Another observation refers to the actual state of the Romanian economy and implicitly to its industry, the FDI are highly affected by the development degree of the transportation, communications and energetic infrastructure, that are not similar to the European level and do not ensure the normal economic activities (Berinde, 2006).

## 2. Working methodology:

For all the above listed indicators $[I_1 – I_{14}]$ applied to the industrial competitiveness evaluation, we will calculate the momentary value and the evolution rate. The momentary value is calculated for one year, and by evaluating these values for several years we may evidence the time evolution of the indicators.

The time rate evolution of a certain indicator ($I_j$) will be calculated using one of the following relations:

$$i_j(t) = \frac{I_j(t) - I_{j0}}{I_{j0}} \times 100 [\%], \text{ or } i_j(t) = \frac{I_j(t)}{I_{j0}} \times 100 [\%], \quad j = \overline{1,14} \qquad (1)$$

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where,

$I_j(t)$- represents the value of $I_j$ at the evaluation moment (t);

$I_{j0}$- represents the value of $I_j$ at the reference moment ($t_0$).

The exports ($I_5$) may be determined as shares in GDP, at national level, sector (k) level or branch ( r) level. So:

$PIB_k^E$- sector exports ,,k''[UM];

$PIB_{kr}^E$- branch exports ,,r'' in sector ,,k''[UM];

UM- monetary units (€, $, lei).

The relative values of the two indicators may be calculated relatively to the total values as:

$$pib_k^E = \frac{PIB_k^E}{PIB_k}; \qquad pib_{kr}^E = \frac{PIB_{kr}^E}{PIB_{kr}} \qquad (2)$$

$PIB_k$, $PIB_{kr}$ – GDP value at sector (k) level and branch (r ) of sector (k).

If there is a possibility of defining the human resources related to sector exports ($POPO_k^E$) and branch export ($POPO_{kr}^E$), than we may calculate the specific value and also the indicators "work productivity" and the "employment rate" referring to exports, using specific calculation relations (Felea, 2013). With reference to indicators ($PIB_k^E, PIB_{kr}^E$) and their relative value we may calculate the evolution rate, using relation (1). The indicators listed above allow the identification of the actual state (momentary state) of the sector and branch exports, in the European context.

$POPO_k^E$- employed population in sector ,,k'';

$POPO_{kr}^E$- employed population in branch "r'' of sector ,,k'';

In order that the results obtained from evaluating indicators "$I_5$" to be relevant for constructing the aggregated indicators (IA), the following problems need to be solved (European Innovation Scoreboard, 2004):

- Establishing the weighting schemes;
- Standardizing the measuring units (UM);
- Establishing the rules for using data for extreme values.

The most frequent applied models for evaluating IA (Barro, R.J. ,1996) start from the following basis relations:

$$IA_i^t = \frac{\sum_{j=1}^{m} p_j y_{ij}^t}{\sum_{j=1}^{m} p_j} \qquad (3)$$

where,

i- The analysed entity (country, region);

j- The simple indicator used for the aggregated (composed) indicator relation (productivity, employment, etc);

t- The moment of the analysis (t);

$p_j$- The allocated share for indicator (j);

$y_{ij}^t$- The transformed value of indicator (j), for entity (i) in year (t);

m- number of simple indicators that compose IA

For calculating the value of $y_{ij}^t$, and starting from the real value ($x_{ij}^t$) of indicator (j), there are several models obtained (**Bănică, 2009**):

$$y_{ij}^t = \frac{x_{ij}^t}{m_j^t} \qquad (4)$$

$m_j^t$- Average of $x_{ij}^t$ values for the (m) entities;

Using relation (4) we obtain a certain model sensitive to the positive values.

In order to balance the model's sensitivity in relation to the extremes (positive, negative), the following relation is used:

$$y_{ij}^t = \frac{x_{ij}^t - m_j^t}{\sigma_j^t} \qquad (5)$$

$\sigma_j^t$- the scattering of ($x_j^t$)

Another formula frequently applied is:

$$y_{ij}^t = \frac{x_{ij}^t - \min(x_{ij}^t)}{\max(x_{ij}^t) - \min(x_{ij}^t)} \qquad (6)$$

where,

$\min(x_{ij}^t)$- is the minimal value from string values ($x_{ij}^t$) with $i = \overline{1, n}$ and (j, t)- constants;

$\max(x_{ij}^t)$- is the highest value from the string values ($x_{ij}^t$) with $i = \overline{1, n}$ and (j, t)-constants;

Applying relation (6) leads to reducing the sensitivity to the extremes.

After evaluating and / or collecting the data for Romanian industry imports and exports, and for its sections and branches, we will proceed to the graphical presentation of the momentary values and of the indicators time evolution values. The Romanian industrial sector competitiveness description and presentation from the international trade point of view will be obtained using the comparison method, as follows:

- Import – Export comparison, calculating the international trade balance for industrial products;
- The comparison between different industrial sections;
- The comparison between the manufacturing industry branches;

The comparison will make reference to the same type of indicator (simple, evolution rate) for a certain year as an average for a period or as a time evolution. For emphasizing the trend, forecasting the Romanian manufacturing industry branches competitiveness we will describe and rank them according to the values of the international trade balance.

## 3. Synthesis of the obtained results

The international trade balance is an important indicator for describing the economic competitiveness, especially the industrial competitiveness. Figure 1 presents the Romanian industrial products imports and exports value evolution
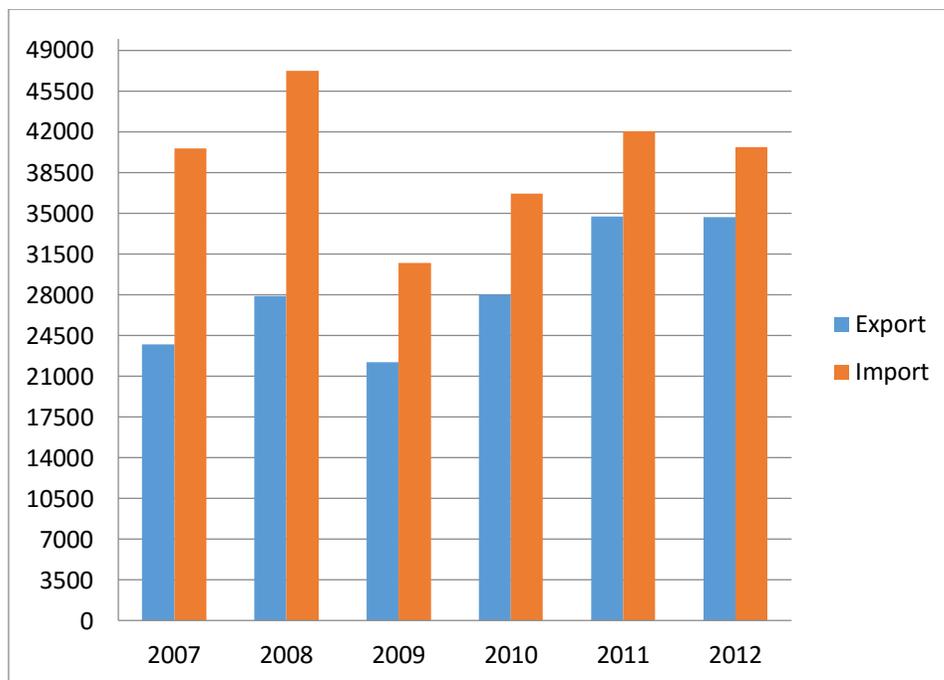
**Figure 1**: Romanian industrial products exports and imports evolution [mil EURO]
Source: Authors calculation based on INS statistical data

Analysing this evolution we can draw several conclusions. Firstly, we may notice that the exports level is lower than the imports level, on the whole period taken in consideration, which is not a very comforting situation for the industrial sector and for the Romanian economy. We may also see clearly the important effect of the economic and financial crisis in Romania, starting from the year 2008. In 2008, Romania registered the highest level of industrial products imports, and this value hasn't been reached since. With reference to the exports value, they have constantly been growing since 2009.

Table 1 presents the international trade balance (BCI) calculated as a percentage ratio between the value of exports and the value of imports:

**Tabel 1: Romanian industrial products trade balance evolution:**

| Year | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|------|------|------|------|------|------|------|
| BCI[%] | 58,4 | 59,1 | 72,2 | 76,3 | 82,6 | 85,3 |

Source: Authors calculation based on the statistical data published by INS

Based on BCI values (Table 1) we calculated and graphically represented the evolution rate of this indicator.
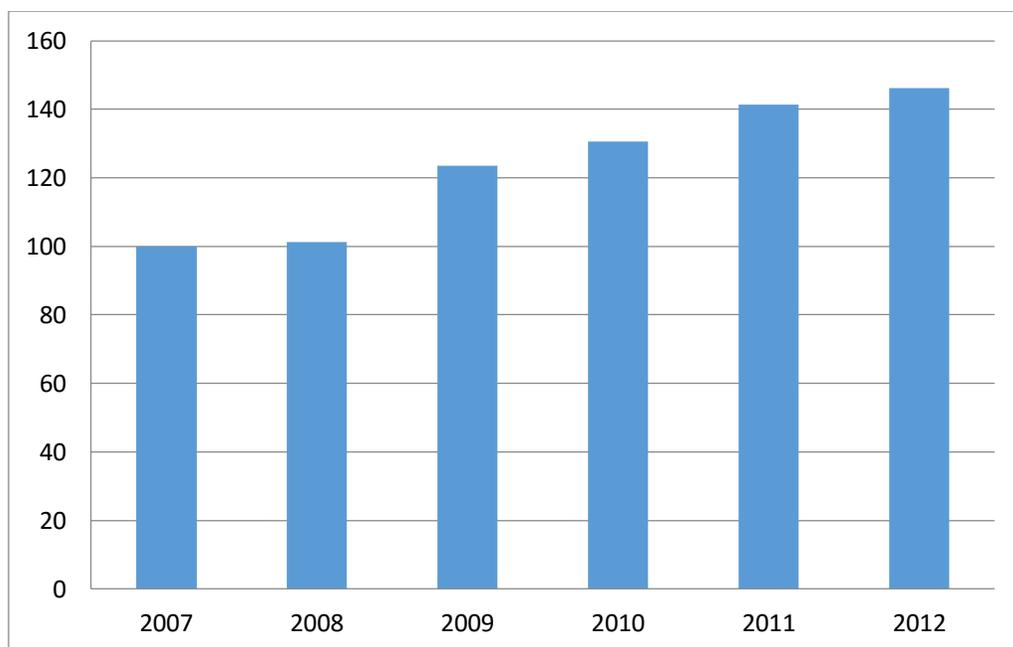
**Figure 2**: Romanian industrial products trade balance evolution rate
Source: Authors calculation based on the data published by INS

The above figure presents the industrial products trade balance evolution between 2007 and 2012 in Romania. We can notice that in the analysed period the exports and imports ratio for Romanian industrial products raised. This means that the exports value appreciated compared to the imports value. In other words, the Romanian industrial competitiveness increased.

We may also study and emphasize the industrial subsectors share in the Romanian industrial products trade balance. Using the information and data published by INS we analysed the industrial subsectors from the trade balance point of view and considered relevant only the ones totalizing at least 500 mil euro in ten months. The relevant IE subsector is "fuel" (oil and gas) and another 18 IP subsectors – the highest share of the Romanian trade balance.

**Table 2**: Industrial sectors share in the Romanian trade balance [%]

| Industrial sector / Capital circulation sense of movement | Mining industry | Manufacturing industry | Thermic and energetic industry |
|---|---|---|---|
| Export | 0,4 | 99,3 | 0,3 |
| Import | 10 | 89,7 | 0,3 |

Source: Authors calculation based on the data published by INS

The numbers show us an important trade imbalance of the industrial subsector "fuel", the trade balance share is 1%, the value of the imports is higher than the value of the exports. Refering to the 18 subsectors of IP, we ranked them according to the imports and exports share. Figure 3 presents this information.
a)Export

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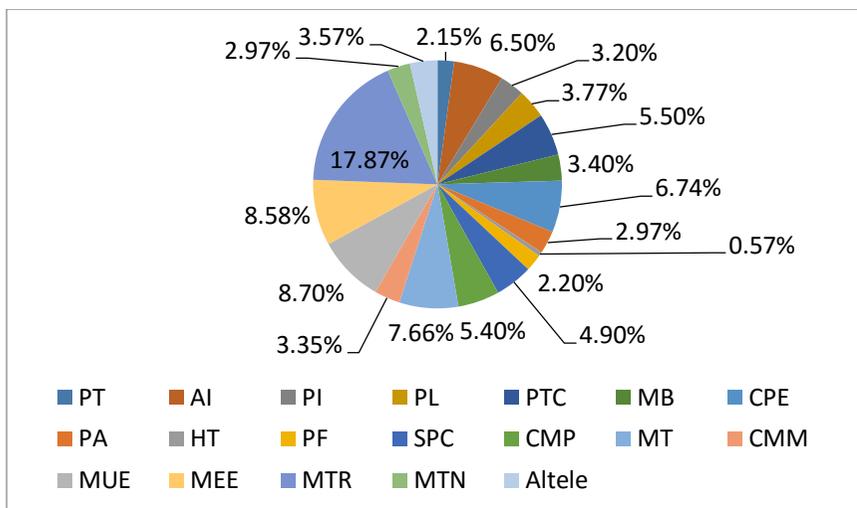
b)Import
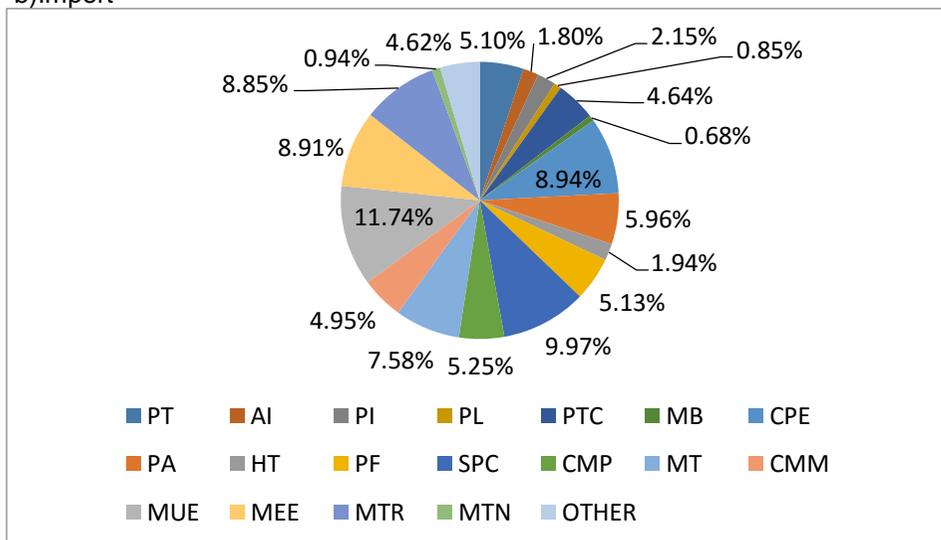


**Figure 3**: Ranking IP subsectors according to their share in the international trade balance
Source: Authors calculation based on the statistical information published by INS

Based on the values obtained for the international trade with industrial products there have been calculated the values for indicator BCI for all 18 subsectors of IP. This article proposes the classification of the subsectors (R-IP) in the following categories:
Excellence R-IP – those branches /subsectors with BCI al least three times higher than the general industry BCI value;
Very good R-IP – with normal BCI values between [2÷3) or the general BCI value;
Good R-IP – with BCI value [100%; industry 2BCI];
Satisfying R-IP- with BCI [industry BCI; 100%);
Low R-IP – with BCI [1/2 industry BCI and industry BCI);
Very low R-IP – with BCI ≤ 1/2 industry BCI.
Table 3 classifies the 18 R –IP based on the results obtained in 2012.

**Table 3**: Classifying and ranking the most important branches / subsectors of Romanian IP, based on the results obtained in 2012

| Category | R-IP | BCI value in 2012 |
|---|---|---|
| Excellence R-IP | 1.MB | 426 |
| | 2.PL | 378 |
| | 3.AÎ | 308 |
| | 4.MTN | 269 |
| Very good R-IP | 5.MTR | 172 |
| Good R-IP | 6.PI | 129 |
| | 7.PTC | 101 |
| Satisfying R-IP | 8.CMP | 87,7 |
| | 9.MT | 86,2 |
| Low R-IP | 10.MEE | 82,2 |
| | 11.CPE | 64,4 |
| | 12.MUE | 63,3 |
| | 13.CMM | 57,7 |
| Very low R-IP | 14.PA | 42,5 |
| | 15.SPC | 42 |
| | 16.PF | 36,6 |
| | 17.PT | 35,8 |
| | 18.HT | 25 |

Source: Authors calculation based on data and information published by INS

Another important aspect in the analysis process of R-IP is their recent dynamics. According to the normal BCI value some R-IP have had a positive evolution, and unfortunately other R-IP have had a negative evolution (Figure 4).

a)Positive evolution R-IP (sharp increase)
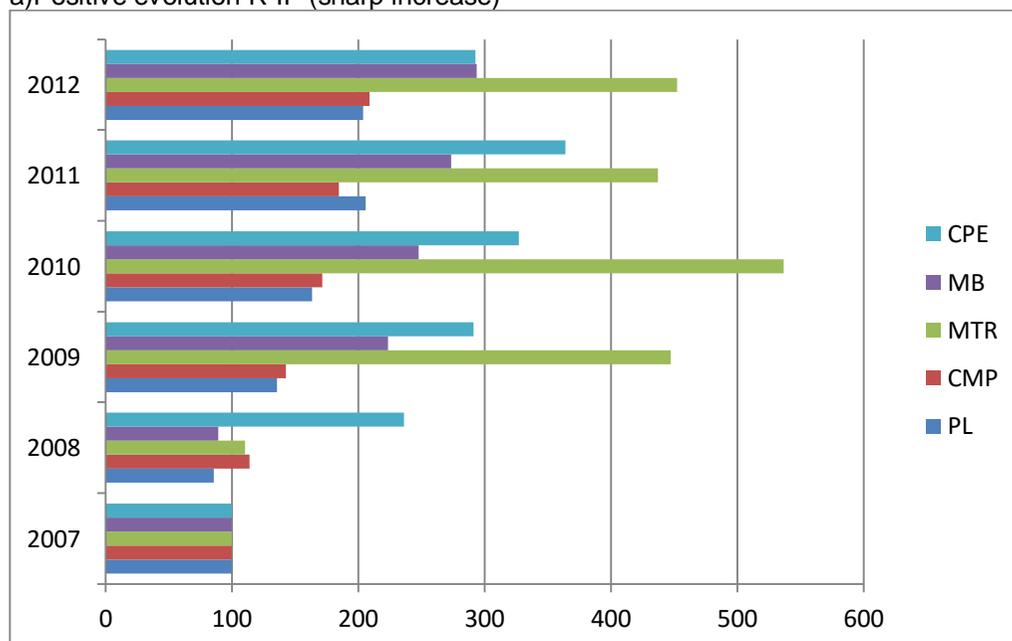
b) Negative evolution R-IP (sharp decrease)
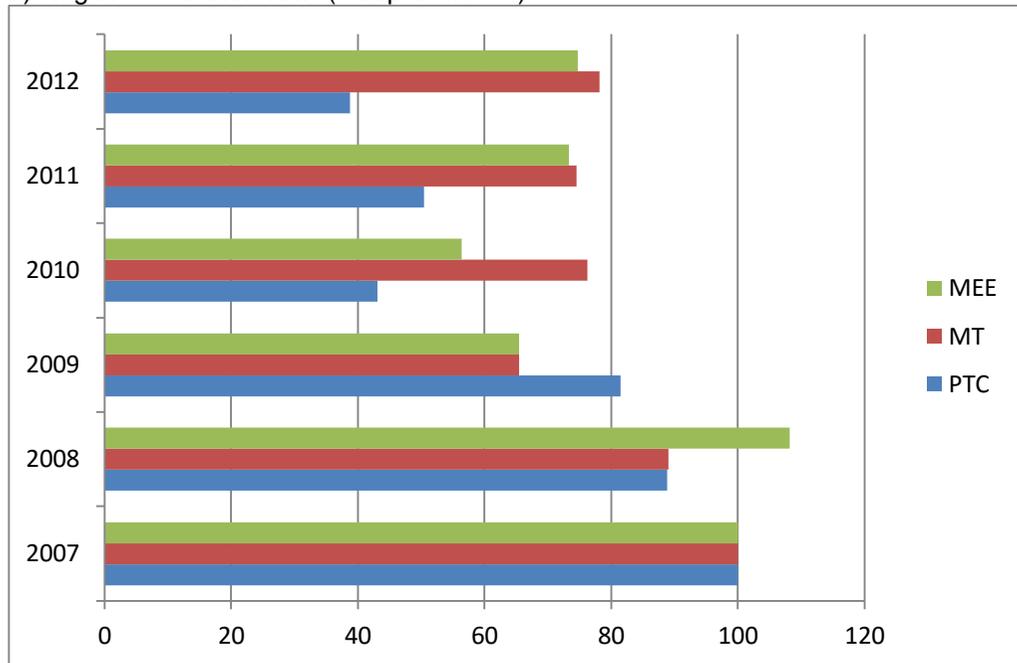


**Figure 4**: BCI evolution rate for R-IP with recent dynamics [%]
Source: Authors calculation based on the data and information published by INS

## 4. Conclusion:

The recent trade balance for Romanian industrial products has an increasing trend, meaning that the value of exports is higher than the value of the imports for industrial products. The exports are made almost exclusively (99.3%) out of IP products. The "fuel" subsector generates a strong trading imbalance for the energetic industry.

Regarding the exports value, the main IP subsectors are ranked as follows: road transport (17,87%; equiments and machinery (exclusively electrical and optical equipments) (8,7%) and machinery, equipments and electric apparell (8,58%).

The most important IP subsectors from the imports value point of view are the following: equipments and machinery (exclusively electrical and optical equipments) (11,74%); chemical substances and products (9,97%), and computers, electronics and optical products (8,94%).

IP subsectors can be divided according to BCI as follows:

- Excellent : MB, PL, AÎ, MTN;
- Very good: ,,MTR'';
- Good: PI, PTC.

The other IP subsectors may be considered uncompetitive.

According to the recent values and dynamics of BCI, the most important recommendation for our country is to try and develop the following IP subsectors: MB, PL, AI, MTN, MTR, PI, PTC, CMP and CPE;

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# THE DISPERSION OF AGRICULTURAL AND RURAL DEVELOPMENT EU FUNDS ON A REGIONAL AND DISTRICT LEVEL IN HUNGARY

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**Abstract:** *A national objective was realised when Hungary joined the European Union based on the preliminary result of the referendum. Naturally, there were pros and cons about the accession and there were those who refused the European integration. Still the emotion was stronger that came from the future EU membership and the hope in terms of the agriculture that with the opportunities offered by the EU both the Hungarian agriculture and countryside would follow a development course. Because of the accession a lot of support forms as well as the EU institutions became available but considering the impacts there were no clear positions. Obviously, today we know what kind of objective, positive changes were brought by the accession for example in terms of infrastructural and machine supply, broadened market possibilities and income growth. Still we also experience the objective disadvantages such as the stronger competition and the mass expansion of multinational food-processing and trading companies. The scientific measurement and judgement of the developmental changes which are difficult to measure is still a subject of debate. We have done the concentration analysis for two budget periods 2004-2006 and 2007-2013 respectively. Between 2004-2006 the regional concentration is more balanced year by year than the district. In the district values even in this period we can already experience the fact that very few farmers receive a big amount of support. Between 2007-2013 there are no sharp differences in the case of concentration neither in the region nor in the district. The Lorenz curve shows a classic concentration distribution in the Southern Great Plain Region every year. The course of Lorenz curves is supported by the value of the concentration ratio which is the total share of the support of the three players receiving the biggest funds since the indicator has been hovering around the 10% average value in the region since 2006 while in the district we can experience values within a 36% and 17% average intervals. By evaluating the funds data of the Southern Great Plain Region and Sarkad district we can state that by 2013 the concentration has balanced out in both areas still we can experience a significant funds-concentration on the district level.*

**Keywords:** agricultural and rural development subsidies, EU payments, Lorenz curve, Hirschman-Herfindahl index, concentration ratio

**JEL classification: Q18**

## 1. Introduction

In the first half of the 20th century the state was primarily expressed through the tax system and the relationship between the different enterprises while from the second half of

the century the state funds have received a more emphasized role in Hungary. After Hungary's accession to the European Union the system of agricultural and rural development funds were regulated by the framework of the Common Agricultural and Rural Policy in which applicants could receive EU, national and co-financed funds. Among the certain support forms the direct payments and the support of the regional development programs were significant. On the basis of experiences of the past periods we can state that the direction of funding policy tends to point towards the less market – and trade – distorting funds and in terms of funding the Hungarian farmer society the accession has made a positive impact. The following figures show the point; while between 2002-2003 the agricultural and rural development funds were 210-220 billion HUF from 2004 on it reached around 400 billion on a national level (Kapronczai, 2011).

## 2. The examination of the distribution of the agricultural and rural development funds

For the examination of the funds-distribution we used the funding data of the Agricultural and Rural Development Office (ARDO) between 2004 and 2013. The available database provided different grouping possibilities in terms of funds. The demarcations for the funds were the following: *Total funds, EU funds, National funds, European Agricultural Guarantee Fund (EAGF), European Agricultural and Rural Development Funds (EARDF), Income supports, Investment and rural development funds.* To measure the regional and district concentration of the funds we chose the Southern Great Plain Region and the Sarkad district where different concentration measurement methods were applied. The Lorenz curves were originally used for measuring the income distribution where concentration was depicted in a single-unit square where the cumulated relative value amounts are shown in terms of cumulated relative frequency. If the certain units have the same share in the value amounts then the cumulated relative frequencies and the cumulated relative value amounts match. In this case a lack of concentration is shown and then the curve matches the diagonal of the unit square (Kovács, 2011; Elte 2005). The concentration ratio (CR) both in terms of calculating and data needs is the simpliest way to create a concentration metrics. The CR concentration ratio shows how the biggest unit of the plurality gets a share from the whole value amount. If the whole value amount belongs to the chosen unit then it takes up a maximum value, in case of consistent distribution it has a minimum value. In practice the visualization of the 3-5 highest value share of the total value amount is the most well-spread. Another definitive metrics of the concentration is the Hirschman-Herfindahl index. When calculating the index it correlates to the main diagonal of the Lorenz curves that is, it equals the sum of squares of the value amount of the certain units. It takes a maximum value in case of total concentration, in that case the value is 1 or if the share of all units is equal then it takes the minimum value of 1/n. Since the metrics take into account the number of the units therefore the distribution of value amount within 100 units  means a lower level of concentration than by examining 10 distributions (Hunyadi and Vita, 2008; Kerékgyártóné et al., 2001).

## Results and Evaluation

By comparing the funding data of the Sarkad district and the Southern Great Plain Region the gradually increasing funding is well-depicted. The earmarked 400 billion HUF for 2004 couldn't be used because the Hungarian institutional system was not prepared enough so on a national level only 156 billion HUF reached the farmers consequently the majority of the Single Area Payment Scheme was transferred to 2005. This unpreparedness is reflected in the comparison of regional and district data since on a district level only 100 million HUF was paid out in 2004 and on the regional level 3,5 billion HUF (Figure 1.) From

2005 on the national payments were between 410 and 430 billion HUF which was about 1.5-2 billion on a district level and between 70 and 80 billion HUF on a regional level. We can generally say that in 2009 the subsidies rose sharply on a national level and it followed a similar method on a district level with a 2.3 billion HUF payment and on a regional level with a close to 120 billion HUF payment. Among the primary reasons of the national increase the sustained growth factors did not play a significant role but rather the early payments, the currency profit and the sugar subsidies. This also explains why the 2009 funding level could not be repeated since in 2010 the paid funds were decreased by 130 billion HUF. The data tell a different story though in the Sarkad district and the Southern Great Plain Region since the per capita funding is just slightly less than the 2009-value. Increase can be experienced in 2011 due primarily to the lower Single area payment deposits which on a district level did not even reach 1 billion HUF compared to previous year's 1.6 billion HUF. The outstanding growth both on a district and regional level was due to the fact that the majority of Single area payment funds of 2012 were paid in that year and the deposits of 2013 were also added to that sum.
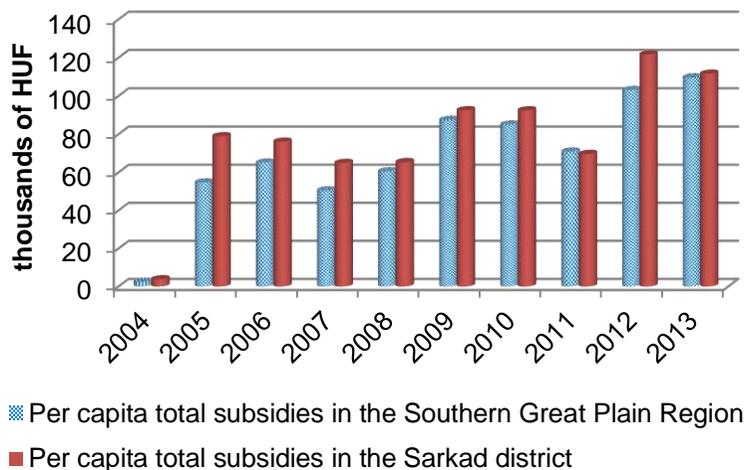


**Figure 1:** The per capita paid subsidies in the Southern Great Plain Region and the Sarkad district

*Source: based on own measurements and ARDO data*

On the whole we can say that on the basis of the Southern Great Plain Region and Sarkad district payment data that the level of per capita payments turned out to be similar and no drastic changes happened. Because of the agricultural aspect of the district and the significant role of agriculture there the level of support per capita is continuously reaching higher values compared to the total population. Obviously the low urbanisation level of the area even on a national level and the significance of agricultural activities among its population contribute to this result. On a regional level though among the population of several cities such as Kecskemét, Szeged, Békéscsaba participation in the industrial and tertiary sector is more characteristic and in their cases the agricultural and rural development funds are less prevailing.

If we look at the distribution of the paid subsidies in terms of their targets (Figure 2) it is clearly visible that since the EU accession the income support has a primary role in the Sarkad district and the share of Single Area Payment is the most significant. The rate of investment and the rural development subsidies started to increase mainly in the budget period of 2007-2013. It doubled from 2006 to 2007 reaching 160 million HUF which was on

the one hand due to the increase of the available amount of resources and on the other hand after the initial inexperience the growing willingness to apply. As a result of the process the amount of paid subsidies reached around 760 million HUF in 2012 in the area and the tendency was similar in 2013, as well.
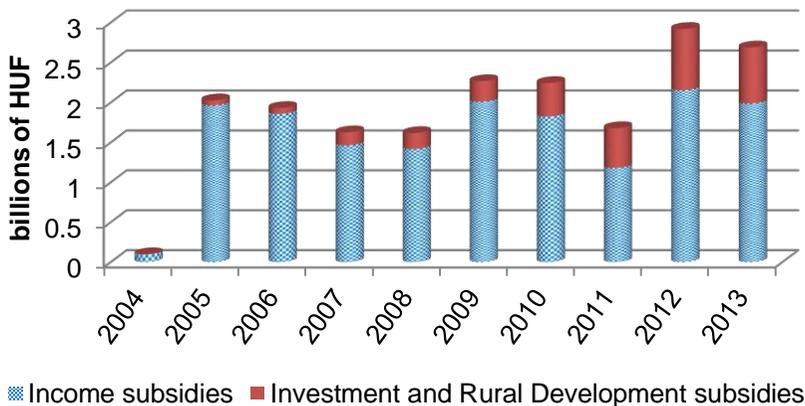


**Figure 2:** The distribution of paid subsidies based on their targets in the Sarkad district
*Source: based on own measurements and ARDO data*

To define the concentration of the subsidies we also made comparisons in terms of regional and district data. To illustrate the development of funds concentration after the EU accession we used Lorenz curves. In the analysis we examined two periods, the budget periods of 2004-06 and 2007-13 respectively. By comparing the single years of the 2004-06 budget period we experienced a much more balanced concentration on a regional level in terms of total funds than on the district level. In the case of regional funds concentration we can see a gradual increase year by year however we can state that the differences between the relative value amounts and the relative frequencies are much more balanced than the district values. The concentration values of the Sarkad district developed more differentially in this period. The reasons of the well-marked differences between the year of accession and the years 2005 and 2006 stem from the fact that because of the institutional unpreparedness (ARDO) and the deficiencies of the Integrated management and control system the payment of funds were delayed and only few people received funds. The process is clearly outlined on the figure since there is no outstanding difference between the relative frequencies and the value amounts. In 2005 and 2006 we can experience a high concentration difference as the curve moves away more from the diagonal of the unit square so we can sense that few funded receive big subsidies. The phenomena can be explained by the fact that the delayed subsidies of 2004 were paid in 2005 but this would not justify the great concentration difference of 2006 and the concentration developments of 2007-2013 (Figure 3-4).
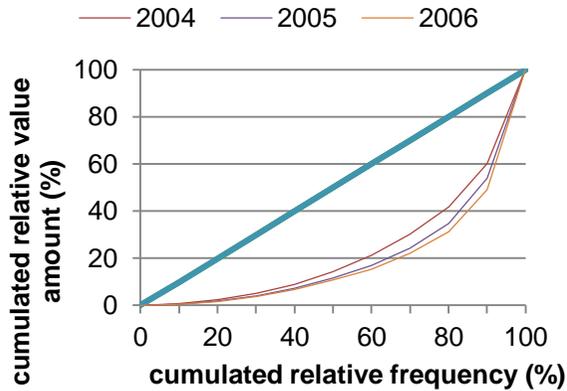
**Figure 3:** Funds concentration in the Southern Great Plain Region between 2004-2006
*Source: own measurements on the basis of ARDO data*
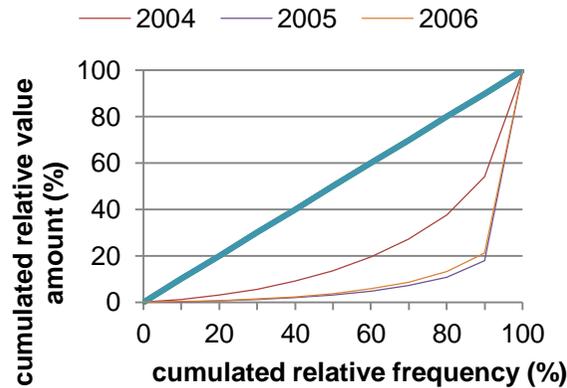


**Figure 4:** Funds concentration in the Sarkad district between 2004-2006
*Source: own measurements on the basis of ARDO data*

It is characteristic for the 2007-2013 period that there are no sharp concentration differences in terms of the certain years. The regional data show classic concentration dispersion (Figure 5) while on the district level (Figure 6) the high concentration remained for every single year moreover for the years 2001 and 2012 we witness a slight increase. We can state in terms of both levels that the curves show that the funds dispersion evened out.
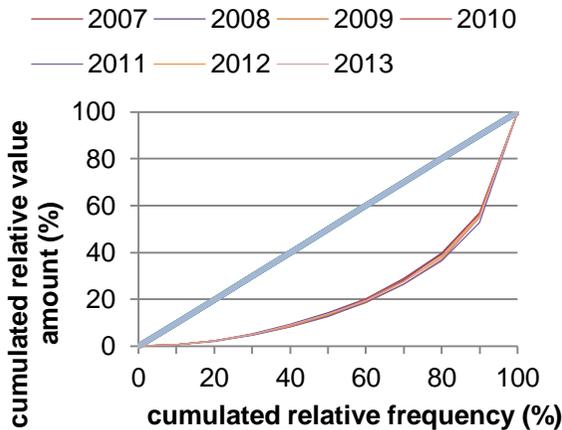
**Figure 5:** Funds concentration in the Southern Great Plain Region between 2007-2013
*Source: own measurements on the basis of ARDO data*
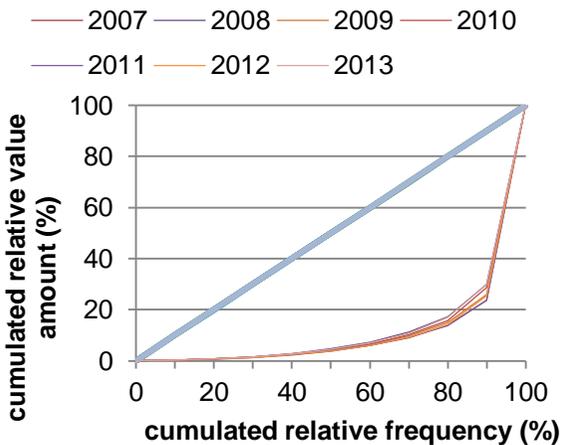


**Figure 6:** Funds concentration in the Sarkad district between 2007-2013
*Source: own measurements on the basis of ARDO data*

The concentration differences between the certain NUTS levels are perceptible the simpliest way by the CR concentration ratio. In our research we matched the share of the total funds of the three biggest regional and district players (Table 1). The data of the table depicts that the share from the total funds of the three biggest funded players confirm the results of the Lorenz curves. On a regional level we experience that the amount of concentration ratio after the years of 2006, when the increase stopped continuously moves around 10%. By contrast the district numbers convey the concentration even in these figures. The highest concentration in 2005 was more than 36% and from 2007 on the share of the biggest players were 17%.

**Table 1:** The changes of CR concentration in each year (%)

|  |  | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|------|------|------|------|------|------|------|------|------|------|
| Southern Great Plain Region | CR1 | 3.53 | 5.75 | 7.39 | 6.22 | 4.60 | 6.08 | 5.02 | 4.93 | 5.49 | 4.71 |
|  | CR2 | 3.43 | 4.28 | 5.15 | 3.27 | 2.92 | 3.35 | 3.18 | 3.83 | 3.32 | 3.55 |
|  | CR3 | 2.50 | 3.47 | 3.14 | 3.12 | 2.77 | 2.98 | 2.93 | 3.31 | 3.06 | 3.21 |
| Sarkad district | CR1 | 4.14 | 16.71 | 11.48 | 7.82 | 6.87 | 8.63 | 9.72 | 15.76 | 18.91 | 11.90 |
|  | CR2 | 3.21 | 12.29 | 10.49 | 3.82 | 3.25 | 3.03 | 2.36 | 4.32 | 2.00 | 2.16 |
|  | CR3 | 2.88 | 8.61 | 8.09 | 3.17 | 2.72 | 3.02 | 2.24 | 4.11 | 1.57 | 2.16 |

*Source: own measurements on the basis of ARDO data*

In terms of the Hirschman-Herfindal index (HH index) or in another name the concentration index, the table does not serve as a comparison but only shows how the value of the index changed in each year. We cannot talk about a comparison in this case because I conducted different number of element research on a regional and district level which greatly defined the minimum of the index on each level. The change can be clearly traced though in the yearly values (Table 2).

**Table 2:** The development of Hirschmann-Herfindal index in each year in terms of funds utilisation

|  | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|------|------|------|------|------|------|------|------|------|------|
| Southern Great Plain Region | 0.0101 | 0.0141 | 0.0174 | 0.0130 | 0.0115 | 0.0135 | 0.0119 | 0.0135 | 0.0127 | 0.0124 |
| Sarkad district | 0.0072 | 0.0567 | 0.0380 | 0.0155 | 0.0114 | 0.0154 | 0.0159 | 0.0337 | 0.0403 | 0.0197 |

*Source: own measurements on the basis of ARDO data*

We chose 2006 as a reference year (Figure 7) since in 2004 extremely few funds were paid while in 2005 extremely lot as they compensated for the lost amounts of 2004. In terms of 2006 we can talk about a balanced year so that is why this is the first year which is suitable for the comparison.
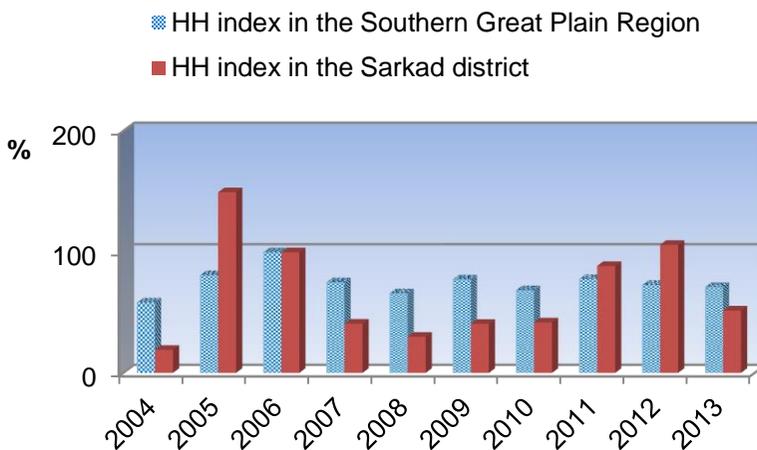


**Figure 7:** The extent of regional and district concentration change on the basis of HH

index (2006=100%)
*Source: own measurements on the basis of ARDO data*

On the basis of the HH index changes the result of the Lorenz curves are better outlined. Between 2004-2006 the regional concentration indexes continually rose while the district values reached their highest value in this period in 2005. In the 2007-2013 budget period the regional HH indexes show almost identical changes. In terms of district the changes compared to the reference year of 2006 are much bigger. On the basis of HH indexes we can state here also that despite the concentration growth of 2011 and 2012 the concentration of funds balanced out in this period.

## 5. Conclusions

Based on the analysis of the concentration data we can state that on a regional level the funds concentration balanced out by the end of 2013 and a similar process went under way on a district level. The regional funds concentration data are much lower on the basis of the Lorenz curves unit square diagonal and curves results. In terms of the Sarkad district, although the concentration gradually balanced out still the funds have reached the funded much more concentrated.

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# THE MACROECONOMIC IMPACT OF LEGISLATIVE REGULATIONS IN THE RENEWABLE ENERGY SECTOR

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**Abstract:** This paper will analyze the impact of legislative regulations in the energy produced from renewable sources of energy prices on households and industrial energy market in the European and Romanian. Will be presented first European strategy on the promotion of renewable energy to achieve the target of 20% of EU energy production. Directive on renewable energy production has generated a number of changes in the energy market on the price to the consumer and the State aid administered by the European Commission. This Directive has led to increases in energy prices finals encouraged by various support schemes. Macroeconomic analysis will estimate the effects of increasing electricity prices due to legislative regulations of renewable energy on domestic and industrial consumers in the EU member countries. For this research the author appeals to applied economic literature on market price of renewable energy, namely the introduction of an additional cost for households and industrial consumers, cost generated by high levels of investment in renewable energy and encourage energy produced by different support schemes. The author will highlight the main issues induced by some EU countries have taken a number of measures to reduce or eliminate the additional cost and then nationally, based on the National Action Plan for Renewable Energy, will assess the effects the regulations in the field of energy they produce to market. On the one hand European Commission approves state aid for renewable energy production, on the other hand, the Commission brought all state aid for the high price of energy in energointensive industry. It will finally achieve some estimates on energy prices in 2020 in Romania. Maintaining the high cost of energy for industrial consumers leads to uncompetitive due to the high prices of the final product. Regarding the question of consumer households vulnerable due to higher electricity prices.

## 1. Introduction
The European Union has set out plans for the energy strategy based on a safe, sustainable and low carbon. In addition to tackling climate change by reducing emissions of greenhouse gases, use of renewable energy is likely to lead to a more secure energy supply, greater diversity in energy supply, reduce air pollution and the possibility creation of jobs in environmental and renewable energy sectors.

## 2. Theoretical considerations
A new interesting research about the impact of electricity generation from renewable energy sources (RES-E) on energy prices, and potential interactions with market liberalization. Most renewable energy technologies are not profitable at current prices, and their development is mainly driven by different public support schemes, which tend to be funded by the retail electricity market. This implies an additional cost for the consumer and an increase in retail electricity prices.

Literature is divided in the direction of the net effect on the price performance of RES_E electricity wholesale and retail. Moreno Lopez and Garcia-Alvarez (2012) confirms that the cost increases energy price support schemes to the final consumer. However, honey Saenz et al. (2008), Sensfuss et al. (2008) and Jensen and Skytte (2003) justify their conclusions that the conduct RES_E contribute to an overall reduction in retail electricity prices. These contradictory results suggest that further work should be done on quantifying the various components of the overall price, the net impact of the type of consumer and the type of renewable energy promoted, and the identification of any interactive effects with other factors such as the degree of competition in the market.

## 3. Legislative regulations in the European Union

Directive 2009/28 / EC of the European Parliament and of the Council on the promotion of renewable energy has set an overall EU target for a 20% share of energy consumption to come from renewable sources by 2020, while renewables should represent a share of 10% of fuel used in transport by the same date. The Directive amends the legal framework for the promotion of electricity from renewable sources and required national action plans to show how renewable energies will be developed in each Member State.

European Commission EC Directive no. 2009/28 / EC on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77 / EC and 2003/30 / EC, considered necessary to promote electricity production from renewable energy sources by implementing schemes support that are actually funded by final consumers of electricity.

On 6 June 2012, the European Commission presented a Communication entitled "Renewable Energy: a major player in the European energy market" (COM (2012) 271 final), highlighting policy options for renewable energy beyond 2020 . The Communication also called for a more coordinated approach in establishing and reforming European support and increased use of renewable energy trade between Member States. In January 2014, the European Commission presented a set of energy and climate goals for 2030, in order to encourage private investment in infrastructure technologies and low carbon. These objectives are seen as a step towards achieving their emission of greenhouse gases for 2050. One of the main objectives is proposed for the share of renewable energy to reach at least 27% by 2030.

European Commission EC Directive no. 2009/28 / EC on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, considered necessary to promote electricity production from renewable energy sources by implementing schemes support that are actually funded by final consumers of electricity.

## 3.1. State aid for renewable energy

In 2008 the European Commission adopted guidelines on State aid granted earlier by the Member States and regional and local authorities. These guidelines stable compatibility criteria which ensure a high level of environmental protection. Much of the aid granted under the 2008 Guidelines served to promote renewable energy sources (RES). From a total of € 10 billion provided under the environmental protection measures between 2008 and 2012, Member States granted € 8 billion for RES and cogeneration. Some of these measures do not require notification to the Commission, so have benefited from an exemption under the 2008 General Block Exemption Regulation.

Review guidelines started in 2012 included three public consultation and numerous contacts with Member States and stakeholders. For the first time, the Commission decided to adopt guidelines covering not only the RES and energy efficiency, but would be more oriented generally aid measures energy. New guidelines on State aid for environmental

protection and energy were adopted in principle in April 2014 and were applicable from 1 July 2014 (OJ C200).

State aid rules for the production of energy from renewable sources helped to achieve the environmental objectives of the EU. Under current EU targets by 2020, 20% of total energy consumption should come from renewable sources. In 2012, the EU average already spent 14.1% of its energy from renewable sources. Based on current trends and policies, the EU average of renewables in energy consumption could reach 20.9% by 2020 (Figure 1).
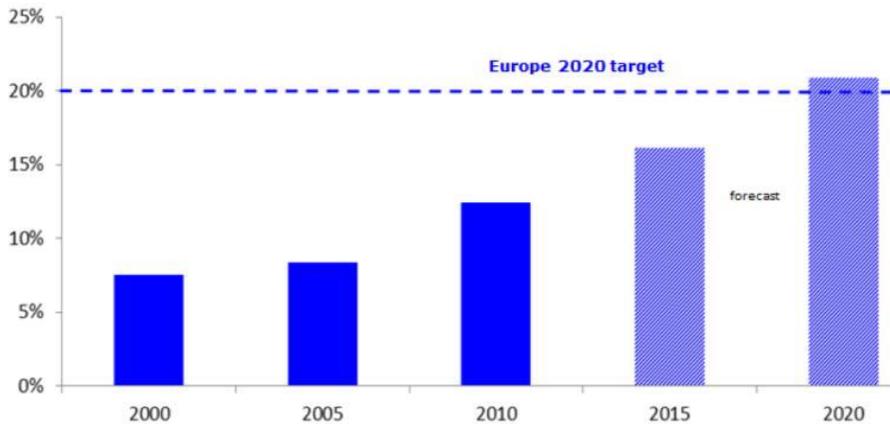


**Figure 1:** EU average of Renewable Energy in gross final energy consumption, 2000-2020
Source: European Commission

But there are also new challenges. Renewables have become victims of their own success. The rapid growth of renewable energy generators have also caused market distortions:

- Support schemes are not cost-effective: To support renewable energy sources, Member States use fixed rates guaranteed. They cover producers of electricity from renewable sources to market signals and changing electricity prices, which do not give any economic incentive to accommodate the characteristics of the project (such as location, design, installation, operation or real) of supply and demand;

- Market fragmentation: There are large differences between support tools, levels of support from Member States and technologies. Figure 2 below shows that many Member States are spending on support schemes for electricity from renewable energy sources (RES-E), both in absolute terms and per MWh.

Different levels of support are not necessarily a problem, but large differences could encourage potential grant shopping. One explanation for the large differences between Member States could be simply that it is difficult to establish administrative charges at the right level. Member States tend to subsidize national production of energy only, which enhances energy market fragmentation.

In June 2014, the Council stressed the need to move progressively towards effective mechanisms and market-based support for renewables. To reduce energy costs borne by end users, the European Council called for greater convergence of national support schemes by 2020.

- Incentives less invested in production capacity: renewable energy sources generally have lower operating costs than conventional electricity production needs fuel to function.
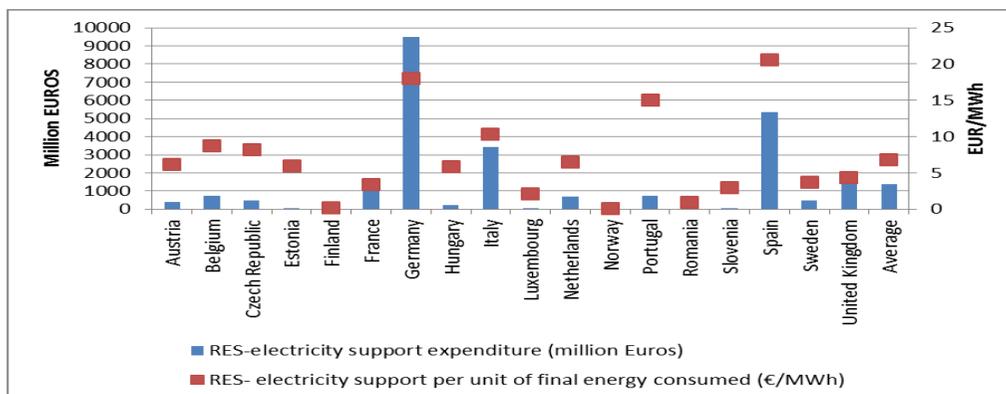
**Figure 2:** RES-e support in Europe per unit of energy consumed
Source: CEER, June 2013

Considerable expansion of renewable energy sources pressed wholesale electricity prices. This had a negative impact on investment in conventional generating capacity, especially gas-fired plants. Existing plants are aging, and when substantial investment is needed to ensure sufficient generation, they cause concern outlooks.

To meet these challenges, it is necessary that support schemes to be reformed and become more responsive to price signals. The revised Guidelines mitigates potential distortions of competition caused by support for renewable energy. At the same time, they help Member States to continue to meet renewable energy targets. Moving away from renewable energy subsidies and their integration into the market will likely reduce market distortions to improve the functioning of the internal market and to help electricity costs in Europe.

As a first step, the guidelines will eliminate guaranteed purchase of energy from renewable sources at fixed prices: from 2016 renewable energy producers will have to sell their production to the market. They can still get help, but as a premium in addition to the market price. In the second stage, the new guidelines promotes the gradual introduction of competitive bidding as a means of granting aid for renewable energy. Competitive bids will become mandatory in 2017, but will be preceded by a two-year pilot phase, which will allow Member States to adapt the system to national circumstances.

To reduce fragmentation of the internal market, competitive bidding processes should in principle be open to bidders from other Member States. This does not apply to foreign companies can not physically access the market, or when there is cooperation mechanisms in place. These are agreements that allow Member States to take electricity from renewable sources produced in another Member State to achieve the target account their energy from renewable sources in 2020.

Competitive bids are permitted only way to grant operating aid for the production of electricity from renewable energy sources. In such cases, notification threshold is set at € 150 million per year, taking into account the combined budget for all systems.

To finance renewable energy, governments increase taxes on energy suppliers who, in turn, increase energy costs for consumers, both domestic and industrial. These charges from renewable energy sources are an increasing burden on energy-intensive sectors. This makes it difficult to compete with non-EU industry. The main concern in terms of state aid control is that companies that benefit from these discounts are subject to obtaining an undue advantage which improves the competitive position compared with other companies and distort trade between Member States. Schemes could also introduce distortions in the Member States where the companies in specific sectors are treated differently (for

example, large firms receive support, while smaller firms not).

To take into account differences between firms, energy-intensive companies in certain sectors consuming more may be eligible for tax cuts RES. Because each company is expected to contribute a percentage environmental objectives, the maximum possible reduction of tariffs is 80%.

In July 2011, the Commission approved the Romanian support scheme based on green certificates designed to promote electricity from renewable energy sources. Producers of electricity from renewable sources receive a certain number of green certificates, depending on the technology used for each MWh produced and delivered over the network. Electricity suppliers must purchase a mandatory quota of green certificates and transfer the entire cost of green certificates to end consumers.

In July 2013, the European Commission approved the scheme proposed by Germany for state aid energy intensive industries ($CO_2$ compensation for indirect costs reflected in electricity prices). The main reason was the risk of relocation of economic production activity to other regions / countries due to strict environmental regulations and high costs of $CO_2$ (carbon leakage). The total approved aid scheme is € 756 million for 2013-2015, which could be extended until 2020. Companies eligible for aid must be active in one of the following sectors: aluminum production, exploitation of minerals and fertilizers , production of iron, steel and ferrous alloys, production of fertilizers, iron ore mining, paper and paperboard.

In July 2014, Romania has notified its plans to reduce its contribution to the financing of renewable energy for some companies that operate in sectors with a high level of intensity and exposure electro-trade. Beneficiaries' contribution to support for renewable energy will be reduced by 85%, 60% or 40% if they show an electro-intensity above 20%, between 10% and 20%, respectively, between 5 % and 10%. Beneficiaries will have to show that (1) does not record debts to general government budgets; (2) performing energy audits and implement measures to improve their energy efficiency; (3) not more than 25% of redundant employees and maintain activity in the European Economic Area (4) partnerships with educational institutions to bridge the gap between theory and practice, increasing the professional level and attract qualified personnel.

The Commission has assessed the compatibility of the measure with the provisions of the new guidelines on aid for environmental protection and energy, adopted in April 2014. Following the investigation it was found that reductions is limited to companies operating in sectors recognized under the same guidelines as for electro-intensive and exposed to international trade. Other conditions applied to selecting eligible beneficiaries are objective, transparent and do not discriminate between companies that are in a similar factual situation. Reduction Scheme Green Certificates entered into force on 1 December 2014 and will expire on 31 December 2024. The annual budget dedicated to the scheme is estimated at around EUR 75 million for 300 beneficiaries.


### 3.2. Electricity price level in EU countries

In the European Union the price of electricity consumption initially fell after the liberalization of the energy market liberalization in 1998 was associated with a deviation from the principle of pricing based on average costs. The evolution of consumer electricity prices (calculated excluding taxes and duties imposed by the government) took over variable costs reflect.

Consumer electricity prices, taxes, doubled in Germany in 2000 as a result of: (1) tax reallocation in favor of renewable energy, which increased to 52.88 euro/MWh by 2013; (2) electricity tax, which was introduced in 1999 and then gradually rose to 20.50 euro/MWh, and (3) fees reallocation launched network access charges. Energy industry was only a little affected by these taxes and charges imposed by the State of relocation, so it was

possible to keep the prices of electricity for industries with relatively high power consumption.

In Spain, due to the shortage of electricity, electricity prices for households are among the highest in the European Union. The situation is slightly better for industrial customers in approximately 115 euros per MWh. Spain has its place among the eight EU Member States (United Kingdom and Italy have higher prices). However, the Spanish electricity prices are still well above average.

Germany kept the competitiveness of large industrial consumers by giving them some exceptions. The main difference with Romania is that it has special rates injection network. On the other hand, the tariff for renewable energy is reduced annually to introduce an incentive to lower the cost of innovation. Rates apply throughout the period of payment, on the 20 years. For onshore wind energy, rates are from 48.7 €/MWh to 89.3 €/MWh, that dropped by 1.5% annually for 20 years. In comparison, our country offers two green certificates, which are traded at a maximum price of 55 euros, plus another 40 euros that they get from selling energy producer on OPCOM (Energy Market Operator and Natural Gas in Romania ).

Since 2010, the Spanish government has made a series of ambitious reforms about to put end deficit, including reducing subsidies for renewable energy production tax activity, creating some fees for different generation technologies, reducing payments for distribution and transmission, etc. Last reform, announced in July 2013, included a royal decree law to enforce emergency measures electricity.

In Spain, green energy producers must choose between a system of difference in price and guaranteed bonus scheme, plus the market price of energy. For wind energy is granted EUR 73.2 fixed price, guaranteed for 20 years. For PV, the largest price is 340 €/MWh for systems installed in buildings, but having installed capacity below 20 kW. For over 10 MW power not granted incentives. However, because of the crisis in January 2012 support schemes for new renewable installations were suspended by royal decree. Increasing the Spanish state deficit, coupled with accelerated development of green energy in recent years has necessitated the suspension schemes. Not affected plants entered into service by 2012.

The Bulgarian government also cut the flesh. Executive in Sofia guaranteed low prices with 20% wind energy and solar energy by 50% in early 2013. It also introduced a retroactive fee for using the National Energy System applicable to green energy producers whose capacities came into use from 2010 onwards.

And Greece has reduced feed-in tariffs guaranteed due to budget cuts. For the year 2014, the tariffs for photovoltaic capacity is between 53% and 68% of tariffs in the first half of 2012.

In fact, of the 28 EU member states, ten countries have already introduced restrictions on support schemes and other schemes implemented ten differentiation of obligations not to press too much on the industry.

Some Member States have in recent years, so-called accumulated deficits electricity tariffs. Regulated electricity prices do not cover costs incurred by energy utilities. In some countries, such as Spain, Portugal and Greece, authorities and regulatory bodies explicitly use the term shortages of electricity price and size monitors them.

In France, regulated electricity tariffs do not cover the real costs of electricity in the state-controlled company, which has the largest market share in the French electricity.

In Bulgaria, regulated energy prices are also too small to fit the related expense.

In Malta, the regulated price rigidity led to an accumulation of debt in the company of electricity.

The scope of the tariff deficit varies from country to country. The deficit is caused by a mismatch between the total amount of electricity to end users and related costs (this is the

case in Portugal or France), between the costs of access - including transport, distribution and support for renewable energies - and the corresponding tariff (in Spain) or between costs and revenues of the Special Account for the support of renewable energy sources (in Greece). It is important to distinguish between significant long-term tariff deficits that are difficult to remove, and short term.

The main factor that causes the tariff deficits in recent years has been a substantial increase in energy prices. Several factors contributed to this price increase, especially the rising cost of fossil fuels and global deployment of renewable technologies. In some countries, generous subsidies to producers of solar and wind power triggered massive investment in these sectors, which in turn inflated the amount of subsidy required to pay investors. This support is mainly financed by a surcharge on the price of electricity. Other factors contributing to the increase in electricity prices include limited competition and transparency in the energy sector in some Member States, subsidies for conventional energy producers and power purchase agreements remaining term.

In most Member States, the rising cost of electricity have been fully reflected in end-user prices, sometimes unequal segments, ie households and industrial.

In Spain and Portugal, utility rights to recover the tariff deficit accumulated turned in fixed income securities; in Spain these securities are guaranteed by the government explicitly. Tariff accumulated debt - including the securitized - amounts to 2-3% of GDP in Spain and Portugal.

To reduce these deficits, the simplest solution, in theory, should increase tariffs to cost recovery levels. However, this is not always possible. If deficits are large, their removal would require substantial electricity prices. They could adversely affect industrial competitiveness and households' purchasing power, and would not be acceptable for energy consumers.

Therefore, Member States tariff deficits usually combined with other measures limited tariff increase: remedies of energy consumers, energy and public finances. These include, first, reducing support to renewable producers (including co-generation), the other generators (such as capacity payments or subsidies to coal) and low pay transportation and distribution. For example, Spain has recently replaced the difference in price for renewable energy through a compensation mechanism which guarantees a specific RES generating annual rate of return on investment, introduced similar rules for energy transmission and distribution and substantially reduced capacity payments gas installations.

Despite these measures, electricity tariff deficits persist in many countries. They distort electricity prices, deteriorating financial condition of utilities energy and increases uncertainty for investors in this sector and for all electricity consumers. For these reasons, several Member States have committed to the elimination of the tariff deficit. In Greece, Portugal and Spain, phasing out the electricity tariff deficit was included in the memoranda of understanding of financial assistance programs.

## 4. The macroeconomic impact of regulations RES in Romania

Transposition of European Directive into national law was made by Law no. 220/2008 for the system to promote energy production from renewable energy sources, republished, as amended and supplemented (the Act), which established a system of promotion of electricity produced from renewable energy sources, green certificates. This system was approved by the European Commission Decision C (2011) 4938 on State aid SA 33134 (2011 / N) for Romania - green certificates to promote electricity production from renewable energy sources. Implementation of the system for promoting electricity from renewable sources, green certificates, established by Law took place on 1 November 2011. The system involves, on the one hand, quota setting annual mandatory green certificates and on the Moreover, market trading mechanisms CV issued to producers of

electricity from renewable energy sources. Market mechanisms consist of selling CV, between a minimum and a maximum or CV centralized market or through bilateral contracts for purchase / sale of CV, performed on a centralized trading platform. Given that the annual quota is not reached mandatory electricity supported by the promotion system established to achieve the national target assumed by Romania, shows a deficit of CV market price determined by market mechanisms tend to increase to the maximum. In 2012 Romania was offering grants of more than two times higher for electricity in the wind compared to the European average and more than six times higher in the photovoltaic According to the latest data, Romania has already achieved 97.5% share of green energy assumed for 2020.

Romania has delayed payment of a number of green certificates for the period 1 July 2013 to 31 December 2016. By 2013 they were granted six green certificates for each MWh of energy produced in photovoltaic (2.5 times higher than the EU average), two certificates for wind energy (2.24 times higher than the EU average) and three certificates for energy SHP with an installed capacity to 10 MW. The draft emergency ordinance provides certificates difference would be delivered after 1 January 2017.

The level set out in the National Action Plan on Renewable Energy (NREAP) to the end of 2013 is 3315 MW. Total installed power plants in Romania in the production of electricity from renewable energy sources (including hydropower plants with installed capacity greater than 10 MW) thus reached approx. 6000 MW.

**Table 1:** Estimated power renewable energy in Romania

|  | **UM** | **2011-2015** | **2016-2020** | **Total 2011-2020** |
|---|---|---|---|---|
| Wind power | MW | 2734 | 800 | 3534 |
| Total investment | Mil. euro | 4641 | 1359 | 6000 |
| Photovoltaic | MW | 148 | 112 | 260 |
| Total investment | Mil.euro | 370 | 280 | 650 |
| Power on biomass Total investment | MW Mil.euro | 402 975 | 175 425 | 577 1400 |

Source: National Renewable Energy Action

Evolution invoice final consumer impact renewable energy contribution for the year 2013 was accelerated growth of about 30 Euro/MWh approx. 53 Euro/MWh in early. As a result of measures taken by Ordinance no.57/2013, the contribution rate in 2013 dropped to 35 Euro/MWh.

In accordance with EC Directive no. 2009/28 / EC on the promotion of energy from renewable energy sources, Romania sent the EC in 2010, the National Action Plan for Renewable Energy for the period 2011 - 2020. NREAP sets national targets for the share of renewable renewable trajectory for reaching them, taking into account the effects of the measures of national development policies and strategies coupled with the limitations of the transmission and distribution network and available reserves to balance the National Power System (RPS) to ensure its safe operation . Evolution accredited capacity by the end of 2013 and their perspective presented by ANRE compared NREAP 2010, for the period 2011 to 2020, indicating a rapid development of the electricity generation sector of renewable energy, which if exceeded expectations intermittent technologies, wind and photovoltaic (about 3750 MW at the end of 2013 to about 2530 MW provided in NREAP). ANRE estimated approx. 6000 MW at the end of 2014, compared to 3,000 MW provided in the NREAP. The spectacular increase installed capacity took place during 2012 - 2013,

especially in 2013 and coincided with a decrease in electricity consumption in the same period.

Given the structure coverage renewable sources considered in the National Plan of Action on renewables, (considering the extra cost of green certificates) lead producer prices to about 72 € / MWh in 2020. The situation is still very fluid whereas the number certificates for each MWh "green" depends on the type of production technology and "overcompensation" can still be invoked in some cases.

However, the study considers that the producer price figure of 72 €/MWh is minimal. Recent data ANRE submit digits of energy price increases due to the use of renewable sources by 30% by 2017 and by 23-24% by 2020. The explanation is that after 2017 fewer green certificates are granted to avoid overcompensation. A recent study from ANRE, gives more details about the gradual increase of the price.

The values are presented in Table 1:

**Table 2:** Gradual increase in energy prices

| Year | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|
| Increase price (€ / MWh) | 19,59 | 23,92 | 12,95 | 13,98 | 30,43 | 21,46 | 21,13 | 20,80 |

Source: Estimates based on the National Commission of Prognosis

According to the International Energy Agency (IEA) high electricity prices will affect the european economy for another 20 years from now, undermining the competitiveness of EU key industries and jobs of a number of almost 30 million Europeans. IEA estimates that in the next two decades, Europe will lose a third of global market share currently held in the export of products that require energy-intensive, because maintaining energy prices at levels significantly higher than those of United States.

Several EU countries are currently providing grants for energy production from renewable sources, progressively renounce nuclear energy production facilities to the dismay companies intensive industries consuming electricity, which complain that, in this way, it is destroyed competitiveness.

In Romania short-term impact of uncontrolled increase in electricity prices by about 30 lei MWh due contribution to promoting renewable energy raises a question of affordability both from households and from industrial consumers.

Projection in the coming years must take into account the effects of price liberalization by about 30% and the effects of price increases in the context of creating regional market (between 10-30%), the fee for cogeneration and changing consumer habits household energy for electricity in the context of the sharp drop in electricity consumption.

The proposed measures are aimed at activation of the market with regard to the scheme to promote renewable energy in Romania is a mandatory quota system based on the purchase of green certificates traded on a separate market competitive.

The main consequence of reducing the mandatory quota fixed for 2014 is the obligation of electricity suppliers to purchase green certificates issued for partial delivery network electricity from renewable sources. By reducing the number of green certificates allocated their market is expected to issue the correct signals on the minimum level of public intervention support and boost the competitiveness of electricity. It also seeks to improve the competitive conditions on the electricity market.

## 5. Conclusions

The liberalization of energy markets and the creation of the European internal market are long-term interests of the European Union, provided gradually implementing legislative

package, predictable and transparent, in line with current realities of the energy system. The introduction of the Directive on renewable energy in the European energy market brings a number of regulations and interventions of the European Commission under State aid producers and investors in renewable energy sources. The scale of investment in renewable energy is clean energy that falls upon costs can not be borne by consumers.

As a result, the European Commission has limited State aid in the field, and some countries have reduced rates of intervention.

In Romania the legislative, fiscal and regulatory framework should be stable, predictable, long-lasting and favorable investment. Any changes need to be discussed by public consultation with leading players in the sector, where appropriate, based on impact studies. Correct formation of prices for final consumers, based on free market mechanisms and proper functioning of the internal energy market is imperative. Currently Law no. 123/2012 creates a vicious circle of unsustainable investment: investment in production capacity can be achieved by pre-contracts for the sale of electricity, because the future is not licensed manufacturer and anyway will have to provide centralized electricity markets where not sure that in time will receive based price.

The state's role in the energy system should be limited in most cases to the arbitrator. Budget revenues derived from taxes on the energy sector should be used for upgrading (especially transmission infrastructure) and for interconnection with neighboring states and not to finance the state budget in general. Of course, part of the aid is strictly necessary for households that become vulnerable with price liberalization.

The liberalization of energy markets in the period 2013-2017 will increase prices for final consumers, whether industrial or domestic, gradually aligning the prices of other Member States, perhaps in a faster pace than that of productivity and income growth.

The increase in electricity prices over the affordability seriously affect energy intensive industry. Decreased competitiveness of industrial products, loss of market share and increased risk of relocation of industries such as metallurgy, aluminum, petrochemicals, cement, construction materials, fertilizers, with major impact in horizontal industries, will reflect on national economic growth and will detract from the attractiveness for foreign investment in the industrial sector.

Regarding households, a simple analysis results in a significant increase in the state budget effort to assist vulnerable consumers by getting the energy poverty situation of new categories of consumers.

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# COST - EFFECTIVENESS ANALYSIS IN CONTEXT OF THE NEW LEGISLATION ON ENERGY EFFICIENCY

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**Abstract:** In this paper the author presents some aspects of a broader analysis on the macroeconomic effects it generates new energy regulations on energy efficiency in the European Union. Are presented for this purpose EU targets for achieving targets 20% reduction in energy consumption by 2020 and improve the prospect of cuts in 2030. In a time when environmental concerns, economic and social becoming increasingly important, being represented by climate change or the endangering energy security, resource depletion or ability to pay energy bills, reduce energy consumption in buildings and industrial sector of strategic importance, both nationally and internationally. In addition to efforts to build new buildings and industrial facilities with low energy requirements, obtained from conventional sources of energy is essential to address the high levels of consumption of existing buildings and facilities. Improving the energy efficiency of the existing buildings and facilities is essential not only for achieving national targets for energy efficiency in the medium term, but also to meet long-term objectives of the strategy on climate change and the transition to a competitive, low carbon dioxide by 2030.
The analysis consists in determining and assessing costs, benefits on energy efficiency in the European Union and national level. In Romania the gradual liberalization of the electricity market and gas is unsustainable in the context of the energy sector, which faces a variety of challenges, including high energy losses. In the medium term, the energy market liberalization leads to an appreciable increase in electricity prices, gas and heat, a process that takes place very late and that will put high pressure on the capacity of all energy consumers (industrial and residential) to pay energy bills. An obvious solution, but not convenient, is to reduce energy consumption through energy efficiency or by reducing energy losses.
The article ends with the development of recommendations aimed at contributing to building a system of energy efficient, safe, competitive, to ensure affordable energy to consumers, reduce dependency on energy imports and to create new opportunities for economic growth.

**Keywords:** direct, market energy consumption, energy efficiency, economic growth, liberalization

**JEL classification:** E21

## 1. Introduction
Energy efficiency concerns an increasingly important for the economy. This interest is motivated by a series of events starting with the continued growth of energy consumption, energy costs over the last few years, energy market regulation and not least, the entry into force of the Directive on energy efficiency.

## 2. Regulations on energy efficiency in the EU

EU Energy Efficiency Directive (DEE) 2012/27 / EU establishes a common framework for promoting energy efficiency in the European Union to ensure the 20% of primary energy consumption by 2020 and pave the way for further energy efficiency improved. It lays down rules designed to remove barriers and overcome some of the market failures that impede improving efficiency in the supply and use of energy. For end-use sectors, the Directive focuses on measures that lay down the public sector, both in terms of administrative building renovation (at a rate of 3% is mandatory for annual refurbishment) and applying high energy efficiency standards to the purchase of buildings, products and services. The Directive requires Member States to establish national mechanisms requiring energy efficiency or alternative measures must achieve a cumulative target of new savings each year equal to at least 1.5% of annual energy sales to final consumers (with the possible exclusion of energy used in the transport sector) in 2014-2020. Are needed in this mandatory regular energy audits for large companies and a number of requirements on energy companies regarding metering and billing.

Energy efficiency has been carefully analyzed in many EU countries during 2014 and will remain in the political agenda for at least two reasons: first, the first Energy Efficiency Directive (2012/27 / EU) was adopted by Council and the European Parliament in October 2012 and would have to be implemented by Member States by June 2014; Secondly, the analysis shows that energy efficiency target - a decrease of 20% of primary energy consumption by 2020 compared to projections made in 2007 is most unlikely to be achieved under current conditions. Member States should accelerate reforms to ensure that EU commitments to be met in the most cost effective.

The Directive establishes a common framework of measures to promote energy efficiency in the Union, in order to ensure that the main objective for 2020 of 20% of EU energy efficiency and to pave the way for further energy efficiency gains thereafter. All 28 EU countries were thus obliged to use energy more efficiently at all stages of the energy chain - from power generation to final consumption (Figure 1). This new directive aims to remove barriers and overcome market failures that impede efficiency in the supply and use of energy and provides for the establishment of national indicative targets for energy efficiency for 2020.
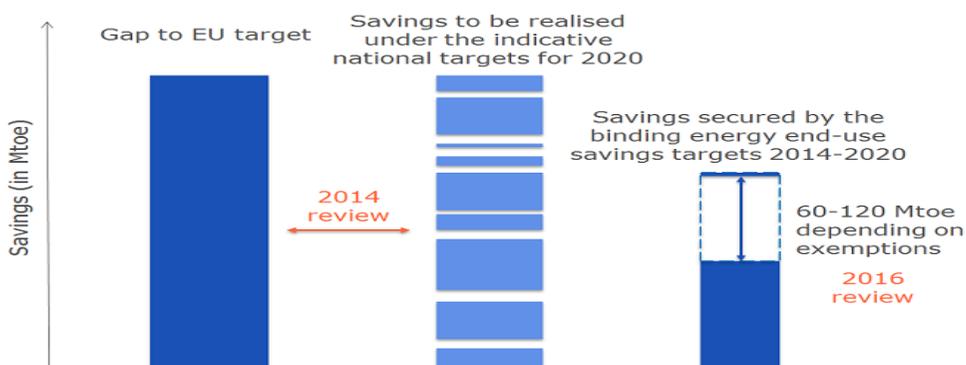


**Figure 1:** The new objectives introduced by DE and their interaction with the EU target
Source: European Commission

The new EU measures on energy efficiency objective quantification predict energy consumption for 2020 of more than 1474 Mtoe of primary energy or no more than 1078

Mtoe of final energy. With the accession of Croatia to the European Union target was revised in 1483 Mtoe of primary energy or 1086 Mtoe of final energy.

The obligation for Member States is to achieve a certain amount of energy savings final period (June 2014 - 31.12.2020) by using energy efficiency obligation schemes or other policy measures targeted to improve energy efficiency. The general problem is that, although energy efficiency policy is already in place, some barriers remain persistent energy savings and potential savings (both short and long term) energy is not fully realized. Therefore, energy efficiency now and, to a greater extent in the future, is expected to contribute sufficiently to the EU energy policy goals.

## 2.1. Current trends in energy efficiency

Member States have set national targets for energy efficiency without binding only recently passed. Energy Efficiency Action Plans of the Member States for 2014 indicates strengthening national energy efficiency policies.

Based on an analysis of Member States' actions on the basis of forecasts and more, the Commission estimates today that the EU will achieve energy savings of approximately 18-19% in 2020 (savings of about 15 Mtoe).

About a third of progress in achieving the 2020 target will be due to lower growth than expected, due to the financial crisis (COM 2013).

The measures of saving move towards sectors with the greatest potential for reducing energy consumption.

According to forecasts, the current 2020 energy efficiency is about to be reached (COM, 2014).

Commission Communication on a 2030 policy framework on climate change and energy levels identified energy savings of 25%, as part of a strategy to achieve the objective of reducing emissions of greenhouse gases by 40% most cost effective way. However, given the growing importance of strengthening the EU's energy security and reduce dependence on imports to the Union, the Commission considers it appropriate to propose a higher goal, namely 30%.

This would lead to increased costs for 2030 frame 20 billion per year, but would bring tangible benefits in terms of economic and energy security.

The Commission does not intend to propose new measures, but calls on Member States to intensify their ongoing efforts to ensure that the collective target for 2020. The Commission will complement these efforts through appropriate guidance and disseminate best practices to ensure full use of funds Available Union.

A key objective of future climate and energy policy is maintaining prices energy affordable for business, industry and consumers. Consequently, the 2030 and the objectives it contains, is the need to meet energy and climate objectives in the most cost effective. Such an approach requires that Member States have the flexibility in how they meet their commitments, taking into account national circumstances. On this basis, the Commission proposed for 2030, mandatory targets for reducing emissions of greenhouse gases by 40% (compared to emissions in 1990) and determining the share of renewable energy to at least 27% of the energy consumed. These are steps towards a path cost competitive low carbon dioxide 2050.

## 2.2. Optimum cost-benefit analysis in the European Union

For 2030 the European Council promotes agreeing targets so that the EU can play an active role in the ongoing international negotiations on climate change. Appropriate contribution to the 2030 energy efficiency should be based on a detailed examination of

the costs and benefits of additional exceeded 25% target of energy savings. Some key aspects of the different options are shown in Table 1.

**Table 1:** Costs and benefits of energy efficiency targets

|  | REF 2013 | EE 27 | EE 28 | EE 29 | EE 30 |
|---|---|---|---|---|---|
| Energy savings 2030 | 21,0% | 27,4% | 28,3% | 29,3% | 30,7% |
| Power consumption primary 2030 (Mtoe) | 1 490 | 1 369 | 1 352 | 1 333 | 1 307 |
| Costs of energy systems (Euro) | 2 067 | 2 069 | 2 074 | 2 082 | 2 089 |
| Investment expenses (Euro) | 816 | 851 | 868 | 886 | 905 |
| 2030 net imports of gas (bcm) | 320 | 267 | 256 | 248 | 257 |
| Fossil fuel import costs (Euro) | 461 | 447 | 446 | 444 | 441 |
| The average price of electricity in 2030 (EUR / MWh) | 176 | 180 | 179 | 178 | 178 |

Source: European Commission

One goal of energy saving by 25% will increase the average annual cost of a power system from 2067 billion to 2069 billion per year (2011 to 2030), ie about 2 billion per year, ie 0.09 %. Substantial costs of the energy system that will support Member States are part of the current renewal of an old energy system. With an energy saving of 25% for 2030 would bring the already substantial improvements Union's energy dependency, representing a saving of EUR 9 billion a year in fossil fuel imports (2% less) and a 13% reduction on imports of gas (about 44 billion cubic meters) compared with current trends and policies.

Energy saving target of 40% by the European Parliament would have a significant impact on energy dependence, reducing, in particular gas imports. These benefits in terms of energy security could lead to a strong increase in global energy system costs from 2069 billion to 2181 billion per year, ie approximately 112 billion per year in the 2011-2030 period.

The Commission has assessed a number of decisions corresponding energy savings between 25% and 40%. The analysis showed that the benefits increase with increasing ambition in energy efficiency and gas imports would be reduced by 2.6% for every 1% additional energy savings. This has a direct impact on the security of supply in the EU - although above a 35% energy savings, the rate of reduction of gas imports due to additional energy savings decreases (COM, 2014).

Regarding the long-term trends, current analyzes showed that improvements in energy efficiency in the EU are below the potential energy savings are not sufficient to fully contribute to the EU decarbonisation targets.

According to the IEA (International Energy Agency) efficiency gains compared to current trends could increase EU GDP by 1.1% in 2030; additional investment required to use the final efficiency are approximately 2,200 billion in the period 2012-2035 compared with low energy expenditure of about 4900 billion in the same period.

A more ambitious energy efficiency provides greater benefits, especially in terms of fossil fuel imports. Additional benefits include those related to GHG emission reduction, reduction of pollution of air, water and soil and noise pollution, reducing resource

extraction, processing, transportation and use of energy, health and related benefits human and ecosystem condition. However, there are, however, additional costs beyond what is necessary to achieve the objective of 40% reduction in greenhouse gas emissions. For example, a target of 28% energy efficiency would increase total annual costs of the energy system from 2069 billion, with savings of 25% to 2074 billion, which represents an annual increase of about 5 billion EUR or 0.24% in the 2011-2030 period.

## 2.3. Financing energy efficiency projects
Regarding the financing of investments in energy efficiency are increased funding through Operational Programmes of the European structures.

Investment funds indicate an increase in the amounts allocated to low-carbon economy, in some cases, well above the minimum requirements for this goal. There is also a general shift from grants towards greater use of financial instruments (leverage private) such as new loans or guarantees.

In Germany, the state bank KfW provide preferential loans for the rehabilitation of existing buildings in terms of energy efficiency and building new ones. Between 2006 and 2013, 2.8 million homes were rehabilitated and 540,000 new homes were built highly efficient (COM 2014).

In France, the new draft national legislation provides numerous concrete actions, especially for buildings. Measures include a tax reduction of up to 30% of the cost of energy efficiency renovations since September 2014.

In Poland, the relevant provisions of the EAD will be fully implemented by means of such a system. DEE promote awareness programs among households about the benefits of energy audits by appropriate counseling services.

In the UK, a specialized help develop policies based on research on how consumers can be stimulated decisions on energy efficiency.

Reaching energy savings considered in this assessment will require significant additional investment, which will be the first public-private.

Around € 38 billion were oriented investments in low-carbon of the Structural Funds and Investment (ESIF) 2014-2020 - and this amount can be multiplied by attracting private capital through financial instruments.

Additional investments in energy efficiency will range from € 48 billion to € 216 billion per year in the 2011-2030 period, depending on the chosen level.


## 3. Cost - effectiveness of energy efficiency in Romania
In Romania, the transposition of Directive 2012/27 / EU (EAD) in Law no. 121/2014 on energy efficiency provides the conditions necessary for the implementation of measures to increase energy efficiency in all economic and social sectors. The measures to increase energy efficiency, considered the first two national action plans for energy efficiency have helped to reduce primary energy consumption and final energy consumption. These reductions were influenced also by the economic crisis that hit Romania in the period 2009 - 2010, the economic upswing is accompanied by modest increases in energy consumption. Energy consumption is the easiest option. This is most directly related to the long-term decarbonisation objectives. This indicator is directly influenced by economic development. If growth turns out to be higher than anticipated, the objective will require additional energy efficiency measures, potentially making cost effective. If, on the other hand, the increase is less than anticipated, the target can be met without energy efficiency improvements, which were originally foreseen and therefore some of the potential cost will not be achieved.

The energy sector in Romania is not sustainable and this is related, first, that this sector has not received due attention to strategic infrastructure that its development was a long time rather inertial that delayed restructuring this sector has started and the pressure was primarily organizations and international financial institutions, today there are a large number of unresolved issues and unfavorable accumulated between large energy losses in the residential sector and heating systems and high energy intensity industry.

Romania, as a Member State of the European Union has obligations under European policy coverage and the national integrated strategy for energy and climate change, developed by the EU.

Romania has set national indicative target for energy efficiency in achieving primary energy savings of 10 million toe in 2020 which represents a reduction of primary energy consumption forecast (52.99 million toe) realistic scenario 19 %. Achieving this target makes the 2020 primary energy consumption to be 42.99 million toe and final energy consumption to be 30.32 million toe. After the data communicated by INS for 2012 primary energy consumption was 34.85 million toe.

As seen in Table 2, according to the forecast presented results for their commitment Romania namely consumption reduction target 42.99 Mtoe primary energy consumption in 2020 is 1.15 million toe. To limit the 2020 final energy consumption amounted to 30.32 millions toe target to reduce this consumption in 2020 is 1.64 million toe.

Given the uncertainty affecting the current weather forecasts in general and in particular, I believe that Romania will be able to achieve primary energy savings of approx. 10 Mtoe (approx. 19%) in 2020.

**Table 2:** Forecast primary energy consumption (ktoe)

| Year | 2012 | 2016 | 2020 |
|---|---|---|---|
| Primary energy consumption | 34851 | 37890 | 44150 |
| Consumption in energy sector | 2960 | 3050 | 3300 |
| Loss | 1343 | 1340 | 1340 |
| Non-Energy | 1953 | 2555 | 3850 |
| Final Energy Consumption of which: | 22766 | 27095 | 31960 |
| Industry | 6346 | 8350 | 9750 |
| Building | 450 | 545 | 730 |
| Transport and communications | 5351 | 6250 | 8050 |
| Residential | 8095 | 8800 | 9500 |
| Agriculture, forestry and fishing | 499 | 700 | 880 |
| Services | 2025 | 2370 | 3050 |

Source: Data from the National Commission of Prognosis

As seen in Table 2, in Romania, as in the European Union, buildings account for 40% of total energy consumption is growing source of $CO_2$ emissions. By improving the energy performance of buildings will be able to achieve and the EU in terms of emissions, to reduce these by 20% by 2020. Simple measures such as better insulation could reduce emissions by up to 80%.

The new Directive on Energy Performance of Buildings sets minimum requirements for energy performance of new buildings and their implementation on existing buildings.

Member States shall take the measures necessary to ensure that minimum energy performance requirements for buildings achieve optimal levels of cost. By 31 December 2020, all new buildings are buildings whose energy consumption is nearly zero, and the energy will come largely from renewable sources. The buildings occupied and owned by public authorities will have to meet these standards already in 2018. To stimulate energy-efficiency measures will provide partial funding from the EU budget. Financial resources for the period 2011 - 2015 are presented in Table 3.

**Table 3:** Financial Resources 2011-2015

| Measure | 2011 - 2013 | 2014 - 2015 |
|---|---|---|
| Enhancing public information campaigns and business | 10.000 Euro | |
| Continuing the "District 2006-2015 warmth and comfort" | 795 mil. lei | 530 mil. lei |
| Continuing the thermal rehabilitation of housing | 1535 mil. lei | 740 mil. lei |
| Expanding the National Energy Efficiency Program (heating system rehabilitation, rehabilitation of public buildings and public lighting efficiency) for the period 2011-2015 | 450 mil. lei | 700 mil. lei |

Source: Results obtained by the author based on data from the Ministry of Economy

When buildings undergo major renovation, the energy performance of the building is improved to meet minimum energy performance requirements. When renovating, owners are encouraged to introduce intelligent metering systems and replace the hot water and air conditioning systems with efficient alternative energy, such as heat pumps reversible. National legislation and impose periodic inspection of heat generators and air conditioning systems.
When buildings undergo major renovation, the energy performance of the building is improved to meet minimum energy performance requirements. When renovating, owners are encouraged to introduce intelligent metering systems and replace the hot water and air conditioning systems with efficient alternative energy, such as heat pumps reversible. National legislation and impose periodic inspection of heat generators and air conditioning systems.
Given the forecast of final energy consumption and final energy consumption in the period 2014 - 2020 without taking measures to increase energy efficiency resulting GDP growth in 2014 - 2017 and average GDP growth rate of 3.3% during 2018 - 2020 presented in Table 4.

Table 4: Projection of GDP in Romania

| Year | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|
| Gross Domestic Product (billion lei) | 586,7 | 628,6 | 662,3 | 698,6 | 736,9 | 778,2 |
| Real growth (%) | 0,6 | 3,5 | 2,5 | 2,6 | 3,0 | 3,3 |

Source: Results obtained by the author based on the National Commission of Prognosis

According to the forecast presented results for their commitment Romania namely 42.99 Mtoe consumption target of reducing primary energy consumption in 2020 is 1.15 million toe. To limit the 2020 final energy consumption amounted to 30.32 millions toe target to reduce this consumption in 2020 is 1.64 million toe.

Given the uncertainty affecting forecasts generally believe that Romania will be able to achieve primary energy savings of approx. 10 Mtoe (approx. 19%) in 2020.

## 4. Conclusions

In a time when environmental concerns, economic and social becoming increasingly important, being represented by climate change or the endangering energy security, resource depletion or ability to pay energy bills, reduce energy consumption in buildings are of strategic, both nationally and internationally. In addition to efforts to build new buildings with low energy requirements, obtained from conventional sources of energy is essential to address the high levels of consumption of existing buildings. After a slow start, energy efficiency policy in Europe is now giving results. Current forecasts suggest that the current 2020 energy efficiency is about to be reached. The Commission does not intend to propose new measures, but calls on Member States to intensify their ongoing efforts to ensure that the collective 2020 target.

Commission Communication on a 2030 policy framework on climate change and energy levels identified energy savings of 25%, as part of a strategy to achieve the objective of reducing emissions of greenhouse gases by 40% most cost effective way. However, given the growing importance of strengthening the EU's energy security and reduce dependence on imports to the Union, the Commission considers it appropriate to propose a higher goal, namely 30%. This would lead to increased costs for 2030 frame 20 billion per year, but would bring tangible benefits in terms of economic and energy security in 2050, through a renewed industrial policy. However, the success of such an approach, Europe needs a development towards industrial and service sectors based more on new technologies and knowledge, with a higher added value, innovative, competitive and sustainable, funded through an ambitious investment plan.

The current framework based on an indicative target at EU level and on a combination of mandatory EU measures and actions at national level has proven to be effective in stimulating the significant progress made by Member States. This approach should therefore continue to apply in 2030 and energy efficiency should become an integral part of the governance framework proposed in the Communication 2030, which would streamline the current monitoring and reporting requirements. Energy efficiency should therefore be a key component of Member States' national plans for energy competitive, secure and sustainable that would bring greater consistency of national and regional policies and measures on climate change and energy.

Based on their analysis of national plans and using energy and climate change at EU level, the Commission will monitor national plans and assess the prospects for achieving national objectives / EU climate and energy (including energy efficiency), prospects on EU energy dependency and efficient functioning of the internal energy market, based on key indicators suitable for energy.

Energy efficiency has a crucial role in the transition to a competitive energy system, safe and sustainable. Although the underlying energy companies and economies, future growth must be operated with less energy and lower costs.

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# THE ROLE OF EUROPEAN FUNDS FOR THE SUSTAINABLE DEVELOPMENT OF ROMANIAN RURAL AREA IN THE PERIOD 2014-2020

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**Abstract**
*This paper aims to analyze the accessing degree of the European funds allocated to Romania for the period 2007 - 2013, in order to achive an efficent use of funds for future programming phase. From the analysis it is found that the National Rural Development Programme has a good degree of access compared to other operational programs implemented in Romania. To enhance the competitiveness of the agricultural sector and the quality of life in rural Romania, it is important to allocate funds for the next programming period that contributes to equitable and sustainable development of rural areas.*

**Key words: rural development, European funds, competitiveness.**

**JEL Codes:** Q1, Q18

## Introduction

Common Agricultural Policy is one of the most important policies promoted by the European Union, with the creation of the European Fund for Agricultural Orientation and Guarantee in 1962, which initially included measures to encourage market. Since 1999, with the creation of the document entitled Agenda 2000, was introduced the second pillar, rural development, which has as main objective increasing the competitiveness of the agricultural sector; increasing the quality of life in rural areas; diversification of activities in rural areas; improving the environment in rural areas.

**Table no. 1 – The share of rural population in the total Romanian population in 2014**

| Regions | TOTAL | RURAL | Share |
|---|---|---|---|
| TOTAL | 19947311 | 9198308 | 46.11 |
| North-West | 2590220 | 1226659 | 47.36 |
| Center | 2355312 | 994086 | 42.21 |
| North-East | 3273367 | 1912201 | 58.42 |
| South-East | 2509094 | 1170176 | 46.64 |
| South | 3085095 | 1866022 | 60.49 |
| Bucharest-Ilfov | 2282968 | 236203 | 10.35 |
| South-West | 2033360 | 1097027 | 53.95 |
| West | 1817895 | 695934 | 38.28 |

*Source: calculation National Statistics Institute*

In terms of demographics, in Romania there are differences in the degree of rurality among the 8 regions. Regions with a significant rural character, both in terms of number of rural population and the agricultural area are South region, Northeast and Southwest. Also, between the 8 regions there are large differences in living conditions caused by different socio-economic conditions. Thus, the objectives of the Common Agricultural Policy, the implementation of rural development programs are to ensure a fair standard of living for rural residents and obtain quality products at reasonable prices for consumers[2].

## 1. Accesing the European Funds in Romania in the period 2007 – 2013

In the period 2007 - 2013, Romania has benefited from structural funds amounting to 19,058 billion Euro for the financial support of the following sectors: regional development; environment; transport; economic competitiveness; human resource development; development of administrative capacity and an amount of 170 mil. Euro allocated for technical assistance programs. The highest amounts were allocated for environmental and infrastructure projects that have received funding through the European Regional Development Fund and the Cohesion Fund.

**Table no. 2 – Stage of operational programs implementation at 28-th of february 2015**

| Programme | Allocation mil. Euro | Submitted projects No | Submitted projects Value (mil. Lei) | Aproved projects No | Aproved projects Value (mil. Lei) | Contracts No | Contracts Value (mil. Lei) |
|---|---|---|---|---|---|---|---|
| Regional Development | 3966 | 10070 | 63145 | 5142 | 22684 | 4630 | 20336 |
| Environment | 4413 | 705 | 37908 | 526 | 22506 | 476 | 22247 |
| Transport | 4288 | 257 | 74498 | 137 | 20702 | 120 | 14327 |
| Economic competitiveness | 2537 | 17089 | 90121 | 8248 | 16489 | 5557 | 12980 |
| Human Resources | 3476 | 15419 | 70065 | 4390 | 21437 | 3883 | 19265 |
| administrative capacity | 208 | 1371 | 3691 | 456 | 1174 | 456 | 1128 |
| Technical Assistance | 170 | 191 | 1363 | 168 | 936 | 161 | 773 |
| **TOTAL** | **19058** | **45102** | **340791** | **19067** | **105928** | **15283** | **91056** |

*Source:Ministry of European Funds, stage of operational programme impementation, 2015*

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[2] Istudor N. – Dezvoltarea rurală şi regională a României în perspectiva integrării în Uniunea Europeană, editura ASE, Bucureşti 2006.

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**Table no. 3. Absortion of structural funds at 28-th of February 2015**

| Programme | Internal payments EU Value (mil. lei) | % | Payments sent to EU mil Euro | % | Internal payments made by EC mil Euro | % |
|---|---|---|---|---|---|---|
| Regional Development | 10447 | 59.32 | 2323 | 58.57 | 2266 | 57.14 |
| Environment | 9229 | 47.1 | 1866 | 42.28 | 1755 | 39.78 |
| Transport | 10087 | 52.98 | 2507 | 58.47 | 2432 | 56.72 |
| Economic competitiveness | 6837 | 60.7 | 1454 | 57.33 | 1249 | 49.24 |
| Human Resources | 9222 | 59.74 | 1617 | 46.53 | 1158 | 33.3 |
| administrative capacity | 687 | 74.41 | 162 | 77.54 | 150 | 72.02. |
| Technical Assistance | 404 | 53.39 | 94 | 55.3 | 77 | 45.09 |
| **TOTAL** | **46913** | **55.44** | **10023** | **52.59** | **9087** | **47.68** |

*Source:Ministry of European Funds, stage of operational programme impementation, 2015*

By February 2015, the degree of access to structural funds is 55.44% (calculated based on payments made to beneficiaries of projects) and 47.68% (calculated on the amount of reimbursements from the EU).

Programs that have the highest levels of access are aimed at developing administrative capacity (with a degree of absorption of 77.54%, respectively, 72.02%). The program also aimed at balanced development of the 8 development regions of Romania, recorded a relatively high degree of access (to 59.32% and 57.14%). It supports social infrastructure, transport, SMEs, tourism.

**2. Accesing of european funds for rural development in Romania in the period 2007 – 2013**

In the period 2007 - 2013, Romania has received significant amounts allocated rural development policy, both from European Agricultural Fund for Rural Development and the Romanian budget funds to support the National Rural Development Programme measures divided into 4 axes, and namely[3]:

Axis 1 - Increasing the competitiveness of agriculture and forestry.
Axis 2 - Improving the environment in rural areas.
Axis 3 - Improving the quality of life in rural areas and diversification of the rural economy.
Axis 4 - Leader.

The analysis table no. 4 shows that the programming period 2007-2013, the funds allocated to rural development policy showed a high interest to farmers in Romania. Measures that have recorded the highest demand are those that identify needs facing

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[3] National Rural Development Programme 2007 – 2013.

Romanian rural areas, such as modernization of farms, village infrastructure, encouraging entrepreneurship, young farmers. By November 2014, the degree of accessing funds was 84.79% calculated on the value of contracts and 68.75% calculated on the value of payments to beneficiaries. High interest for accessing these funds is demonstrated by the very high number and value of projects submitted (double the value of contracts submitted to the financial allocations of the period). Of all the projects submitted in this period than 59.6% were contracted (representing about 44% of the projects submitted).

### Table no.4 – Accesing degree of NRDP, November 2014

| Measure | | Allocation | Submitted projects | | Selected projects | | Contracts | | Payments | Degree | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | No | Public Value | No | Public Value | No | Public Value | Public value | contracts | payments |
| 111 | | 119,019,349 | | | | | 29 | 19,170,420 | 15,482,431 | 16.11 | 13.01 |
| 112 | | 337,221,484 | 22,494 | 630,074,066 | 13,446 | 339,118,514 | 12,982 | 326,241,035 | 264,691,569 | 96.74 | 78.49 |
| 121 | | 991,827,895 | 8,154 | 3,008,189,083 | 3,375 | 1,250,133,509 | 2,702 | 860,537,694 | 531,621,182 | 86.76 | 53.60 |
| 122 | | | 20 | 3,011,934 | 18 | 2,513,937 | 17 | 2,445,741 | 784,242 | | |
| 123 | | | 1,762 | 1,771,015,955 | 923 | 908,484,590 | 606 | 531,008,926 | 297,753,600 | 49.57 | 27.80 |
| Schema XS | | 1,071,174,126 | 247 | 113,706,025 | 215 | 101,626,174 | 148 | 56,870,783 | 48,236,053 | | |
| Schema XS | | | 177 | 78,896,763 | 157 | 67,450,879 | 88 | 33,881,683 | 27,047,902 | | |
| Schema N578/2009 | | | 453 | 311,099,775 | 292 | 216,093,918 | 200 | 112,934,187 | 60,970,325 | | |
| 125 | | 476,077,390 | 1,701 | 1,789,032,854 | 555 | 611,012,899 | 544 | 560,752,529 | 322,849,462 | 117.79 | 67.81 |
| 141 | | 476,077,390 | 88,846 | 666,345,000 | 63,544 | 476,580,000 | 59,157 | 391,048,233 | 268,057,696 | 82.14 | 56.31 |
| 142* | | 138,855,905 | 86 | 16,870,702 | 80 | 15,560,049 | 62 | 12,350,816 | 3,546,061 | 8.89 | 2.55 |
| 143 | | 158,692,463 | | | | | 7 | 12,415,223 | 5,084,766 | 7.82 | 3.20 |
| 211 | | 607,754,544 | | | | | | 653,578,607 | 653,578,607 | 107.54 | 107.54 |
| 212 | | 493,083,876 | | | | | | 374,859,203 | 374,859,203 | 76.02 | 76.02 |
| 214* | PNDR | 996,408,184 | | | | | | 1,229,346,741 | 1,229,346,741 | 123.38 | 123.38 |
| 221* | PNDR | 263,610,733 | 52 | 4,354,839 | 40 | 3,775,661 | 28 | 2,142,657 | 179,633 | 0.81 | 0.07 |
| 215 | | | | | | | | | 153,499,618 | | |
| 312 | | 383,429,681 | 9,499 | 1,317,172,809 | 4,187 | 535,514,693 | 3,284 | 423,674,453 | 255,326,270 | 110.50 | 66.59 |
| 313 | | 544,222,774 | 3,703 | 569,890,748 | 2,584 | 392,089,882 | 1,791 | 254,780,551 | 74,860,921 | 46.82 | 13.76 |
| 322 | | 1,546,087,425 | 3,317 | 7,646,950,036 | 886 | 1,943,039,631 | 879 | 1,744,507,852 | 1,345,953,427 | 112.83 | 87.06 |
| 4.1 | | | 8,066 | 414,972,949 | 5,898 | 301,189,221 | 5,781 | 296,184,394 | 59,502,405 | | |
| 421 | | | 142 | 4,825,209 | 21 | 700,029 | 21 | 409,767 | 0 | | |
| 431.1 | faza 3 | 14,161,138 | 112 | 4,920,162 | 111 | 4,827,533 | 98 | 4,097,403 | 3,205,795 | 28.93 | 22.64 |
| | fazele 1+2 | | | | | | 8 | 1,704,000 | 1,657,317 | | |
| 431.2 | | | | | | | 163 | 66,907,378 | 30,757,865 | | |
| 511 | | 376,119,793 | | | | | 133 | 68,828,972 | 73,937,895 | 18.30 | 19.66 |
| Schemele de | | | | | | | 2 | 115,313,453 | 115,313,453 | | |
| 611 | | 625,136,100 | | | | | | | 395,012,123 | 0.00 | 63.19 |
| TOTAL | | 9,618,960,250 | 148,831 | 18,351,228,909 | 96,332 | 7,169,711,121 | 88,730 | 8,155,992,703 | 6,613,116,562 | 84.79 | 68.75 |

*Source: calculation with data from the Agency for Financing Rural Investments*

Analyzing the interests of applicants for each rural development measure, we find that measure 322, aimed at the renovation and development of villages, recorded the highest values of projects submitted (five times higher than the financial allocation), the only beneficiaries being the public institutions and financial support can be 100% of the total eligible costs.

Measure for SMEs, namely the extent 312, which financially supports the diversification of activities in rural areas experienced a high demand being submitted projects with a value exceeding 3.4 times the allocations. To encourage entrepreneurship in rural areas have been allocated amounts up to 200,000 euros, as the first, with no need for beneficiaries to allocate co-financing.

Regardimg the measure aimed to encourage the young farmers, namely measure 112 were submitted projects worth nearly double the amount of allocations, the support being given as the first installation a function of economic size (6 to receive minimal support) .

While accessing measure 121, the modernization of agricultural holdings require co-financing from the beneficiaries, however, interest was very high (recorded values of projects submitted 3 times greater than the allocations). The importance of this measure to

increase the competitiveness of Romanian agriculture is high because finances one of the main weaknesses of the agricultural sector is the small number of tractors and agricultural machinery (even the existing record wear and tear).

## 3. Rural development policy in Romania for the period 2014 – 2020

In the programming period 2014 - 2020, EU rural development policy allocates about 99 billion. Euro. Unlike the previous period, greater weight is given to improving the environment by directing large sums to the sector, according to the schedule no. 1. Also, a high importance is given to increasing the competitiveness of the agricultural and forestry sector by allocating 20% of the total amount.

**Graph no.1 – Financial allocation for each priority in European Union for the period 2014 – 2020**
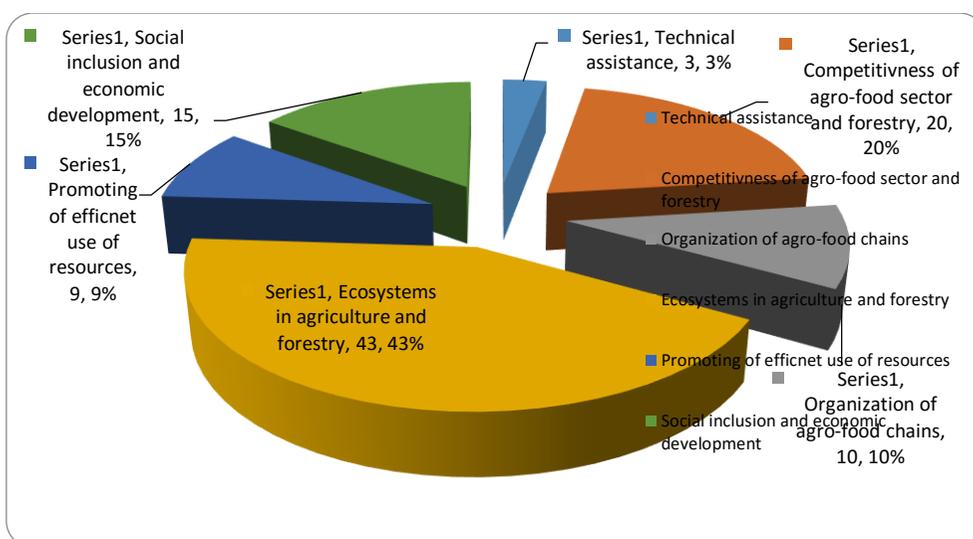


*Source: DG AGRI*

Romania has higher amounts compared with the previous period of about 8.1 billion. Euro, divided into the following priorities:

| No | Measures | Financial allocation Mil. Euro |
|---|---|---|
| 1 | Investments in assents | 2057.028 |
| 2 | Developing farms and businesses | 800.3575 |
| 3 | Group of producers | 5000 |
| 4 | Basic services and village renewal | 1100.595 |
| 5 | Counseling Services | 25.3861 |
| 6 | Transfer of knowledge and innovation | 25.3861 |
| 7 | Afforestation and forest plantations | 105.6952 |
| 8 | Agri-environment and climate | 849.9649 |

| 9 | organic farming | 200.6862 |
|---|---|---|
| 10 | Areas which are faced with natural or other specific constraints | 1230.796 |
| 11 | Cooperation | 28.0211 |
| 12 | Risk management | 200 |
| 13 | LEADER | 624.932 |
| 14 | Technical assistance | 178.3681 |

*Source: National Programe for Rural Development 2014 – 2020*

Although Romania has allocated for 2014-2020 European funds higher compared with the previous period in order to best use, not neglected a number of issues, of which the most important are:
- Clear definition of the term active farmer to guide production by the market and to participate in GDP growth.
- Create a globalization fund or reserve for crises in the agri-food sector to be given financial support to cover the difference in interest on loans to farmers.
- Create specialized marketing chains for products made in classical terms, with the allocation of pollutants in low or no allocation of such factors.
- Given additional support for young farmers is needed to ensure that these young people really act in rural and agricultural activities, contributing to the rejuvenation of rural farmers and rural vitalization.
- Prepare carefully research organizations to be able to access EU funds that are allocated consistent expected for the next period of research and able to conduct applied research whose results contribute to increased efficiency in the food sector.
- Provide the necessary funds for pre-financing rural development projects to no longer call burdensome loans.

**Conclusions**
Romanian agri-food sector and the quality of life in rural areas still face significant delays to the European Union. Competitiveness gaps are caused by many factors, including: the low yields of the main crops; poor technical equipment to farmers; land fragmentation, etc. Reduction or elimination can be achieved through programs aimed at balanced development of all regions of the country.
Analyzing European funds in the period 2007 - 2013 indicates that the program has funded rural development has relatively good degree compared to other operational programs, this being determined by previous experience from the pre-accession to the EU, the implementation of SAPARD program. In addition to a high degree of access, this program helped reduce competitiveness gaps compared to other EU countries, with high efficiency, measured by gross value added growth project beneficiaries.
The next stage of programming, ie 2014 - 2020, gives Member States greater flexibility in the allocation and distribution of amounts, so it is very important to implement a program that contributes to equitable and sustainable development of rural areas.

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# E.U. VERSUS O.E.C.D. – MIGRATION FLOW UNDER THE LABOUR TAXATION IMPACT

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**Abstract:** In a world governed by the freedom of movement, production factors – capital, labour and consumption – can "run" from on territory to another bringing along positive and negative effects, just as well. Labour, the second in line of "run away" production factors, has a great impact upon a state economy generating sustainable growth or increasing budgetary revenues This paper presents for a period of 7 years, for both European (UE-28) and international (OECD) level, the migration flow under the labour taxation impact (it is well known that more than 75% of the migration flow is work force related). The authors found that even if both areas are attracting labour force the reasons for doing that are completely different – while for the OECD member states and non-EU member states there will always be the "occident fascination" in the Europeans are "voting with their feet".

**Keywords:** migration, labour, taxation, implicit tax rate

**JEL classification:** F22, H30, O15

## 1. Introduction

The taxation policy and its impact upon a state economy is a never ending point of discussion at both European and international level. Taking into consideration that we live in a world without borders, where everybody can decide where they want to live and work, where they want to invest their capital or what to buy – national or foreign products – we can state that even the slightest positive difference between national and foreign legislation – in any filed – can, and most probably will, trigger a "run for the better" of a production factor.

At European level, taxation policies are undergoing a coordination process but without decreasing national freedom of personalizing the taxation system – which is a bit of a paradox. Thus, policy makers want 28 taxation systems to have the same regulations but still be different or react the same to changes but with different time lags and intensities and you just can't have it both ways. At international level economies are not going through the same coordination process, but taxation policies still have a big impact upon a state development. Between the three production factors – capital, labour and consumption – capital and labour are considered moveable (capital the most moveable and labour less moveable than capital but more moveable than consumption) and consumption is the less moveable production factor (this doesn't mean it is not moveable at all but just less moveable than the other two). Thus, states, in general, will try to compensate the decrease of collected capital revenues by increasing the fiscal burden upon labour and consumption. Furthermore, if labour is less moveable than capital, specialized labour force will be more moveable than non-specialized labour force – an individual with master or a PhD. degree will have a better chance at succeeding abroad than one with just a bachelor degree or none). And in an economy the less moveable production factor will always be consumption. This is why we can state that states are being "blackmailed" into increasing the fiscal burden upon labour and consumption and decreasing it for capital in order to preserve collected resources, at one end, and the public goods offer, at the other end.

Migration is just as old as the world, but along history there have been a number of factors that pushed people to migrate, like: lack of opportunities in the origin state, economic crisis, religious persecutions, wars, etc. We can state that migration is just a natural and structural phenomenon of the human society. Its effects, and especially the effect brought by the specialized labour force, have been observed for the first time (Stanica, 2000) in the case of emigrants from the Byzantine Empire who brought their knowledge to the Islamic world and to the renascence Italy. The idea to quantify the migration effects appeared much later – late XVIII century, beginning of XIX century – when the international economy faces the technological boom.

## 2. Migration and labour taxation

Human flows are always taking place between two states – an origin state and a destination state. In both territories the migration phenomenon will have positive and negative effects but, in order, to consider migration a "good thing", at a given time, the positive effects must compensate and overrun the negative ones.

| | Advantages | Disadvantages |
|---|---|---|
| **Origin state** | • Discovers new opportunities in developing economies and will attract at national level specialized labour force;<br>• Interact with people from different cultures, with different languages and religions, etc;<br>• Gain knowledge about other states, traditions, etc | • Loosing part of the specialized labour force that could have been used on national level;<br>• Decrease of number of jobs due to migration and from here, also decrease of the total collected revenues;<br>• Economic, social and never the less political pressure in order to stop the migration phenomenon – immigration and emigration, etc |
| **Destination state** | • Foreign labour force will sustain the economic growth;<br>• Increase in collected revenues;<br>• Families reintegration;<br>• Specialized labour force that most time is cheaper than the national one, etc | • Special taxation treatments applied to foreign human capital against national one;<br>• Increase of unemployment among indigenous population;<br>• Increase of criminality;<br>• Increase in social tensions, etc |

**Figure 1** Migration flow advantages and disadvantages
Source: personal synthesis

We notice, as mentioned before, that in both cases the migration flow has positive and negative effects. Maybe the biggest advantage, of an destination state, is that attracting specialized labour force means that that state is also an financial capital attractor and can maximize both flows – more capital means more investments, more investments means more jobs, more jobs will attract a higher human flow. At the other end we will find the origin state that can loose both capital and specialized labour force – the capital won't find investment opportunities and the labour force won't find a job according to its requirements.

In a complex analysis (European Union publications, 2012) done upon member states at European Union 27 level, the responders – both legal and individuals – were asked to classify the most acute problems they are facing both at personal and national level and the first three places were occupied by:

- macroeconomic stability – viewed by profitability of national and international future investments (capital);
- prices level – viewed by inflation and the purchasing power (consumption);
- unemployment rate – viewed by job's safety /stability and in this context the working profitability (labour).

**Table 1** European Union problems according to respondents

| Year/Indicator | Macroeconomic stability | Prices (inflation) | Unemployment |
|---|---|---|---|
| **2006** | 23% | 13% | 49% |
| **2007** | 20% | 18% | 34% |
| **2008** | 20% | 37% | 24% |
| **2009** | 26% | 38% | 21% |
| **2010** | 40% | 20% | 48% |
| **2011** | 59% | 17% | 26% |
| **2012** | 35% | 24% | 46% |

Source: personal synthesis according to data from Standard Euro-barometru – Public opinion in the European Union, 2006-2012

We can notice that throughout the analysed period the three elements hierarchy is made according to the economic cycle evolution. Thus, at the first signs of the economic crisis (2008, 2009), inflation becomes an acute problem and afterwards (2010, 2011) the macro-stability takes the first place. We do have to notice that during this whole period the unemployment issues is actually the most important one – the average rate registered by the factor "unemployment" is 35.43% face to 31.86% for macro-stability and 23.85% for inflation. So the fear related to the unemployment status can and will generate migration.

Furthermore, individuals – owners of the labour force – can and will choose to migrate and settle down wherever they want and feel like "home", giving their vote of confidence to that chosen state.

The migratory pressure has intensify in the last decades because of differences in remunerations, opportunities given by certain jobs or certain states – these being related not only to the labour market – and nevertheless because of the demographic characteristics of the developed economies compared to the developing ones.

The task to correctly quantify and understand this phenomenon is very difficult due to the lack of data; most countries are realizing statistics regarding the number and structure of immigrants (immigrant – a person with a different nationality that chooses to enter the territory of another state with the clear intention of settling down there) and the number and structure of emigrants (a person leaving the national territory with the clear intention to settle down elsewhere); available data is coming though equerries made by special bodies or by the declaration filled by either immigrants or emigrants when they enter or leave the country.

Putting aside the lack of available data, we can state that net migration rate has fluctuated during periods of time due to factors like weather conditions, revenue level, job opportunities, political orientations, demography (age, sex, etc), taxation policies, budgetary policies, etc. some of these factors are pure natural – weather conditions, but some are "man made", like policies.

In the following paragraphs we will concentrate our analysis upon the migration phenomenon at European (UE-28) and international level (OECD). The statistical analysis

is made for a period of 7 years for both areas and we aimed at finding out if one or both of these areas are attracting human capital or not.

**Table 2** European average net migration rates (UE-28)

| 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|------|------|------|------|------|------|------|
| 2,94 | 3,32 | 4,01 | 1,57 | 0,88 | 1,55 | 1,34 |

Source: personal synthesis according to data from epp.eurostat.ec.europa.eu

The net migration rate is the difference between immigrants and emigrants determined over a period of time, usually 1 year, and reported by 1,000 individuals. This rate can have both positive values – in which case that territory attracts more immigrants; the number of immigrants is higher than the number of emigrants – and negative values – in which case the number of emigrants is higher than the immigrant's one.

For data in table 2 we can see that the European area is a "magnet" to foreign labour force even of it is an intercommunity flow or an extra-community flow. Furthermore, we notice the influence of the economic and financial crisis that actually increased in 2008 the net migration rate face to 2007 and then because of the political and social tensions in the European area made the indicator to plunge to just 0,88 in 2010. If we were to analyse the data state by state we will find another interesting aspect. Thus, even if the UE-28 is a "magnet", there are states that in the analysed period (2006-2012), actually throughout the entire period, have negative average net migration rates – Lithuania, Latvia, Romania, Estonia, Bulgaria – and the registered levels are getting higher because of the crisis (Lithuania) or because of the adhesion process to the UE-28 (Romania, Bulgaria). Opposite to these economies, there are states like – Luxembourg, Belgium, Hungary, Cyprus, Great Britain – that present a positive average net migration rate throughout the analysed period. Lithuania is the state that has the highest negative average net migration rate – is the most "unlike" state - and Luxembourg is the state with the highest positive average net migration rate – the most "liked" state - in the analysed period – but we do have to consider that both countries are relatively small – Luxembourg has approximately 650.000 citizens and Lithuania has less then 3.000.000 citizens and so the results can be subject to distortions.

**Table 3** Medium emigrants number at international level (OECD)

-thousands individuals -

| 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|------|------|------|------|------|------|------|
| 171,78 | 178,96 | 176,59 | 160,33 | 157,20 | 163,64 | 168,32 |

*Source:* personal synthesis according to available data on http://stats.oecd.org/

According to data in table 3 we noticed that OECD member states are also attracting human capital but we can't state for sure that the OECD is a "magnet" or not due to the lack of data. Again if there is to analyse individual countries we find that non-EU OECD member states like, USA, Canada, Japan, Korea or Australia are attracting a significant number of emigrants.

Now, that we have seen that both areas are confronted with a migration flow, the question that arises is: Is part of this migration flow determined by the taxation policies promoted by states? We will try to answer this question in the next paragraphs.

Taxation policies are a state key to attract on national territory part of the wealth (capital, labour force and consumption) belonging to other states. Budgetary revenues are mainly

made of taxes – direct, indirect – and social contributions and this is why the slightest positive difference in taxation face to others will lead to the "run away" of production factors from national territory.

**Table 4** EU versus OECD - average %CIT/GDP and %PIT/GDP, 2006-2012)

|         | CIT/GDP | PIT/GDP |
|---------|---------|---------|
| **UE-28** | 2.7%    | 9.3%    |
| **OECD** | 3.2%    | 8.7%    |

Source: personal synthesis according to data from Taxation trends, 2014

Table 4 shows that both EU-28 and OECD areas are focusing their taxation policies on individuals – the personal income tax (PIT) to gross domestic product (GDP) is higher than the corporate income tax (CIT) to GDP with 6.6 pp in the EU-28 and with 5.5 pp in the OECD. This emphasized what we have stated before that states will try to compensate resources lost due to capital flows by increasing the fiscal burden upon labour.
A more accurate indicator used to establish the fiscal burden upon a production factor is the implicit tax rate (ITR) that quantifies the impact of all taxes levied upon that production factor.

**Table 5** EU versus OECD - ITR for labour (%)

|         | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---------|------|------|------|------|------|------|------|
| **UE-28** | 35.6 | 35.8 | 36.0 | 35.4 | 35.4 | 35.8 | 36.1 |
| **OECD** | 25.7 | 25.6 | 26.4 | 27.6 | 23.9 | 25.8 | 27.3 |

Source: personal synthesis according to data from Taxation trends, 2014

We notice that the fiscal burden upon labour in the European area is higher than the one register in the OECD area – with an average of 35.73% face to 26.05% and a 9.68 pp difference. Furthermore, we do noticed that during the crisis actually increases the fiscal burden on labour and that level registered after that period (2008) don't fluctuate much. For the same period of time the average ITR for capital was 27,12% in the EU-28 and a staggering 10,4% in the OECD so, by comparing the two production factors ITR - labour and capital - we can easily notice state's preference for taxing labour.

### 3. Conclusions
The migration flow has increased in the last decades and in world without borders labour can choose to settle down wherever it finds the best conditions to self-develop. Thus, at European level, where most countries has a labour fiscal burden (average ITR) around 24% - so labour taxation alone is not a deciding factor, due to small taxation differences, individuals representing the labour force will for sure take into consideration other factors like: level of public expenses with education, the social security system and/or the public heath system, etc, when deciding where to settle down. This way, individuals at European level will act according to the Tiebout (1956) and will "vote with their feet" – meaning they will choose to settle down where the fiscal burden is upscale by the public goods and services received or where they feel that report is optimal for them. At international level, individuals are attracted by the lower fiscal burden - most OECD countries have a labour fiscal burden around 20% and furthermore, we don't have to rule out the so called "occident fascination".

The authors are stating that we do have to take into account that the analysis was focused only upon general migration and general fiscal burden upon labour and that the conclusions might be subject to interpretation due to available data. Furthermore, it would be interesting to see a more detailed aspect of the anlysis – like only the brain-drain migration and it's connection to the taxation systems.

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# THE ECONOMIC GOVERNANCE: CONCEPT, INSTRUMENTS OF MEASURMENT AND EVOLUTIONS ACROSS EUROPEAN UNION MEMBER STATES

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**Abstract:** *The literature in the field identified over time a series of economic and non-economic factors that trigger the process of economic growth and convergence. Despite the fact that most of the theoretical as well as the empirical studies address the determinants of the economic growth process only from an economic perspective, a series of recent debates draw the attention upon a neglected category of factors until now, namely the quality of the economic growth process and the role of institutions as important tools in promoting convergence/divergence between economies. This new area of research, named institutional economics, highlights the role of institutions in protecting the property rights and the contracts (Han, X., et all 2014). Although these factors were often ignored as explicative variables of the economic growth process, in comparison to factors such as human capital, physical capital or technological progress, recently economists, researches or other participants in the market became highly aware of their importance. The primary objective of the current paper is to analyze the concept of economic governance as detailed within a series of studies in the field, or as perceived by international organizations. In addition to this objective we present some main indicators used to measure the quality and efficiency of the economic governance process with precise data and evolutions for the member states of the European Union. The main conclusions of our study reveal the fact that in order to achieve high levels of economic growth and convergence across European Union member states there is a strong need for enforcing the legal framework of EU along with the transfer of the power regarding the development, management and implementation of the economic stability policies from the national to the supra-national level. Also a harmonization of the institutional structure is required as a measure for supporting economic performance.*

**Keywords:** economic governance**,** economic growth, economic convergence, European Union

**JEL classification:** H11, O38, O43

## 1. Introduction

The importance of the economic governance process proves to be of real interest taking into consideration the fact that the markets, the economies and the transactions between different economic actors cannot develop without its presence. Despite that, there are states were the process of economic governance develops within optimum parameters and on the other hand there are states where this is characterized my major shortcomings. The question that arises in this situation may be summarized such us: Which are the responsible factors for the efficiency of the economic governance process within a certain economy? The answer to this question may rely in the fact that in some states there is no competent regulatory framework or the imposed rules are situated at a sub-optimal level.

The process of economic governance influence nowadays a multitude of areas, including the economic field, the political one, anthropology, triggering an harmonization in what concerns the development of the social sciences. The agricultural area is another important sector where the economic governance process determines significant transformations (Pop, 2015). This embodies a series of dimensions and, concentrating the analysis of the economic governance quality on a single instrument seems useless in estimating the economic contribution of different economic governance categories (Givens, 2013).

Acknowledging the role attributed to the economic governance in stimulating the economic growth and convergence trends was in a certain degree limited. The current interest in this category of indicators is due to the actual economic and political framework and may be a consequence of the economic circumstances experienced over time. Santiso (2001) argues that across the current emerging economies achieving a sustainable level of economic governance constitute an objective and at the same time a basic requirement in promoting economic development. Despite all that, interconnecting these elements seems a real challenge for the institutions that operate across the states (Santinso, 2001).

The remainder of this paper is organized as follows: section 2 highlights some major contributions in defining the economic governance concept; section 3 details certain key instruments used by several international organization in quantifying the economic governance indicators as well as presenting the evolution of these indicators across the European Union member states and section 4 summarize the main conclusions and policy implications of the current study.

## 2. The economic governance concept – short literature review

Even though the role of the economic governance process is extremely important in ensuring economic stability and enhancing the economic growth trends, developing a precise definition regarding this concept constitute a real challenge taking into consideration the wide spectrum of meaning it incorporates. It embodies the process of decision making by the institutions, their manner of operating and implementing policies as well as the ethical norms characteristic to the process of governance (Delors, J., 2013).

According to the view expressed by the World Bank, the process of governance is defined as:"*Governance consists of the traditions and institutions by which authority in a country is exercised. This includes the process by which governments are selected, monitored and replaced; the capacity of the government to effectively formulate and implement sound policies; and the respect of citizens and the state for the institutions that govern economic and social interactions among them*". Moreover the Anti-Corruption and Governance Strategy of the World Bank attributes the following definition to the economic governance process:" *the manner in which the public authorities and the institutions acquire and exercise their authority in developing public policies and providing goods and services". (World Bank, 2006).*

Kooiman (1993: 2) approach to the economic governance concept may be summarized such as:" *the total amount of activities with social, political and administrative characteristics conducted by different individuals that may be regarded as joint efforts to guide, control and manage the society*". From this point of view the economic governance embodies an interconnected action between the members of a society and implies a cumulative participation in order to achieve the established objectives. On the other hand Rosenau (1995: 14) develops the definition of the economic governance concept in terms of the activities of the national governments including in this category: changes of the

norms, issuing new directives and pursuing policies. In this case the economic governance is viewed as a responsibility attributed only to the legal authorities of the state without any intervention from other players in the market.

Another important definition of the economic governance concept is the one elaborated by Huther and Shah (1996, 1998) that states:"*the aspects thorough which the authority is exercised including formal and informal institutions that have the role to manage the resources of one state".* The authors bring into light the dichotomy concerning the level of institutions that have a decisive role in coordinating the economic governance process.

In the study entitled "*Governance institutions and economic activity*", Dixit (2009: 5) refers to the economic governance concept taking into consideration the fact that: " *the functioning and organization of the social and legal institutions that support the economic activity and transactions by protecting the property rights, implementing arrangements and the collective work with the purpose of developing a physical and organizational infrastructure that would allow the interconnection between economic actors, individuals and companies*". During time worldwide economies used different types of institutions in order to achieve their established goals, that depending on the existing circumstances proved to be successful or not. Therefore, the study of the economic governance concept refers to these institutions, to the models developed theoretically and empirically, or to the manner in which these institutions interconnect or develop in order to assure economic stability and high levels of performance.

Also Oxford Advanced Learners Dictionary (2010: 672) defines economic governance as being:"*the governing activity exercised at the level of a country or of a company*". This definition extends the research area on what the specialists name corporate governance. Corporate governance analysis the internal management of a company, its organizational structures and the manner in which the company relates to the shareholders or stakeholders. Although there is a clear dependence between economic and corporate governance, given the fact that companies operate taking into account the norms and rules established by the state, this study will concentrate only on what economic governance aspects.

Even thought there was a significant progress in defining and interpreting the economic governance process in the last three decades, we have to keep in mind that many times there is a confusion between the term governance and government. For example in the American Heritage, Random House and Merriam Webster dictionaries the term of government and governance are presented as synonymous and defined such as: *" the process of exerting authority or control*", "*a method or a system of governing*", " *the act, the process, the power to govern*".

We consider that the government constitute in this case just a component of the economic governance process that requires a series of other social institutions in order to develop and improve the economic performance of a certain state.

Based on this short introspection in the literature in the field, we consider necessary to express our point of view upon the meaning of the economic governance concept that will constitute the main approach of the current research. Therefore the economic governance embodies: "*the set of norms, rules, operating principles and measures, developed across a certain economy by the formal along with the informal institutions with the purpose of assuring economic, political and social discipline, promoting economic progress and convergence without limiting/affecting the interests of other states/individuals/companies*.

### 3. Instruments to measure governance

Over time a number of studies and international organizations tried based upon the existing data, to develop a set of indicators that would incorporate accurately all the transformations within this system.

These indicators include different elements that relate to the process of economic governance. Their different structure, depending on the issuing institutions, is a strong indicator in favour of the multiple perspectives one may analyze and quantify economic governance. The main objective of this section is to shortly inventory the literature in the field of economic governance indicators as well as presenting their evolution across European Union member states.

Transparency International is an organization developed in 1993 whose primary objective is to reduce the level of corruption across world economies. With over 100 headquarters globally, this organization aims at developing a complex analysis that would embody useful information regarding the level of corruption for more than 190 economies, but also to investigate the cause and effects of the corruption in different types of states. The main categories of indicators used by the Transparency Index are:

- Corruption Perception Index
- Global Corruption Barometer
- Bribe Payers Index

Corruption Perception Index was firstly established in 1995 and constitutes one of the most important instruments used by the Transparency Index in modelling the data concerning this aspect. This composite index requires at least three different sources in order to be validated. This index is calculated for 175 world economies (according to the most recent report published by the organization) and concerns the manner of which corruption is perceived by officials or politicians. The value for this indicator ranges between 0 (the highest perceived value of corruption) and 100 (the lowest perceived value of corruption). According to the data published in 2014, 75% of the world economies obtained a score below 50, the country with the lowest value associated to this index being Denmark (92), at the opposite pole being situated North Correa and Somalia with 8 points.

The values for the member states of the European Union as well as the global rank regarding the corruption perception index are listed in table 1.

**Table 1:** Corruption Perception Index across European Union Member states in 2014

| Country | Index value in 2014 | Evolution in comparison to 2013 | Global rank |
|---------|---------------------|----------------------------------|-------------|
| European Union | 66/100 | Increase | 43/175 |
| Austria | 72/100 | Increase | 23/175 |
| Belgium | 76/100 | Increase | 15/175 |
| Bulgaria | 43/100 | Increase | 69/175 |
| Czech Republic | 51/100 | Constant | 53/175 |
| Croatia | 48/100 | Increase | 61/175 |
| Cyprus | 63/100 | Constant | 31/175 |
| Denmark | 92/100 | Increase | 1/175 |
| Estonia | 69/100 | Increase | 26/175 |
| Finland | 89/100 | Constant | 3/175 |
| France | 69/100 | Decrease | 26/175 |

| Germany | 79/100 | Increase | 12/175 |
|---|---|---|---|
| Greece | 43/100 | Increase | 69/175 |
| Hungary | 54/100 | Constant | 47/175 |
| Ireland | 74/100 | Increase | 17/175 |
| Italy | 43/100 | Constant | 69/175 |
| Latvia | 55/100 | Increase | 43/175 |
| Lithuania | 58/100 | Increase | 39/175 |
| Luxemburg | 82/100 | Increase | 9/175 |
| Malta | 55/100 | Decrease | 43/175 |
| Netherlands | 83/100 | Constant | 8/175 |
| Poland | 61/100 | Increase | 35/175 |
| Portugal | 63/100 | Increase | 31/175 |
| Romania | 43/100 | Constant | 69/175 |
| Slovakia | 50/100 | Increase | 54/175 |
| Slovenia | 58/100 | Increase | 39/175 |
| Spain | 60/100 | Increase | 37/175 |
| Sweden | 87/100 | Decrease | 4/175 |
| United Kingdom | 79/100 | Increase | 12/175 |

Source: Global Report on Corruption Perception Index 2014 available at: http://issuu.com/transparencyinternational/docs/2014_cpibrochure_en?e=2496456/103758 81

In what concerns the evolution of the corruption perception index across European Union member states we may notice that there is an increasing tendency of this index in the majority of the countries which means an increase of the confidence level on the capacity of the authorities to coordinate and implement public policies that would suits the interests of all members of the society. Regarding the relatives scores Denmark is the country that is situated on the first rank with the lowest perceived level of corruption, followed by Finland (89/100) and Sweden (87/100). The states with the highest perceived level of corruption are Greece and Bulgaria with a score of 43/100, these states being the ones that confronted with the most accentuated instabilities associated to the political environment in the recent period.

The second indicator used by Transparency International in the analysis of the corruption process, constitute a survey that embodies the perception of the society upon the level of corruption. The minimum age of respondents is 15 years old and for each state is selected a representative sample that may be both national and urban. According to the Global Corruption Barometer report from 2013, almost 52% of the interviewed citizens across European Union member states consider that the level of corruption increased in the last two years, while 12% agree that this level has decreased. Respondents from Portugal (78%), France (72%) or Cyprus (71%) are the ones who believe that there is currently a high level of corruption within their national states, while at the opposite pole are situated economies like Denmark (27%), Croatia (21%) or Belgium (11%). In what concerns the corruption issue only Denmark agrees that is not a warning signal for its society, while Greece, Portugal, Spain, Lithuania or Romania consider it a problem of great interest. Regarding the level of corruption across institutions, the most affected sector is the one corresponding to the political parties (score 4 of 5), followed by the parliament (score 3,7 of 5) and business (3,5 of 5), the least affected being the military sector (score 2,7 of 5). Table no. 2 details the institutions considered by the population to be the most corrupted at European Union level.

**Table 2:** The most corrupt institutions according to the data published by Transparency International in 2013

| Countries | Institution considered corrupted |
|---|---|
| European Union | Political parties |
| Belgium | Political parties |
| Bulgaria | Judicial system |
| Croatia | Political parties, Judicial system |
| Cyprus | Political parties |
| Denmark | Religious groups |
| Estonia | Political parties |
| France | Political parties |
| Germany | Political parties |
| Greece | Political parties |
| Hungary | Political parties |
| Italy | Political parties |
| Latvia | Political parties |
| Lithuania | Judicial system and the Parliament |
| Luxemburg | Political parties |
| Portugal | Political parties |
| Romania | Political parties |
| Slovakia | Political parties |
| Slovenia | Political parties |
| Spain | Political parties |
| United Kingdom | Political parties and the Media |

Source: Transparency International (2013) http://www.transparency.org.ro/politici_si_studii/indici/bgc/2013/GCB2013ReportRo.pdf

With respect to the third indicators analyzed by Transparency International, namely Bribe Payers Index, its main objective is to classify a number of 30 exporting countries regarding their disposal to give bride outside the state borders in order to obtain preferential services. The data provided by the most recent report from 2011 show that the best results in this sectors are achieved by Netherlands (8,8), and Belgium (8,7) in the European Union, at the opposite pole being situated China (6,5) and Russia (6,1).

Another important data source used by economists, analysts and researchers in investigating the economic governance process is The Freedom House Index. Freedom House is an independent organization whose mission is to promote global freedom. This organization was founded in 1941 and was the first American organization which acted as a catalyst for freedom and achieving a democratic environment. The indicators published by this database cover more than 195 economies including 44 economies from Europe. There are two main areas of economic governance process analyzed: political rights and civil liberties. The indicators are grouped as follows:

- Electoral process
- Political pluralism and participation ⟩— Political rights
- Functioning of government
- Freedom of expresion and belief
- Rule of law ⟩ Civil liberties
- Associational and organizational rights
- Personal autonomy and individual rights

According to the 2014 Freedom House index, 45 % of the global economies are considered free, 30% partial free and 25% not-free. The available data for Europe reveal the fact that 88% of the economies are free, while only 12% are partly free, these values being higher than the global average. Moreover the report states that the European countries have a relatively high interest in maintaining the democratic standards and civil liberties at a higher level.

The World Bank is a global institution that has shown a constant concern for developing a set of indicators that would allow providing more complex information upon what sustainable governance implies. Kaufman et all. are the authors that based upon a multitude of reports on firms and individuals across 200 states elaborated a set of six indicators that incorporate all the characteristics of the economic governance concept. These indicators embody over 340 variables collected from 32 different sources including: commercial information providers, study on companies and individuals, non-governmental organizations and public organizations. The authors mentioned three main elements that are considered of high importance in sustaining the viability of these indicators: 1) The used aggregation methodology enables the incorporation of individual information higher than any other existing source; 2) They allow the calculation of the marginal errors of the estimated indicators; 3) Enable the creation of a database with global coverage.

The six indicators used by the World Bank in analysing economic governance are (Kaufmann et all., 2010):

1. *Voice and accountability (VA)*: freedom of expression, freedom of media, freedom of the citizens to elect their government;
2. *Political stability and absence of violence (PV)*: military risk, terrorism, political attacks;
3. *Government effectiveness (GE)*:  quality of public and civil services, government capacity in formulating and implementing certain categories of policies;
4. *Regulatory quality (RQ):* capacity of the legal authorities in developing regulations that stimulate the development of the private sector;
5. *Rule of law (RL)*: the enforceability of contract, property rights, the quality of judicial system;
6. *Control of corruption (CC)*: effects and costs of corruption, the degree of confidence of the individuals in the public institutions, the effects of the instability of the political system.
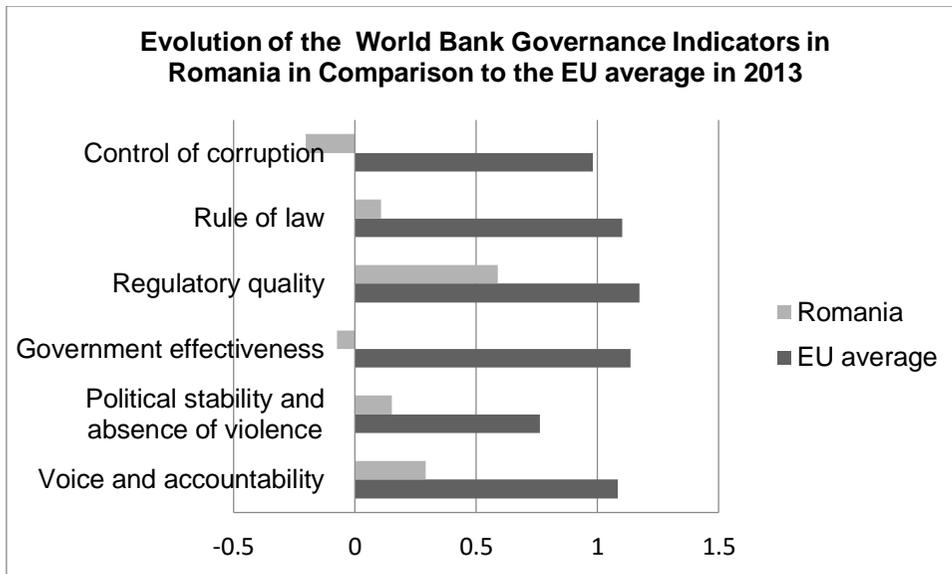
**Figure 1:** Evolution of the World Bank Governance Indicators in Romania in Comparison to the EU average in 2013
Source: Authors calculation based on World Bank Governance Indicators.

By analyzing the data from the figure above we may conclude the fact that Romanian economic governance indicators are situated below the EU average regarding all six aspects, the area were Romania register even negative values is in respect to the control of corruption and government effectiveness,

## 4. Conclusions and policy implications

According to the definitions detailed in the previous sections we may notice the fact that the process of economic governance constitute a priority and at the same time a characteristic for many domains stating with markets, communities, state and covering a wide range of institutions that operate at regional, national or supra-national level. The EU economic governance embodies a special feature, namely in this case the decisions are made as a result of an interconnected action between a complex network involving different levels of government.

Even though it is a real challenge to establish a set of indicators that quantify correctly the process of economic governance, world-wide institutions concentrated their efforts in developing complex methodologies that capture the transformation and properties of this debated subject. The Freedom House, Transparency International or World Bank use the most relevant indicators considered by the literature in the field in measuring global economic governance.

The European Union architecture in terms of economic governance differs from the one promoted by other systems and the impact of the recent financial crisis triggered an alarm signal upon the need to reconfigure the institutional and political framework (Deceanu, L., 2015).

Taking all these points into consideration we may conclude that there are strong arguments in favour of transferring the power of elaborating, implementing and managing the economic stability policies from national to supra-national level. Furthermore assuring

an institutional convergence across European Union member states is an important requirement for achieving political integration. Pasini (2013) considered that "*the fight of the European elites in developing a concrete answer from the institutions to the recent economic crisis was not a failure of the modern theories to elaborate feedbacks regarding the coordination of the macroeconomic problems, but rather a refuse to accept the transfer of the political and democratic control over European economic policies*". Also strengthening the existing regulatory framework and developing a normative set of rules that promote fiscal discipline for an early signal of economic, fiscal and monetary deficiency should became primary objective of the economic governance architecture.

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# ACCELERATING THE ADOPTION PROCESS OF RENEWABLE ENERGY SOURCES AMONG SME'S

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**Abstract:** *By 2020, intermittent renewable small scale energy sources (e.g. wind and solar energy) are expected to represent about 17% of the EU's total electricity consumption. All national overriding energy policy objectives are to ensure competitive, secure and sustainable energy for the economy and for society. Renewable energy, allied with energy efficiency, is often found crucial to meet these goals of secure sustainable and competitive energy supplies reducing dependency on expensive fossil imports and underpinning the move towards a low carbon economy while delivering green jobs to the economy. This all contributes to national competitiveness and the jobs and economic growth agenda. However, a straight forward implementation of renewable energy options is not easy, due to various barriers and obstacles. For most SMEs, the concept of generating their own renewable energy is still more of academic than genuine interest. In general, several barriers are experienced, such as high capital investments, slow return on investment, and the lack of knowledge of the benefits. There is a need for education on the benefits and drawbacks of sustainable energy, as well as a greater contribution to costs for this to work. In this paper we describe the intermediate outcomes of a European Partnership under the name of GREAT (Growing Renewable Energy Applications and Technologies), funded under the INTERREG IVB NWE Programme. GREAT aims to encourage communities and small to medium size enterprises (SMEs) in Ireland, the United Kingdon, Belgium and The Netherlands to develop technological solutions for Smart Grid, Renewable Energy and Distributive Generation; research and develop policy issues for regulatory authorities and provide structured co-operation opportunities between SMEs and research institutes / technology developers. We developed GREAT spreadsheets to facilitate SMEs in each country to calculate the return-on-investment of renewable energy sources, such as solar panel installation, heat pumps and wind energy, generating electricity. We have a two-track approach: development of a tool to support SMEs in their decision making process about suitable and appropriate technologies and solutions, and research to understand the barriers and obstacles that hinder adoption and implementation of sustainable energy solutions. In this paper we introduce a tool which aims to support SMEs in their decision making process on renewable energy applications in the expectation that this will accelerate that process.*

**Keywords:** Sustainable Energy Sources, Innovation, SME's, Renewable Energy Applications, Economic tool for decision making

**JEL classification:** Q55, Q42, O3

**Introduction**

This paper describes the preliminary outcomes of a Partnership between the United Kingdom, Ireland, Belgium and The Netherlands entitled GREAT: *Growing Renewable Energy Applications and Technologies*. Ultimately GREAT aims to encourage SMEs and collectives of SMEs to develop and apply sustainable technological solutions related to Renewable Energy, Smart Grid and Distributive Generation. In the following sections we introduce the GREAT project and place sustainability in a wider European context. Then, we identify the problem and explain the focus of our research. In this section we will also explain our methodological choices and research design. This forms our theoretical framework and the lenses through which we have carried out our research. The results of our research and its market implications are discussed subsequently. We finalize with conclusions, which also highlight the next steps that are being taken in the project and the envisaged final outcome of the Partnership.

**The GREAT Project**

GREAT is an EU funded project under the INTERREG IVB NEW Programme in which the following organizations have formed a Partnership: Udaras Na Gaeltachta, University Hasselt, Oost NV, Basildon Council, EnergyVille, Design 4 Sustainability, Westbic, Smart Grid Flanders, Energy North and Wittenborg University.

The overall aims of the project are to accelerate deployment of Smart Grid benefits in North West Europe (NWE). Smart Grid, Renewable Energy and Distributive Generation provide opportunities for SMEs to achieve optimum synergies in the emerging renewable energy sector. The project wants to stimulate enterprises, develop innovations and contribute to the creation of employment in this field; create best practices and policies that will help to push the so-called third Green Revolution forward in North Western Europe by: informing regulatory and policy actors of the opportunities associated to Smart Grid developments; enabling and promoting the renewable energy sectors as a growth opportunity for SMEs in this region and providing a platform across North Western Europe that promotes and develops Smart Grid benefits and encouraging new Smart Grid services and technologies be developed for citizens.

Objectives of the GREAT project are: a) to develop a set of tools to enable SMEs to engage with the Smart Grid, Distributed Energy and Renewable Energy Nexus; b) to provide tools to SMEs to compete for transnational business; c) to stimulate product developments through developing and setting up international consortia and d) to increase awareness of market opportunities through distribution networks.

**Sustainability in a European Context**

In Europe, under Directive 2009/28/EC, all countries have developed Energy Efficiency Action Plans up to 2020, reaffirming their target to reduce energy consumption.

**Table1:** Target for 2020 under the Renewable energy directive 2009/28/EC

| Country | Energy consumption 2014 (ktoe)[4] | Target for 2020 on renewable energy |
|---|---|---|
| Ireland | 8.004 | 16% |
| Netherlands | 34.592 | 20% |
| UK | 90.400 | 15% |
| Belgium | 19.243 | 13% |

Source:http://ec.europa.eu/energy/en/topics/renewable-energy/national-action-plans

All national overriding energy policy objectives are aimed at ensuring competitive, secure and sustainable energy for the economy and society in general. Renewable energy, allied with energy efficiency, is often found imperative to meet these goals of sustainable and competitive energy supplies, thereby reducing dependency on expensive and environmentally unfriendly fossil imports and underpinning the transition towards a low-carbon economy. Ultimately this is a means of creating and offering 'green' jobs to the economy. SMEs may be key actors in this respect.

In the EU economy, SMEs make up to 99,8% of non-financial enterprises, providing an estimated 58% to 67% of jobs and contributing the region's GVA (Gross Value Added).

**Table2:** Definition of SME

| Company Category | Employees | Turnover (million €) | Balance sheet total (million €) |
|---|---|---|---|
| Micro | <10 | <2 | <2 |
| Small | <50 | <10 | <10 |
| Medium -Sized | <250 | <50 | <43 |

Source:http://ec.europa.eu/enterprise/policies/sme/facts-figures analysis/performance-review/files/supporting-documents/2013/annual-report-smes-2013_en.pdf

**Table 3:** Statistic Information on SMEs in Europe

| | Micro | Small | Medium | SMEs | Large | Total |
|---|---|---|---|---|---|---|
| Number of Enterprises | | | | | | |
| | 18,783,480 | 1,349,730 | 222,628 | 20,355,839 | 43,454 | 2,399,291 |
| % | 92.1 | 6.6 | 1.1 | 99.8 | 0.2 | 100 |
| Employment | | | | | | |
| | 37,494,458 | 26,704,352 | 22,615,906 | 86,814,717 | 43,787,013 | 130,601,730 |
| % | 28.7 | 20.5 | 17.3 | 66.5 | 33.5 | 100 |
| Value Added at Factor Costs (million €) | | | | | | |
| | 1,242,724 | 1,076,388 | 1,076270 | 3,395,383 | 2,495,926 | 5,891,309 |
| % | 21.1 | 18.3 | 18.3 | 57.6 | 42.4 | 100 |

Source: Eurostat, National Statistical Offices, DIW, DIW econ, London Economics

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4 Data from National Renewable Action Plans from the four countries; energy consumption includes heating, cooling and electricity. Ktoe = kilotonnes of oil equivalents.

Energy consumption by SME depends on their energy-intensiveness; industry consumes about 25,5% of national energy; the energy costs as a percentage of overall process costs for mining, paper, glass and metal producing industry, range between 5,1%-8,7% for chemical and food industry respectively 2,9 and 1,8%. It seems evident that SMEs have a responsibility in taking their role in relation to diffusion and growth of sustainable energy solutions (Abdelaziz et al, 2010).

For SMEs in Europe, energy costs now account for around 7-11% of operating costs and up to 30-35% in highly intensive energy using businesses. In the current economic climate, all SMEs are cost conscious so energy prices are becoming important. Although energy is traditionally a relatively low engagement area, SMEs are increasingly aware of their behavior with regards to energy consumption and slowly changing their habits (i.e. spend time switching off lights or equipment etc. when going home). Very few SMEs, however are actually making significant investments in the building to reduce energy consumption. For most SMEs, the concept of generating their own renewable energy is still more of academic than genuine interest. In general, several barriers are experienced, such as high capital investments, slow return on investment, and the lack of knowledge of the benefits. There is a need for education on the benefits and drawbacks of sustainable energy, as well as a greater contribution to costs, to accelerate the implementation process.

**Problem Definition & Research Design**
The importance of investing in sustainable technologies and energy solutions is uncontested in both the public and academic domain. Since the film of Al Gore" *An inconvenient truth"*, sustainability stands high on the national agenda of most countries. Concern for the environment is one of the main reasons in combination with opportunities to innovate. Policy measures are aimed at reduction of carbon dioxide emission, waste management and alternative use of energy sources and materials. In line with these measures companies are urged to integrate sustainability in their business processes and search for innovative sustainable solutions.

Increased adoption and diffusion of renewable energy technologies (RET) is critical in this context (Stern, 2007, IPCC, 2011). The appeal of renewable energy has risen due to its potential for reducing dependence on energy imports (Valentin, 2011). At the same time, renewable energy offers possibilities for generating local environmental and health benefits along with the facilitation of energy access (Mahapatra et al., 2009) and can have positive impacts on employment, competitiveness, and sustainable or "green" growth (Ragwitz et al., 2006, Council, 2009, Edenhofer and Stern, 2009, OECD, 2010, 2011).
While on a national level policy measures towards a more sustainable society are defined, enterprises – and especially SMEs- lag behind and fail in sufficiently incorporating these measures appropriately in their day-to day business.

Wittenborg University (www.wittenborg.eu) located in the city of Apeldoorn in The Netherlands, is one of the Dutch partners at the GREAT project. Wittenborg University has two main tasks within that framework. The first task: to carry out a small-scale research activity among SMEs together with their Belgian counterpart to identify the barriers and obstacles for renewable energy participation. The second task (which is the focus of this paper) involves the development of an economic tool, in the form of spreadsheets, to help SMEs to estimate the return on investment in a sustainable energy project.

**Supporting Tool For SME's**

As of today, renewable energy cannot compete with fossil fuel in terms of production costs but impressive technological progress has paved the way for promising alternatives, such as biomass, solar and wind energy sources. (Pan & Khler 2007, Nemet 2006, IEA 2004).

In the countries of interest for the GREAT project: UK, Ireland, Belgium and The Netherlands, three renewable energy types are of interest: wind energy, solar energy (photovoltaic energy (PV) and solar heating) and geothermal energy (heat pumps; Table 4).

**Table 4:** Production of Renewable Energy[5]

| Type of energy | UK | Ireland | Belgium | Netherlands |
|---|---|---|---|---|
| Wind energy production (TWh, 2012) | 19.584 | 4010 | 2750 | 4999 |
| Thermal solar collectors installed capacity (MWh, 2012) | 455 | 184 | 334 | 608 |
| PV (GWh, 2012) | 1188 | 0,6 | 2148 | 254 |
| Heat pumps (ktoe, 2013) | 45 | 4 | 11 | 174 |

Source:http://ec.europa.eu/energy/en/topics/renewable-energy/national-action-plans

For SMEs, the size of the renewable energy system will depend on:
•         Location: the physical (unshaded) space available for the installation of PV modules or access to wind if installing micro-turbines;
•         Financial: how much investment is possible?
•         Energy generation potential
Furthermore, storage applications for off-grid renewable energy may be needed.  In order to develop an easily accessible and user friendly economic tool to be able to define the return-on-investment for these types of renewable energy, we set up an excel sheet, including accompanying cash flow statement.
The excel sheets have been developed per type of renewable energy and contain technical factors (e.g. capacity, factors influencing capacity), investment costs (cost of equipment, installation), operational and maintenance costs and energy generation items (annual electricity production in kWh and €). For the heating options, using solar heating, or geological heat (heat pumps), an extra module to convert heat into electricity is added. Per country, a different set of spreadsheets had to be developed due to differences in tax systems and other local regulations (Table 5). Using this approach, various scenarios associated with various payback times and return on investment can be estimated per type of renewable energy in each country.

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5 The state of renewable energies in Europe, Ed 2013, 13e Eurobserver Report

**Table 5**: Tax incentives for renewable energy in the four countries

| Country | Corporate taxes | Tax relief system |
|---|---|---|
| **The Netherlands** | 20% (2014) | some deduction possibilities exist for investments in sustainable energy such as EIA (41,5% deduction of taxes) and KIA (28% deduction of taxes, at investments ranging from €2301 to €55238). Deduction period for EIA and KIA is 3 years. |
| **Belgium** | 40,71% (2014) | some deduction possibilities exist for investments in sustainable energy such as EIA (14,5% in 2013 and 13,5 % in 2014 for sustainable energy projects). |
| **Ireland** | 12,5% | for renewable energy, including solar energy, tax relief regulations exist; it allows companies to write off 100% of the purchase value of qualifying energy efficient equipment against their profit in the year of purchase. As a result of this regulation, we assume that no depreciation is needed. |
| **United Kingdom** | 21% | for renewable energy, including solar energy, tax relief regulations exist; it allows companies to write off 100% of the purchase value of qualifying energy efficient equipment against their profit in the year of purchase. As a result of this regulation, we assume that no depreciation is needed. |

Source:http://ec.europa.eu/energy/en/topics/renewable-energy/national-action-plans

An elegant and low-cost approach to become more aware of electricity usage by SMEs, is the installation of a so-called Smart Meter. A Smart Meter measures electric current, records consumption of electric energy and enables two-way communication between the meter and the central system for monitoring and billing purposes enabling the use of variable pricing.
It facilitates energy savings and several customer benefits, such as enhanced energy efficiency, lower peak demand, more convenience through automation and online interaction with utilities, and intangible benefits such as improved customer satisfaction. Smart meter costs involve: up-front (capital) costs include meters, and communication system (software), as well as ongoing costs include operating maintenance, data transfer, service cost. In our excel tool for SME the inclusion of smart meters is also an option.

The model consist of three spreadsheet pages per type of renewable energy (no. 4: solar energy (photovoltaic and solar heating), wind energy, heat pumps) and country (no 4: The Netherlands, UK, Ireland, Belgium). So in total 16 different spreadsheets were developed.

The first spreadsheet (quick calculation) enables the input of a limited amount of variables, and results in a return on investment calculation.

The second spreadsheet (extended calculation) enables the input of several variables, in 7 categories: technology, investment, exploitation, electricity output, finance, taxes and revenues. In each category, input of several parameters is feasible (green fields), such as roof surface, specific capacity of the solar panel, investment, exploitation costs, specific

regulatory issues (such as tax) per country etc.

Some general data, such as costs of electricity (kWh), feed-in tariff per country, tax data etc. are used as standard values (Table 6). In the calculation cells, the results of calculations, i.e. the amount of electricity generated by the type of renewable energy selected as well as the return on investment is determined.

**Table 6**: Data on electricity prices per country

| Country | Average price per €/kWh at peak[6] | Annual change in price (%) | Sale of excess electricity: price per kWh |
|---|---|---|---|
| **Netherlands** | 0,08 | 6,7 | 0,20 |
| **Belgium** | 0,09 | 3,3 | 0,0722 + green certificate |
| **Ireland** | 0,13 | 6,6 | 0,16 |
| **UK** | 0,11 | 6,6 | 0,21 feed-in tariff + export rate |

Source:http://ec.europa.eu/energy/en/topics/renewable-energy/national-action-plans

The third spreadsheet (CashFlow Total) encompasses a cash-flow analysis, using the data input from the first spreadsheet.
The four spreadsheets (for NL, Ireland, Be and UK) and our SME tool is available from the website of the GREAT project (www.greatproject.eu.com) and can be used for further application and evaluation.

**Conclusions & Further Research**
In Table 7 below we have compared the four different energy generation methods regarding to their Internal Rate of Return (IRR) and payback time.

**Table 7**: Comparison of different energy generation methods (Internal Rate of Return (20 yrs) for four countries

| | Capacity | Investment | NL | Be | UK | Ire |
|---|---|---|---|---|---|---|
| **Solar PV[7]** | 12225 kWh/yr | 14852 | 9,2% | 5,5% | 12,5% | 7,5% |
| **Wind energy[8]** | 2 kW | 13000 | 7,1% | negative | 8,5% | 7,3% |
| **Solar heating[9]** | 12500 kWh/yr | 13750 | 7,9% | 7,0% | 13,2% | 7,9% |

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6 Source: Eurostat, 2013 for industrial users using 20-50kWh/year

[7] Self consumption 75%, Si cells,
[8] Self consumption 75%
[9] Self consumption 100%

| | | | | | | |
|---|---|---|---|---|---|---|
| **Heat pump[10]** | 10,9 kW | 14181 | 8,5% | 3,3% | 9,7% | 7,0% |

Variability between countries is due to the fluctuating prices of electricity and electricity index, the regulations for feed-in and the tax regimes. Solar technologies are favorable for all countries, esp. for the UK with a very high feed-in tariff.

Wind energy in the UK and Ireland is more interesting than in Belgium and The Netherlands as the capacity factors are assumed to be higher (40% instead of 25% for Belgium and The Netherlands, thus lower investments for better capacity).

We believe that financial tools like the one we developed can be instrumental to increasing the acceptance of renewable energy applications by SMEs. In the coming months this tool will be tested and we expect to carry out further research to understand better what the inhibiting factors are that constrain SMEs.

**Acknowledgements**

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[10] Self consumption 100%

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**THE SELECTIVE COLLECTION OF RECYCLABLE WASTE – A CHALLENGE IN THE CONTEXT OF ROMANIA'S SUSTAINABLE DEVELOPMENT**

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**Abstract:**
In this paper we analyzed the requirements for Romania deriving from the principles and European directives made regarding the selective collection of recyclable waste to implement the concept of sustainable development. The integrated waste management system is not fully functional in Romania which can cause much of the recyclable waste not to take the road of recycling but that of final disposal generating pollution. I believe that the rigorous application of European directives transposed into national legislation, national strategies on waste management but also making people aware and educating them are the factors that lead to the major desideratum of full processing and recovery of all recyclable waste. The most important way to recovery is the selective collection of recyclable waste. Most cities in Romania have implemented selective waste collection systems complying both with the national and county strategies in which waste management is concerned. This paper shows how the selective collection system is implemented in Oradea and in Bihor county and all the challenges that result from it.

**Keywords:** integrated waste management, sustainable development, reciclable waste, national recycling targets, sellective collection

**JEL classification:** Q53.

**1. Introduction** The continuous urbanization, industrialization, rising living standards process lead to increased consumption and therefore to the increase of the amount of household waste. Through its policies in the field of integrated waste management, the European Union ensures that the current economic growth will not lead to the generation of more and more waste. In this regard it was required to create and implement long-term strategies on waste. Thus, the Thematic Strategy on Waste Prevention and Recycling built in 2005 has led to the revision of the Waste Framework Directive, the cornerstone of EU waste policy. The review brings a modernized approach to waste management, marking a shift from the perception of waste as an unwanted burden to perceiving it as a precious resource. In order to reduce the amount of waste deposited in the end and to raise the degree of recycling and recovery of recyclable waste more steps are required to be followed, from the reduction of the consumption to the involvement of the whole society in the selective collection of recyclable waste

Directive 2008/98 / EC focuses on the prevention of waste production and sets new goals that will help the EU to move towards its goal of becoming a recycling society, a healthy society. It includes targets for recycling 50% of household waste for the EU Member States by 2020. Therefore, each local public administration must engage directly, by providing the necessary infrastructure necessary for the selective collection and indirectly by participating to the public awareness and its involvement in achieving the proposed targets. Analyzing the European provisions on waste management transposed into Romanian legislation we have highlighted some important elements.

**2. Important elements of EU waste management provisions transposed into national legislation**

## 2.1 National strategic planning documents

In order to achieve the recycling targets and also to promote the sustainable development in every European country overall it has its own legal and strategic planning frameworks in terms of selective collection, all these documents being in line with European directives.

**National Waste Management Strategy 2003-2013** was the document that was the basis for drafting the National Plan for Waste Management in 2004, both documents being approved by the Government Decision 1470/2004. These two documents have set the benchmark in drafting the County Plan for Waste Management in Bihor and the feasibility study for carrying out the project Integrated Waste Management System in Bihor County.

In 2013 it was developed and approved by Government Decision nr.870 / 2013 the National Waste Management Strategy 2014-2020 in which one of the overall goals is to direct Romania to a "recycling society".

## 2.2 Sellective collection and waste disposal

The selective collection of packaging waste is done according to art. 11 of the European Directive 2008/98 / EC through colors collection schemes. Thus, for the plastic waste yellow containers are used, for paper and cardboard waste blue containers and for the glass waste green containers.

Disposal must be carried out safely, in compliance with Directive 2008/98 / EC and Directive 1999/31 / EC.

In addition, according to Law No. 211/2011 on waste regime the following are stated "ART. 19 (1) Waste producers and holders of waste are obliged to operate the waste which have not been capitalized to a disposal operation in safe conditions, complying with the requirements of Art. 20. (2) Authorized economic operators in terms of environmental protection for waste disposal activity shall: a) ensure the total elimination of waste delivered to them; b) use the best available techniques not entailing excessive costs for waste disposal; c) to place and fit waste disposal facility in a place and under conditions determined by territorial authorities responsible for environmental protection; d) to introduce the waste only in the disposal facility specified in the authorization issued by the competent authorities and comply with the disposal technology approved by them. (3) The abandonment of waste is prohibited. (4) Disposal of waste outside the premises authorized for this purpose is prohibited.

ART. 20 Waste management should be carried out without endangering human health and without harming the environment, in particular: a) without incurring risks to air, water, soil, plants or animals; b) without causing discomfort through noise or odors; c) without adversely affecting the countryside or places of special interest. "

In order to reduce the amount of waste by Government Emergency Ordinance no. 196/2005 regarding the Environmental Fund, with subsequent amendments introduced the objective of reducing by 15% the amount of waste disposed of through landfills of household and similar wastes collected through public service sanitation applicable to local authorities responsible for organizing and managing the locally generated waste management process in their administrative territory.

In case of prohibitions applicable landfills we can mention the following: it is forbidden the disposal by land filling of packaging waste, except those resulting from selective collection or sorting processes, which are not recoverable or that cannot be incinerated in incineration installations with energy recovery.

## 2.3 Recycling

Much of the waste that can be discarded are recycled. Recycling reduces the amount of going to landfills, while reducing the volume of materials obtained from the natural environment. This is important because Europe is dependent on imports of rare raw

materials, and recycling provides the EU industries essential resources from waste, such as paper, glass, plastic and metals and precious metals extracted from used electronic devices.

The EU policy on waste intends them to be used as much as possible as raw materials for new products. Also, by recycling energy saving is achieved: for example, by recycling one aluminum can about 95% of the energy required to produce the same box of raw materials is saved. The EU has set recycling targets for many types of waste, including old vehicles, electronic equipment, batteries and packaging, household waste and construction and demolition waste.

The Member States including Romania strive to implement systems to ensure the achievement of these objectives. These systems include the Extended Producer Responsibility, attributing to producers responsibility for the entire lifecycle of products and the packaging they produce, including the last stage of the life cycle when they become waste.

Also, individuals play an important role. In many Member States, local residents are urged to separate different types of waste materials (glass, paper, plastic, metal, garden waste, etc.). This approach helps to achieve the highest possible quality of materials at the end of the recycling stage, maximizing the value of materials and increasing the number of products that can be made from them.

## 3. Challenges regarding the selective collection of reciclable waste in Romania

### 3.1 Targets of waste selective collection

Waste producers and local public administration authorities have the following duties, in accordance with European Directive 2008/98 / EC transposed into Romanian legislation by Law 211/2011 on the regime of waste:

a) to achieve, by 2020, a level of preparation for reuse and recycling of at least 50% of the total amount of waste, such as paper, metal, plastic and glass from household waste and, if the case, from other sources, to the extent that these waste streams are similar to waste from household waste;

b) to achieve, by 2020, a level of preparation for reuse, recycling and other material recovery operations, including backfilling operations using waste filler to replace other materials, of minimum 70% of the quantities of non-hazardous waste from construction and demolition activities (Law 211/2011 Article 17)

By the amendments brought to GEO no. 196/2005 regarding the Environment Fund Administration, starting on 1 July 2010 was introduced the contribution of 100 lei / ton owed to territorial administrative units in case of failure of the annual target of reducing by 15% the amount of household and assimilated waste, collected and sent for storage. The payment is made for the difference between the amount corresponding to the annual reduction target and the amount corresponding to the target actually realized through specific activities for the selective collection and recovery. Thus, local public administrations are directly co-interested in the implementation of integrated waste management systems and consequently of selective collection systems.

To achieve the collection targets but also to stimulate the citizens to collect selectively by Law Nr. 132 of 30 June 2010 the selective waste collection in public institutions in Romania was imposed.

### 3.2 Research regarding the selective collection in Bihor County and Oradea Municipality

In the Integrated Waste Management System, Bihor county is divided into six collection areas: Area 1 Oradea, Area 2 Aleşd, Area 3 Salonta, Area 4 Beiuş, Area 5 Marghita, Area

6 Săcuieni.

Each area will benefit from sorting and transfer stations, as follows:

Area 4 Beiuş, Area 5 Marghita and Area 3 Salonta (built in the project with the same title Integrated Waste Management System in Bihor County and funded through the Sectoral Operational Programme Environment 2007-2013.

Area 6 Săcuieni and Area 2 Aleşd are the beneficiaries of investments on sorting stations construction, Valea lui Mihai, PHARE - CES 2005 and the Environmental Fund for Aleşd, both of which being erected and functional.

In Area 1 Oradea was built in 2005 and is functional the ultimate ecological warehouse operated by a private company Eco Bihor SRL. Also, on the Eco Bihor platform there is currently a sorting station and will benefit through project from the construction of an MBT station that will serve the entire county.

We conducted a research based on interview at the company Eco Bihor SRL. The questions focused on issues related to selective waste collection in the county of Bihor and in Oradea in particular, the quantities selected and recycled, the way in which the Integrated Waste Management is implemented.

Thus, only in Oradea area the separate collection of waste is done according to the requirements of Law of localities sanitation service no 101/ 2006 modified and completed by Law No.99 / 2014, the wet waste respectively (which is stored, partially or finally and is used to getting compost) and dry waste (consisting of mixed recyclable waste).

Partly in Oradea the selective collection of recyclable waste is done in containers by color. Thus, the local Oradea administration arranged in year 2012-2013 in the areas of blocks 800 platform for the selective collection of household waste collection, 550 being platforms for the collection of separate wet and dry waste and 250 being platforms for collecting according to the type of waste the recyclable waste. The sanitation operator RER Ecologic Service collects all the waste from Oradea and transport it to Eco Bihor SRL for the recovery of recyclable waste and the final disposal of waste not covered by recycling.

In the rest of the county the household waste is collected mixed, just in Alesd and Valea lui Mihai there is first a sorting in two types, wet and dry and then from the dry waste it is selected the recyclable waste for recovery. The data provided in the interview conducted to Eco Bihor SRL show a continuing increase in household waste over the last four years and also a slight increase in the amount of recyclable waste selected from the total amount.

| Year | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|
| Total of mixed household waste ( tons) | 62,426 | 69,647 | 69,822 | 78,548 |
| Introduced recyclable waste ( tons) | 1,451 | 4,381 | 5,217 | 4,128 |

Source: Eco Bihor SRL Oradea

We attribute the increase since 2012 of the amount of recyclable waste entered in the environmental warehouse Eco Bihor to the involvement of Oradea municipality in terms of building the 800 platforms for the selective collection in the area of blocks of flats of the municipality. We can notice that the duties of local administrations to diminish with 15% the amounts sent for final storage are not fulfilled.

**Conclusion:**

In this paper we analyzed, synthesized and produced a synthesis of elements from the Romanian and European legislation, the role of central and local authorities and also that of the population in the field of selective recyclable waste collection and we compared it to

the current state of implementation of selective collection in Bihor County.The selective collection and recovery of recyclable waste represents a prerequisite for sustainable development. The strategic programming documents, the transposition of European directives, the involvement of local and central authorities and the public awareness are conditions in achieving the collection targets proposed by Romania on the road to a "recycling society". The completion of the project "Integrated Waste Management System in Bihor County" by building and commissioning of all transfer and sorting stations will help increase the quantity of recyclable waste collected and thus to achieve recycling targets.

**Acknowledgment**

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# THE METROPOLITAN AREA OF ORADEA – DEVELOPMENT DIRECTIONS

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**Abstract:** *The Metropolitan Area of Oradea has certain directions of development settled in accordance with the objectives of development assumed by The Local Council of Oradea on 10 March 2015 once with the approval of the strategy for development of Oradea Municipality for the period 2016 – 2020. It is very important for for the Municipality of Oradea to become, by quantifiable arguments in a relatively short period of time a real competitor of the great cities surrounding it or of Timişoara, Cluj-Napoca, Arad and Debrecen. Domains, in which Oradea can excel as a clear differentiator in front of its competitor, are closely related to the local traditional specific and resources. Thus, Oradea proposed to be the capital of Art Nouveau and thermal-ism. The fulfilment of this goal would definitely bring more tourists and obviously additional financial resources to the local budget. At this moment, OMA is prepared in what concerns the hotelier infrastructure and utilities for taking the new tourists. In addition, another important objective regarded at macro level for the entire OMA is the assurance of a security comfort for the citizens of the Municipality of Oradea and implicitly of the neighbouring villages. One of the objectives – Oradea, the safest city – is closely linked to another one which represents the follow-up of some successful beginnings in 2012 with the award Oradea – the green city. In the following period an increase of the surfaces covered with green spaces and recreational areas is being planned for the optimum comfort of the inhabitants and tourists of the OMA. The three main objectives mentioned above must be added to the imperative need of completing the necessary investments for the increase of the quality of life. The infrastructure for the assurance of the quality of health and education is reflected by the completed HURO programme accessed by the executive of OMA.*

## 1. Background

The general concept of a metropolitan area is that of a core area containing a large population nucleus, together with adjacent communities that have a high degree of economic and social integration with that core.

The development of Europe's economic territory today can be characterised as a process of metropolisation of economic development potentials and innovation capacities. "Metropolisation" is a paraphrase for the selective concentration of research-intensive industries and knowledge-intensive services on metropolitan regions and major urban agglomerations

On this basis the metropolitan regions and urban agglomerations are functioning as the "motors" of the European economy. In this article the metropolisation of the European economic territory is being analysed with regard to the increasing specialisation of Europe's major urban regions on knowledge-intensive economic activities. Particular emphasis is being put on the different sectoral profiles and development paths of the European urban agglomerations' and metropolitan regions' knowledge-intensive economy.

The result of this analysis is a differentiated representation of the developmental dynamics in the European Union urban system which allows overcoming simplifying general trend descriptions as for example the structural change of urban regions towards becoming "service centres".

Updating the local development strategy 2015-2020 Oradea was achieved within the project "Local development strategies in Oradea Metropolitan Area" implemented by Oradea Metropolitan Area Association. The overall objective of this project was to improve the capacity of government in Oradea Metropolitan Area. By implementing the project we aimed to improve public policies and update local development strategies of our members.

The overall objective of sustainable development strategy in Oradea is to raise the standard of living by exploiting existing resources and promoting the potential of administrative-territorial unit. To achieve this objective should be achieved a complete and realistic analysis of the situation at local, metropolitan, county, regional, national and international levels.

Thus, information was collected, analyzed and interpreted at the level of Oradea municipality, both as separate territorial unit and the main urban core of OMA, coupled with the specific situation in Bihor county and the North West Region. There were identified problems and measures to be taken.

This strategy also outlines actions for the promotion and achievement of the project "Oradea Mare", meaning the administrative - territorial union of Oradea with Sînmartin commune, in order to achieve the common goal "Oradea / Felix - the capital of spa tourism in Romania".

The attached list of priority projects was generated within internal meetings and working groups, public debate and analysis of project proposals that are being processed at technical and decisional level by the Municipality of Oradea. Starting from the investments already made in the previous period 2007-2013, based on the principles of opportunity analysis, financial affordability and generating added value without high costs of maintenance, there have been selected the priorities presented in the attached list of projects.

This is work in progress because the material is still in the process of updating with the necessary additions, because the official launch of sources of grants has not occurred yet (Final guides for national, international and cross border programmes). It is estimated that they will be launched in the first half of 2015.

At the time of their launch, this strategic document and priority projects portfolio will be updated with the final list of eligible activities and costs, which will allow completion of the implementation schedule and budgets. Meanwhile we work on the development / update / completion of technical documentation necessary to achieve these strategic investment projects.

This strategy emphasizes the role for Oradea municipality within Oradea Metropolitan Area (OMA) as a platform for sustainable development. OMA was created by associating Oradea and administrative-territorial units located in the proximity area of municipality: Biharia, Bors, Cetariu, Girişu de Cris, Ineu, Nojorid, Oşorhei, Paleu, Toboliu, Sînmartin and Sîntandrei.

The purpose of association, as it was established in constitutional documents, is to stimulate and support the growth and prosperity of the metropolitan territory and to increase the welfare of its citizens, the main purpose being the continuous increase of quality of life.

The overall objective underlines the sustainable development of the metropolitan territory, envisioning the creation of a common urban space of its members, following all the necessary principles to ensure territorial cohesion.

The set specific objectives are related to aligning OMA to economic and social standards of Euro-Atlantic structures, harmonized with the national ones of keeping the metropolitan market climate aligned to international competition procedures, and not least, economic and social growth in the area. Among the main directions of activity of the association, there are key elements of a coherent strategy, promoting sustainable development, the implementation of public policies to support the continuous growth of added value, attracting, facilitating and supporting direct investments, to develop projects of major impact on the sustainability of the area.

## 2. Current situation analisys

### 2.1. Geographical positioning
Oradea is located in the Central - Western part of Bihor County in the North West of the country.

Development Region. Oradea – administrative seat of the county - is a member of Oradea Metropolitan Area, having a central geographical position in it.
Oradea is bordered to the north by Biharia, to the east by Osorhei and Paleu to the south by Sînmartin and Nojorid and to the west by Sîntandrei and Borș. Relative to the custom point in Borș – the busiest border point between Romania and Hungary - Oradea is located at a distance of about 13 km.

### 2.1.1. Strengths
- A lower demographic aging degree that the numbers at the county regional and national levels;
- Demographic dependency ratio is below the level recorded at county, regional and national, which means "pressure" exerted by the economically inactive population (young and old) on the active (adults) is lower;
- Infant mortality rate lower than the regional or county level;
- Positive balance for changes of residence, because of the large number of students;
- A higher marriage rate compared to the county, regional and national levels.
- Decreased divorce rate in 2014 compared to 2013

### 2.1.2. Oportunites
- Support of the national birth levels through government incentives (aid for children, benefits, etc.);
- Sustainable economic development of the area can lead people settled abroad to return;
- The background of increasing the number of jobs may encourage the establishment of population outside the municipality, which will determine the demand for new homes
- Investments to improve the quality of life will attract people with higher education;
- Economic development = jobs, 25,000 commuters will be established in the coming years in Oradea
- Oradea-Sînmartin teritorial annexa

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### 2.1.3. Weaknesses

- Downward trend of population in Oradea between 2000-2014 and its migration to neighboring area, for ex. in Sînmartin, Oşorhei, Paleu, Sintandrei etc .;
- Slightly unbalanced distribution of population by gender (53% females and 47% males);
- Labor replacement rate present a deficit of labor force of about 50% in 10-15 years;
- Negative balance of residence change (including migration abroad);
- The downward trend in marriage rates in recent years;
- Significant increase in divorce rate in 2006-2014; value of divorce rate is higher than in Metropolitan Area Oradea, Bihor County or North - West Region.
- Negative natural growth rate registered in recent years;

### 2.1.4. Threats

- Abroad population migration due to the global economic crisis;
- Reduction in the amount of maternity allowance may reduce the birth rate
- Aging of the general population due to the decreased number of newborns;
- Increasing divorce rates as a result of departure of one spouse to work abroad.
- Reduction of incoming residences due to low numbers of students because of low numbers of high schools graduates.
- Persistence of economic crisis (natural growth rate is related to this phenomenon).

## 3. Public Transport: TRANSREGIO

Scheduled public transport is organized across the three administrative - territorial units: Oradea establishment, organization, regulation, operation, monitoring and joint management of local public transport by regular services of the association, on the competence area of the administrative - territorial members, in accordance with Law 51/2006 of public utilities services and the principles of decentralization and local autonomy.

The members of Transregio Intercommunity Development Association are:
1. Oradea Municipality;
2. Borş Commune;
3. Sînmartin Commune.

Of the total of 238,254 inhabitants of the area of ADI Transregio, 98% live in Oradea, the municipality being the centre with polarizing role in the region due to multiple connections (social, cultural, economic) that it has with all members of ADI Transregio.

The local public transport network consists of 5 tram routes with a length of 71.9 km, 17 urban bus routes with a length of 210.8 km and 6 metropolitan bus routes with a length of 114.1 kilometers.

Transregio Intercommunity Development Association was constituted on 13.03.2012 aiming the According to data from OTL. In 2014, in Oradea 70 buses and minibuses, out of 1,437 existing at the level of Bihor county were put into service. In what concerns the public transport via trams, Oradea is the only place in Bihor County that has the necessary infrastructure.

In 2014, 68 trams were put into operation (car + trailer), i.e. 46% of the existing trams at regional level. In the North - West Region, only Cluj-Napoca provides public transport by trams, holding 37 such vehicles.

The price for a ticket for a journey by public transport in Oradea is 2.5 lei and the price of a monthly pass, valid for all lines, is 70 lei. There are discounts of 50% of the full price of the subscription for pupils and students, granted by Oradea Municipality based on a Regulation. Retired persons and persons entitled under the law and decisions of the council benefit from free local public transport.


## 4. Water / Sewerage: APAREGIO

Intercommunity Development Association APAREGIO Oradea was established on 18.02.2008 and is incorporated under the provisions of Law regarding the local government no. 215/2001 republished and modified, Law regarding the community services for public utilities no.51 / 2006 as amended and supplemented, Law regarding public service of water supply and sewerage no. 241/2006 amended and supplemented, and of Government Ordinance no. 26/2000 on associations and foundations with approved and completed modifications. A.D.I. Aparegio is the legal entity of private law and public utility status.

The founding members of the association are: Bihor County, Oradea Municipality, Beiuș Municipality, Nucet City, Vascau City and communes: Biharia, Borș, Ceica, Cetariu, Copacel, Drăgești, Girișu de Criș, Hidiselu de Sus, Ineu, Lăzăreni, Nojorid, Oșorhei, Paleu, Sacadat, Sînmartin, Sîntandrei, Tinca, Toboliu.

The Association was established for settlement, creation, organization, financing, operation, monitoring and management of joint service of water and sewer within the competence area of the administrative-territorial units and for the joint execution of investment projects of area or regional interest, for setting up, modernization and / or development, as appropriate, of public utility systems related to the service of water supply and sewerage, based on its development strategy.

At the base of the Association is the general interest of the inhabitants from territorial administrative units members of the Service, under conditions of tariffs that respect the limits of affordability of the population and the "polluter pays principle," achieving and complying with European standards on environmental protection, and increasing the ability to attract funds to finance the necessary investments in public infrastructure related to the service of water supply and sewerage.

As a result of the signed association agreements of ADI APAREGIO, it was proceeded to delegate the administration for the water supply and sewerage based on which SC Compania de APA Oradea SA fulfilled one of the eligibility conditions in order to obtain the necessary financing for investments through the Sectoral Operational Programme Environment 2007 2013.

The achievement of these investments is mainly aimed at compliance with Community legislation Implementation Plan in accordance with the Treaty of Accession of Romania to the European Union.

As a result of the issuance of the financing decision no. 2011/2034 from 05.04.2011 of the European Commission, issued after thorough verifications, changes and additions made during the evaluation and selection procedure, based on criteria established by the European Commission Regulations Sectoral Operational Programme Environment, on 18.04.2011 was signed between the Ministry of Environment and Forests and SC Compania de Apa Oradea SA , the financing contract no. 121 230 - "Extension and modernization of water and wastewater in Bihor county."

The Contract signed between SC Compania de Apa Oradea SA (as delegated public service operator) and the Managing Authority for the Sectoral Operational Programme Environment is worth 300,624,265 lei without VAT. Responsibility for project implementation lies with SC Compania de Apa Oradea SA, in cooperation with ADI APAREGIO.

Performance indicators to be achieved by application of SOP Environment under the Cohesion funding:
**Drinking water:**
• Coverage of the service
    o Before project - 91.5%
    o After project - 99.6%
• Km of water distribution network comprised in the project
    o replacement - 56.8 km
    o extension - 82.4 Km
• Km of new adduction pipe network
    o extension - 40.5 Km
    o Number of treatment/pumping plants in the project
    o new water pumping stations - 2
    o new pumping stations hydrophore - 7
    o new water treatment stations - 4.
• Coverage of the service
    o Before project - 83%
    o After project – 98.9%
• Km of sewerage network comprised in the project
    o replacement – 34.1 km
    o extension 126.1 Km
• Km of new adduction pipe network
    o extension - 40.5 Km
• Km of new collectors for transfer / new pipes wastewater discharge
    o extension - 32.1 Km
• Number of pumping stations of wastewater / sewage in the project
    o new wastewater pumping stations - 24
    o new treatment stations – 2


**5. Heat energy: TERMOREGIO**
The public service of heat energy supply in centralized system is available in Oradea and commune Sînmartin. This service is organized according to Law no.325 / 2006, which regulates the specific activities on the production, transmission, distribution and supply of heat to users.
Oradea is currently associated with commune Sînmartin in the Intercommunity Development Association of public utilities for the service of heat supply, Termoregio. All the activities related to the service of centralized heat supply (SACET) are the responsibility of local authorities. Service is achieved through technical infrastructure that belongs to public domain, consisting of equipment, facilities, specific facilities that produce hot water and heating. Services include: thermal stations, electrical central heating, network connections, transport networks, thermal points, measurement and control systems.
Currently, Oradea City Hall implements the investment project Rehabilitation urban heating system in Oradea for the period 2009 - 2028 in order to comply with

environmental legislation and increasing energy efficiency, financed by the SOP Environment.

The centralized heat supply system (SACET) in Oradea, supplies about 70% of households / population in Oradea. The age of this equipment varies between 27 and 47 years and have not benefited of major works of modernization, due to lack of funds, therefore present a low overall efficiency and high level of air pollution.

Besides the cogeneration power plant, to SACET also contribute two boilers operating on natural gas and geothermal resources, which covers less than 3% of the city consumption. They belong to SC Transgex SA and supply the consumers through the networks of SC Termoficare Oradea SA.

As a result of the project Rehabilitation urban heating system in Oradea for the period 2009 - 2028 in order to comply with environmental legislation and increasing energy efficiency, (with a total value of EUR 77.7 million) funded by the Sectoral Operational Programme Environment, will be put into operation during 2015 a number of new facilities of the latest generation, efficient and low pollution.

## 5.1. Heating Networks

Primary heat networks provide the transportation of hot water from CET to heating points. This system comprises six lines of which only one leaving directly from the central (City Line) and branches into three lines: M1 (9 km), M2 (6 km) and M3 (2.7 km). In the city center, the three lines branch to other 3 other lines (M4, M5, M6) through a system of sectioning valves and connecting straps. The transport network has a length of 77.04 km.

The secondary thermal network is 142,456 km long. 32, 40%, in pre-insulating system and 10% in classical system have been rehabilitated up to the present.

## 5.2. Heating points

In Oradea, the operator SC Termoficare Oradea SA operates 151 heating points, of which 27 are upgraded and fully rehabilitated and 124 are partially rehabilitated.

A number of 7 heating points will be dropped and consumers (about 13,200 inhabitants in the district Nufărul I) will benefit from heat and hot water from geothermal water, heat pumps, and the majority of consume will be provided by SACET.

## 6. Conclusions

The main directions of development of the Metropolitan Area of Oradea have to take into account the analysis of the present macro economical indicators of the entities forming this organization. Further more, the objectives assumed by the Municipality of Oradea, the centre of development, are very important. Thus, Oradea proposed some goals for the period 2016 – 2020: to be the safest city in the country and among the first three cities in the country in what concerns the street cleaning. In addition, the cleaning will be corroborated with the desired collocation "Green Oradea" a direct consequence of the rapid and consistent increase of the surfaces covered with green spaces and recreational areas in the past years.

Last but not least there is the objective generated by the involvement of the City of Oradea in the local/regional politics of balneary and cultural - confessional tourism: "Oradea the capital of Art Nouveau and thermal-ism"

## 7. Acknowledgment

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# JURIDICAL AND ECONOMIC ANALYSIS OF THE CORPORATE SOCIAL RESPONSIBILITY IN THE BANKING MANAGEMENT FROM ROMANIA

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**Abstract:** *At present, the corporate social responsibility must be regarded from a complex perspective. We consider that the social responsibility of the banks is what the community expects from a bank ecologically, economically, juridically, ethically, and philanthropically. Thus, the banking corporate social responsibility includes all these types of responsibilities: the ecological responsibility, the economic responsibility, the juridical responsibility, the ethical responsibility, and the philanthropic responsibility. Combining the juridical analysis with the marketing research, this work aims at the actual compliance with the corporate social responsibility by the banks from Romania, an European Union member state. The juridical regulations adopted mid 2013 at the European Union level bring a new approach to the relation between the most important categories of stakeholders – consumers and employees – and the bank by means of actual juridical specifications regarding the banking management. Presenting the most important provisions of Directive 2013/36/UE of the European Parliament and Council regarding the access to the activity of the credit institutions and prudential supervision of the credit institutions and investment companies, and of Regulation no. 575/2013 of the European Parliament and Council regarding the prudential requirements for the credit institutions and investment companies, in relation to the corporate social responsibility aspects offers an interesting image of the evolution of the legislative aspects regulating the banking management. One can note, in practice, the assimilation by the banks of the corporate social responsibility only with its philanthropic component, ignoring the most important elements of the social responsibility: the juridical responsibility, the ethical responsibility, or the economic responsibility. This work shows results of a quantitative marketing research which has been performed in Brașov municipality in 2014. The marketing research on "Attitudes and opinions of the Brașov citizens regarding social responsibility" had a final sample made up of 386 persons, with a random error of ± 4.99%, which can be considered a minimum limit of representativeness. Thus, the results of this research are representative for Brașov town, and can also be extended in the case of other large towns of Romania. This work presents pertinent proposals regarding the improvement of the juridical framework regarding the corporate social responsibility which can be developed within the banking management.*

**Keywords:** social responsibility, banks, quantitative marketing research, juridical analysis, European Union.

**JEL classification:** M31.

## 1. Aspects regarding the corporate social responsibility developed by the banks.

Several traders instinctively know that "to do the right thing" – serve the clients, take care of the staff's morale, be careful with the providers, be good neighbours, and protect the

environment – means commercial sense. The socially responsible activity regards the provision of the economic success of a commercial company by including social and ecological aspects into its activity. [European Commission]

It is considered that the social responsibility can also be regarded as a fundamental ethical principle which expresses towards "whom" and for "what" a commercial company is responsible, in the light of the ethical system accepted and promoted by it. In this view, the social responsibility implies: the compliance with the laws, with the contractual provisions – starting from the premise that the contract is the law of the parties which obliges them to comply with it –, honesty, but also the consideration of desiderates of several groups interested in the existence and operation of a economic operator. [Schreiner, Ciobanu, Huţu, 2002]

The social responsibility can also be characterized as being the firm obligation of a commercial company to act beyond the legal obligations or those imposed by economic restrictions, and to pursue long-term objectives to the use of the community. The respective commercial company is considered responsible not only towards their owners (shareholders) but also towards clients, providers, employees, governmental organisms, creditors, local communities, public opinion.

At present, the social responsibility of the commercial companies must be regarded from a complex perspective. We consider that the social responsibility of the commercial companies is what the community expects from a commercial company ecologically, economically, legally, ethically and philanthropically. In my opinion, the social responsibility includes all these types of responsibilities: ecological responsibility, economic responsibility, legal responsibility and philanthropic responsibility. [Poţincu, 2012]

The philanthropic responsibility does not mean corporate social responsibility

## 2. Analysis of the results of a quantitative marketing research performed on the consumers of the Braşov municipality regarding the socially responsible activity of the banks from Romania

In 2014, we performed the quantitative marketing research on "Attitudes and opinions of the Braşov citizens regarding social responsibility". The purpose of performing this marketing research was getting to know the view of the consumers regarding the activity of the banks operating in Braşov municipality.

The final sample was made up of 386 persons, with a random error of ± 4.99%, which can be considered a minimum limit of representativeness.

Considering the fact that the size of the sample has been established probabilistically, simply random, and taking into account the fact that the level of the admitted error is ± 5%, and the probability of guaranteeing the results is 95%, we consider that the results of the research are representative for the entire adult population of Braşov municipality, and – also – these could also be extrapolated at the level of other municipalities with a similar size and structure of the population from Romania. Thus, one can note the view of the citizens on the banks operating on the Romanian market.

Within this marketing research, we have analysed the opinions of the Braşov consumers regarding the banks operating on the Romanian market as far as their socially responsible attitude is concerned.

To the question "*Do you consider that the banks operating on the Romanian market perform their activity while complying with the requirements of the corporate social responsibility*?", the questioned Braşov consumers, in a percentage of 45%, have answered "Yes, I consider that the banks operating on the Romanian market perform their activity while complying with the requirements of the social responsibility". This aspect is highlighted in diagram 1.
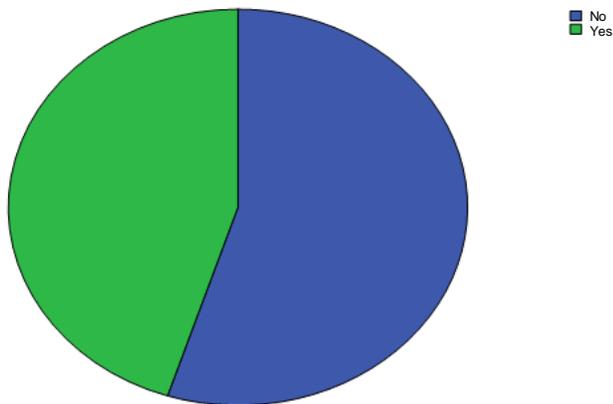
**Figure 1:** Analysis of the question "Do the banks operating on the Romanian market perform their activity while complying with the requirements of the corporate social responsibility?"
Source: Quantitative marketing research performed by the authors

The interesting fact is the answer of 55% of the questioned persons: "no, I consider that the banks operating on the Romanian market do not operate while complying with the requirements of the corporate social responsibility".

One notes the fact that over 5 out of 10 questioned consumers consider that the banks operating on the Romanian market do not perform their activity while complying with the requirements of the corporate social responsibility. From our point of view, this should be a warning for the banks, i.e. attention must be paid to the implications of the corporate social responsibility concept in the activity.

The fact according to which over 1 out of 2 consumers consider that the banks do not comply with their legally established rights, excluding the reality of not complying with the consumers' moral rights, is a problem, especially under the circumstances in which most of the banks in Romania state that they are socially responsible.

As previously highlighted, directing certain funds with the purpose of supporting a social cause, while complying with the philanthropic component of the corporate social responsibility, does not imply ignoring the other responsibilities included in the social responsibility. Also, the relations between the bank and several categories of stakeholders – consumers or employees – in complying with the juridical, ethical or economic responsibility, must be given an increased attention, as compared to the aspects of philanthropic responsibility.

Within the same marketing research, we have analysed the opinions of the Braşov consumers in relation to their age.

**Table 1:** Do you consider that the banks operating on the Romanian market perform their activity while complying with the requirements of the corporate social responsibility? * Age Cross tabulation

| | Age | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|
| | 18-29 years old | 30-39 years old | 40-49 years old | 50-59 years old | 60-69 years old | 70-79 years old | 80 years old and over | |
| NO | 40 | 28 | 27 | 27 | 16 | 0 | 6 | 144 |
| | 27,8% | 19,4% | 18,8% | 18,8% | 11,1% | 0,0% | 4,2% | 100,0% |
| | 55,6% | 59,6% | 50,9% | 60,0% | 59,3% | 0,0% | 100,0% | 55,0% |
| YES | 32 | 19 | 26 | 18 | 11 | 12 | 0 | 118 |
| | 27,1% | 16,1% | 22,0% | 15,3% | 9,3% | 10,2% | 0,0% | 100,0% |
| | 44,4% | 40,4% | 49,1% | 40,0% | 40,7% | 100,0% | 0,0% | 45,0% |
| Total | 72 | 47 | 53 | 45 | 27 | 12 | 6 | 262 |
| | 27,5% | 17,9% | 20,2% | 17,2% | 10,3% | 4,6% | 2,3% | 100,0% |
| | 100,0% | 100,0% | 100,0% | 100,0% | 100,0% | 100,0% | 100,0% | 100,0% |

Source: Quantitative marketing research performed by the authors

Table no. 1 shows that the questioned persons aged 40 - 49 years old consider, in an almost equal proportion, that the banks operating on the Romanian market perform or do not perform a socially responsible activity. 49% of them have answered "Yes", while the rest of 51% have answered "No, I consider that the banks operating on the Romanian market do not operate while complying with the requirements of the corporate social responsibility."

Progressively, the results are as follows::

- the consumers aged between 18-29 years old which have been questioned consider, in a percentage of 56%, that the banks operating on the Romanian market do not perform their activity while complying with the requirements of the social responsibility,
- the consumers aged between: 30-39 years old, 50-59 years old, 60-69 years old, consider, in a percentage of 60%, that the banks operating on the Romanian market do not perform their activity while complying with the requirements of the social responsibility.

The interesting fact is that, in the case of the questioned ones aged between 70 and 79 years old, the situation is trenchant: 100% of the questioned persons have chosen the answer "Yes". In the case of the questioned consumers aged between 80 years old and over, the situation is exactly the opposite: 100% of the questioned ones have chosen the answer "No, I consider that the banks operating on the Romanian market do not operate while complying with the requirements of the corporate social responsibility."

The trust the consumers have in banks and the strict compliance with the contractual obligations by a large part of the Romanian consumers, including the Brașov consumers, have determined a good relation with the banks, which has led to a positive response regarding their evaluation of the compliance with the requirements of the corporate social responsibility by the banks. Also, the consumers' failure to know the entirety of rights provided by the legislation protecting the consumer of banking products and services, has led to their wrong manner of evaluating the activity of the banks. If the banks had considered the juridical and ethical responsibility, there would not have been so many legal actions commenced by the consumers of the banks operating on the Romanian market.

**3. Directive 2013/36/EU for the development of the social responsibility of the banks**

Directive 2013/36/EU of the European Parliament and Council regarding the access to the activity of the credit institutions and prudential supervision of the credit institutions and investment companies, modifying Directive no. 87/2002/CE and abrogating Directives nos. 48/2006/CE and 49/2006/CE, and Regulation no. 575/2013 of the European Parliament and Council regarding the prudential requirements for the credit institutions and investment companies, and modifying Regulation (EU) no. 648/2012 is the juridical framework at the European Union level regarding the socially responsible management of the banks. The second juridical document extends the provisions of the directive.

If, until mid 2013, the legislation adopted at the European Union level juridically regulated only the contractual and pre-contractual relation between the consumers of banking products and services and the banks, the two normative documents adopted at the European Union level are centred on the regulation of the banking management, including the bank-consumers relation.

We shall further present and analyse the aspects regarding the socially responsible management of the banks, integrated in Directive 2013/36/EU of the European Parliament and Council.

Argument 13 of the Preamble of Directive 2013/36/EU states the need of supervision practices and decisions which would be transparent, predictable and harmonized, underlying the activity of the market and coordination of the cross-border groups of banks, with the purpose of providing a proper operation of the internal market.

Also, argument 51 stipulates that "adopting stricter regulations" shall provide transparency, a reduction of the systemic risk, and elimination of any improper practices, as these are "necessary for the stability of the financial system." Transparency is a very important element of the social corporate responsibility, as the European normative document makes the connection between the stability of the financial system in its whole and the stability of the banks by means of the transparency of their activity, as well as the transparency of the banks supervision activity.

*Argument 52* of the Preamble of Directive 2013/36/EU directly refers to the social responsibility. Thus, *the increased transparency regarding the activities of the banks, "especially regarding the achieved profits, paid taxes and received subsidies is essential for regaining the trust of the Union citizens in the financial sector".* Our conclusions, further to the prior analysis of the results of the marketing research, support this provision. They further stipulate that *"the mandatory reporting in the mentioned field can be considered an important element of the corporate responsibility of [the banks, authors' note - AN] to the interested factors [stakeholders AN] and society".*

The most interesting part of the previous provision is considered to be the transparency of the received subsidies, which can come from public funds, but also private, and can – in extreme cases – cause pressures from those offering them.

*Argument 53* explains the fact that "*certain deficiencies of the corporate governance of a number of [banks AN] have contributed to taking excessive and imprudent risks in the banking sector, which has led to the bankruptcy of the individual institutions and systemic problems both at the member states level, and globally. The very general dispositions regarding the governance of the [banks AN] and the non-mandatory nature of an important part of the corporate governance framework, which is mainly based on voluntary conduct codes, have not sufficiently encouraged the effective implementation of solid practices of corporate governance by the [banks AN].*

*In some case, the absence of effective control mechanisms within the institutions results in the lack of an effective supervision of the decisional administration process, which has*

*encouraged the administration strategies centred on short-term and extremely risky objectives.*

*The unclear role of the competent authorities in supervising the corporate governance systems of the [banks AN] has not allowed a sufficient supervision of the effectiveness of the internal governance processes."* These provisions capture the reality prior to the current economic crisis and the problems faced by the European and international banking system.

Consequently, argument 54 of the Preamble of Directive 2013/36/EU stipulates: *"in order to counteract the possible negative effects which the improperly conceived corporate governance mechanisms can have on a healthy administration of risks, the member states should instate principles and standards which would provide an effective supervision by the management body, promote a solid culture at all the levels [of the banks AN], and allow the competent authorities to monitor the adequacy degree of the internal governance mechanisms.*

*The respective principles and standards should be applied considering the nature, size and complexity of the activities [of the banks AN]. The member states should be able to impose corporate governance principles and additional standards to the ones provided by this directive".* One can note the transmission as an obligation to be fulfilled by the European Union member states, including by Romania, to develop and impose corporate social responsibility principles and standards.

Directive 2013/36/EU states in Art. 74 align. 1 the fact that banks are obliged to enforce "solid measures regarding governance, which include a clear organisational structure with well-defined, transparent and coherent responsibility lines, effective processes for identifying, managing, monitoring and reporting risks to which they are or can be exposed, adequate internal control mechanisms, including rigorous administrative and accounting procedures, as well as remuneration policies and practices which would promote and be in accordance with an adequate and effective management of risks". These provisions underline the need for a socially responsible management in order to develop and support a healthy banking management.

Art. 96 establishes the compulsoriness of the banks to maintain a website regarding the corporate governance and remuneration.

Argument 63 of the Preamble of Directive 2013/36/EU stipulates the following: "in order for the institutions to enforce healthy remuneration policies, clear principles regarding the governance and structure of the remuneration policies must be specified. Especially the remuneration policies should fit the appetite for risk, the long-term values and interests of the [bank AN]. For this purpose, the evaluation of the structure of remuneration depending on performances should be based on the long-term results, and take into account the current and future risks associated to these performances". We consider it important to establish clear juridical rules regarding the protection of the banks employees, regarding their remuneration, in the spirit of the corporate social responsibility.

Also interesting are the provisions of Art. 91 align. 7 and 8. Thus, "the management body generally possesses proper knowledge, skills and experience in order to understand the activities of the institution, including the main risks". Also, "each member of the management body acts in honesty, integrity and spirit independence in order to evaluate and effectively dispute the decisions of the upper management whenever necessary, and in order to supervise and efficiently monitor the decision-making process by the management team". The persons involved in developing a socially responsible management must be prepared, and must want this.

## 4. Conclusions and proposals

Analysing the view of the Brașov municipality citizens on the integration of the corporate social responsibility aspects in the banking management activity, one can note which aspects should be included and developed within the normative documents which constitute and shall constitute the juridical framework of a healthy banking management, with positive influences on the economy of the European Union.

Analysing the aspects which can be correlated with the corporate social responsibility stipulated in Directive 2013/36/EU of the European Parliament and Council, and Regulation no. 575/2013 of the European Parliament and Council, we consider it to be a good start to adopt the two normative documents at the European Union level, documents which are mandatory for all European Union member states, including Romania. However, supporting a socially responsible behaviour, understanding, and correctly and completely developing a socially responsible management can only be achieved by means of a special regulation exclusively centred on the banking social responsibility. A minimum of social responsibility requirements agreed upon at the European Union level in the activity performed by the banks, and a juridically clear explanation of the corporate social responsibility activities and strategies, which can be supervised and controlled by the already instated bodies at the European Union level would be, in our opinion, the next step in the evolution of the juridical framework of the banking management.

In this respect, it would be important to integrate and develop at least the following elements in the future legislation adopted at the European Union level, which shall be mandatory for the banks in all member states:

- Explaining and controlling all types of responsibilities which are part of the corporate social responsibility: the juridical responsibility, the economic responsibility, the ethical responsibility, the ecological responsibility, and the philanthropic responsibility;
- Integrating the social responsibility elements in the relation with their own employees, by developing the remuneration aspects initiated by Directive 2013/36/EU of the European Parliament and Council, and Regulation no. 575/2013 of the European Parliament and Council, and by adding new elements regarding the protection of the banks employees;
- Integrating the social responsibility elements in the relation with their own consumers, by developing information programs, extending certain ethical rights of the consumers by means of their juridical regulation, explaining certain juridically regulated rights of the banking products and services consumers, transposing fundamental rights from the common civil and commercial law into the field of the juridical protection of the banking products and services, performing a real control from the banking supervision bodies – operating at the level of the European Union and in the member states – of the compliance with the rights supported by the normative documents in force, and compliance with the solutions given by the courts of law correlated with observing the law.

We believe that the previously mentioned de lege ferenda proposals are an essential step in the development of a socially responsible management in all the banks operating on the European market, including Romania.

## 5. Acknowledgements

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# THE COMPETITIVENESS AND ITS MEASUREMENT BY MEANS OF THE PYRAMID MODEL

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**Abstract:** The competition itself, the fighting for the scarce resources is as old as the mankind. However, the naming 'competitiveness' has been present in the specialized literature since the 1980s. Nowadays, by crescendo of the international competition, concept of the competitiveness has become increasingly important among the decision makers at national economic and corporate levels alike. However, almost everyone means something different by competitiveness, even the researchers dealing with it have not created a uniform definition accepted by everyone. Most of them have worded their competitiveness definition with regard to corporate and national economic levels. The localization appears more pronouncedly in the economic formed and changed by effect of the globalization; economic roles of the regions, sub-regions are increasingly revaluated. This procedure is also mirrored by the competitiveness-themed theoretical and practical researches of the recent years; a significant part of them is aimed at some local levels. Topic of present treatise is the investigation of competitiveness of the regional level, among the local levels. This choice is justified by the fact the European Union decides about disbursement of the financial sources improving the competitiveness, with regard to the regional level NUTS 2. Models dealing with examination of the regional competitiveness can basically be grouped around two basic models. Members of the model family built on the benefits have largely a case study nature while the pyramid model to be presented belongs to the so called input-performance-output models. Basis of the model is the success factors which influence the region's competitiveness in a long term through metastases. And the success factors determine such basic factors as the research-development; the organizational background of the region's economy; investments from the outside; infrastructure and human capital; as well as the institutions and social capital. At next level of the model, there are such index numbers suitable for establishing the competitiveness sequence as the income, employment and labour productivity. On top of the pyramid, there is the last purpose of the competitive economy which is to increase the society's quality of life, standard of living. The final part of this essay will show the connection of the basic categories and basic factors of the pyramid model, through the example of Northern Great Plain region Hungary. According practice of the EU, GDP per capita is the basic category which determines the developmental sequence of the Hungarian regions. Presentation of the basic factors happens based on the most recent data (regarding to 2012/2013) of KSH (Központi Statisztikai Hivatal – Centrals Statistical Office) sorted by area. The treatise is of theoretical nature and partially based on an empirical research.

**Keywords:** competitiveness, regional competitiveness, pyramid model, Northern Great Plain region

**JEL classification:** R11, O18

## 1. Concept of the competitiveness and its different levels

It is not an easy task to define concept of the competitiveness in an exact way. A uniform definition accepted by everyone cannot be found in the specialized literature dealing with the theoretical and practical examination of the competitiveness. By wording of Ádám Török, an illustrious researcher being engaged in questions about the competitiveness since '80s, "this concept cannot be deduced from either basic paradigm of the economics i.e. in point of fact, it cannot be defined theoretically" (TÖRÖK, 1999).

Defining the concept can be performed at different levels. In a narrow sense, it can be determined in one sentence or in more detail via drawing up the factors of competitiveness. The third level already deals with different possibilities of measuring the competitiveness.

From among the persons being engaged in concept of the competitiveness, Ádám Török and Michael Eugene have worded such a definition which deals with the corporate and national/regional levels of competitiveness equally. According to Ádám Török, "concept of the competitiveness means, at micro level, the ability to gain positions in a competitive market and to hold on among the individual companies, their competitors as well as the single national economies from a macroeconomic point of view" (TÖRÖK, 1999). On the contrary, Michael Eugene defines the competitiveness as a totality of the institutions, policies and factors determining the quality of a country's productivity (PORTER – SCHWAB, 2008).

Other researchers determine the definitions of competitiveness referring to different levels of the competitiveness. For example, Erzsébet Czakó has worded a corporate-level definition widely accepted, according to which "the corporate competitiveness is the ability of a company which can permanently proffer the consumers such products and services, by complying with the norms of the social responsibility, that the customers are prepared to pay for, rather than for products (services) of the competitors, under conditions ensuring profit for the corporation. Condition of this competitiveness is that the company should be able to sense the changes in the environment and within the company and should be able to adjust to these changes by fulfilling the market competition criteria" (CZAKÓ, 2005).

According to the national economic competitiveness definition of Attila Chikán, "the national economic competitiveness means that part of a national economy which, in accordance with the requirements of the international trade, is able to create, produce, distribute and/or provide products in such a way while the proceeds of its own producing factors are growing" (CHIKÁN, 2006).

Consequently, based on the specialized literature, the competitiveness can be divided into four levels:

- corporate;
- regional;
- national;
- supranational level.

The corporate competitiveness means the competitiveness of each concrete corporation; the regional competitiveness applies to a given country's region. Otherwise, the regional competitiveness can also be construed as a totality of competitiveness of all the companies functioning in the area. The next category embracing the regional levels is the national level (LENGYEL, 1999). We can often find the naming 'macro-level competitiveness' in the essays about competitiveness of the countries (MEYER-STAMER, 2008). The competitiveness can be examined in case of the cross-border areas as well. By means of the different mathematical models describing the spatial structure of Europe, we can easily imagine the areas meaning a so-called meta-level. For example, the "boomerang" appearing in the middle of Europe may be known for many people. Certain authors define these cross-border areas as a regional level (GORZELAK, 1996).

## 2. Measuring the competitiveness with the aid of the pyramid model

The approach of competitiveness, including the regional competitiveness, increasingly appears in the European Union. The importance of regional competitiveness is even more highlighted by the cohesion reports published every three years as well as the regional periodic reports dealing with the regions purposefully. The regional politics has a continuously increasing role within the EU's policy, the most important purpose of which is to moderate the developmental differences of the areas, thereby strengthening the economic and social cohesion between the member states (FORMAN, 2001).

The European Union represents the competitiveness of the individual regions by the means of value of GDP (gross domestic product) per inhabitant. However, it is to be highlighted that the application of the GDP per head as an index-number measuring the competitiveness can lead to distorted results. It does not take the community role of the social relationships and households into consideration since effects of processes taking place here cannot be measured by instruments of economics. GDP is not able to denote whether the society has moved towards the appointed goals, and if so, what the extent of displacement is (DABÓCZI, 1998).

The models measuring the regional competitiveness can basically be divided into two groups. As a starting point, one group of the models uses a basic model built on benefits and the other one applies the input-performance-output triple structured system of Huggins. The competitiveness analyses built on benefits are basically of case study nature; these ones try to present the best practice. Porter's model presenting the competitiveness benefits of the nations is a good example which describes the expected development paths of nine countries based on four countries' success stories in the industry (PORTER, 1998). Essence of the input-performance-output models is the building on each other. The inputs determine the level of economic performance, the competitiveness. Growth of the economic performance and the increasing competitiveness help to increase the wages and to reduce the unemployment. Building of the model's elements on each other is illustrated by the following figure.
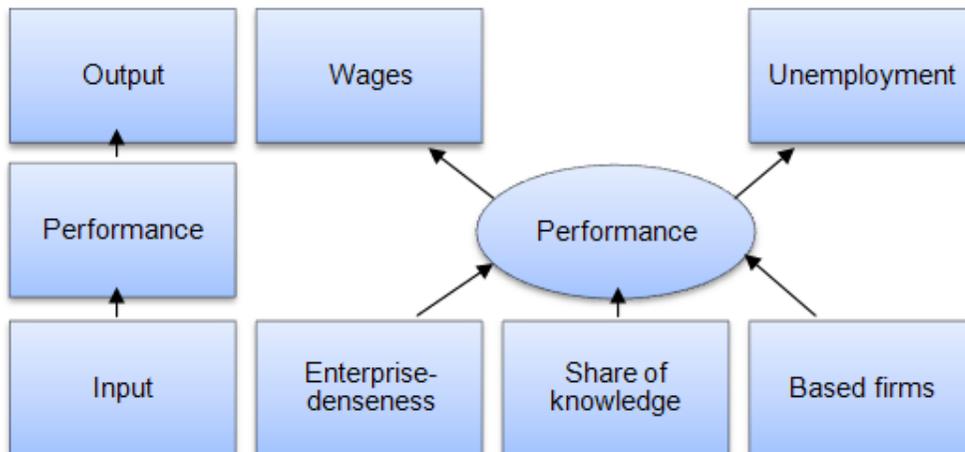


**Figure 1**: Logical structure of Huggins' input-performance-output model
Source: Own edition, based on (HUGGINS 2003).

The pyramid model, which I would like to delineate, belongs to the input-performance-output models and it is built on the competitiveness definition drafted by OECD (Organisation for Economic Co-operation and Development). It is about that "the

competitiveness is an ability of companies, industries, regions and supranational regions to create a relatively high factor income and a relatively high level of employment on a basis of sustainability, under international competitive conditions" (LENGYEL, 1999).
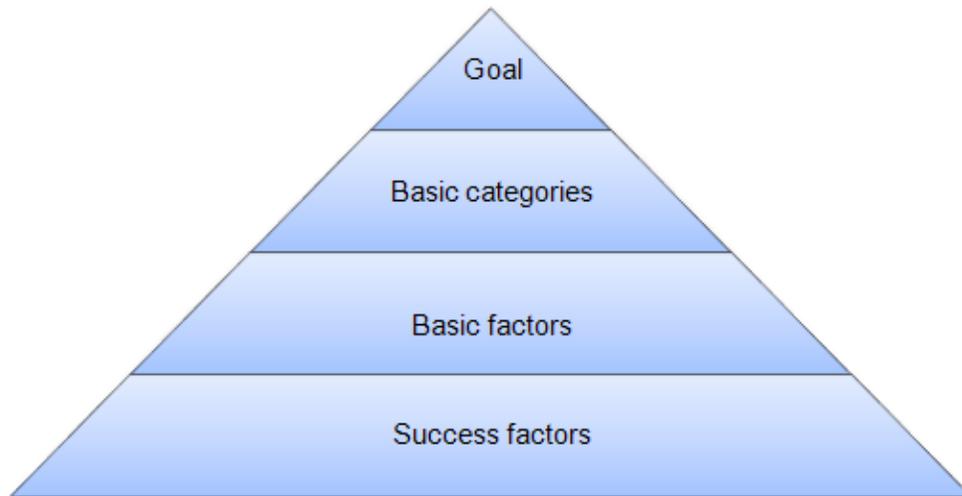


**Figure 2:** Structure of the pyramid model
Source: Own edition, based on (LENGYEL 2003).

Three basic categories meaning the competitiveness in the model are the income, the labour productivity and the employment.

In the EU's practice, the expression of the income generated in a region is performed through the regional GDP which means the primary income produced by firms having registered office, branch office in the region. However, the owners can take these incomes out of the region. For this reason, the income de facto available for the populace is more accurately determined by the regional NDI which is the total income realized for the people living in the region and having permanent residency (LENGYEL, 2003). However, the relevant regional statistics currently does not provide enough information to calculate the regional NDI.

In spite of the occasional distortions, GDP per capita is suitable for establishing the competitiveness sequence of the regions and it expresses the connection between the labour productivity and the employment in accordance with the uniform concept. There is an extraordinarily narrow connection between the regional GDP, labour productivity and employment meaning the basic categories, a change in either of them can cause a change in one of the other two categories.

At time of establishing the competitiveness sequence, the behind the values of different GDP per capita belonging to the individual areas should be investigated as well.

Five basic factors have an indirect effect on the competitiveness:
- the research and development;
- the organizational background of the region's economy;
- investments from the outside;
-  infrastructure and human capital;
- institutions and social capital.

New technologies, products, innovative solutions could be suitable for obtaining a competitive advantage for a corporation, enhancing the profitability of its activity, retaining or increasing its market share. Of course, the companies performing extended

researching and developing activities can improve the competitiveness of a given region. Beyond R&D activities, from aspect of competitiveness, role of the small and medium-sized enterprises is also significant by maintaining the employment primarily. An important indicator for the development of a region is the ability to attract capital. The functional capital arriving from abroad contributes to enhancement of the region's competitiveness by means of creating new jobs. Furthermore, the competition intensifies, stimulating the other managing organizations for effectiveness. Beyond the basic factors mentioned already, the region-specific infrastructure and human capital as well as the institutional system and social capital can also influence the competitiveness. Besides the technical infrastructure (transport, telecommunication networks), quality of the institutional system responsible for developing the human capital is much higher in the more competitive regions. Areas provided with similar factors can show significant differences in the competitiveness for the different operation of institutional system, due to the communicational effectiveness. Competitiveness of the institutional system is closely connected with the region's competitiveness, namely "the features of social organization such as trust, norms and networks" (EC, 1999).

The success factors mean the basis of model which influences a region's competitiveness in longer term through metastasises. Upper level of the success factors has a close connection with the basic factors – these are mainly aspects of economic nature: economic structure of the region; whether the servicing sectors producing high added-value are present; what kind of the innovation culture is. Beyond these, the following factors are decisive: the region's accessibility, geographical location, transport connections as well as availability of the adequate skilled labour force. Beside aspects of economic nature, the competitiveness "is also influenced by number of factors which represent aspect outside economic rather. Lower level of the success factors embraces these social-environmental-local conditions affecting the regional development for a long time period" (EC, 1999).

Overall, the pyramid model is a well-structured model depicting the coherences in a logical way. However, it is to be highlighted that measurement distortions can come into being at application of the model since the total group of the basic categories and basic factors cannot be measured accurately by means of the information available in the territorial databases.

**3. Presenting the relation between basic categories and basic factors the pyramid model through the example of Northern Great Plain region**
**In Hungary, the different level territorial units were already established at the end of the '90s, in accordance with the EU'S five-degree** NUTS (Nomenclature of Territorial Statistical Units) system allowing a uniform territorial ranking. The developed seven **NUTS 2-level planning-statistical regions have an outstanding importance because this level is linked to the whole supporting regulation and submitting conditions of the tenders for demanding support (KOVÁCS, 2000).**
GDP per capita means the basic category on basis of which the competitiveness sequence of Hungary is established. The available GDP per capita data show that each area of Hungary has been developing with varying degrees since the change of regime. The Central Hungarian region is developing above the national average, Central and Western Transdanubia are the most advanced among the rural regions while the Northern Great Plain and Northern Hungarian regions are at the end of the developmental sequence. This trend did not change in 2012 either as you can see on Sheet 1 below. Disadvantage of the regions lagging behind, therefore of the Northern Great Plain region is steadily growing, the GDP per capita was only 63.9% of the national average in 2012.

**Sheet 1:** Value and distribution of GDP by regions in 2012

| Regions | GDP, million HUF | Distribution, % | GDP per capita, thousand HUF |
|---|---|---|---|
| Közép-Magyarország | 13 795 721 | 48,32 | 4 681 |
| Nyugat-Dunántúl | 2 872 966 | 10,06 | 2 917 |
| Közép-Dunántúl | 2 740 682 | 9,60 | 2 543 |
| Dél-Dunántúl | 1 809 695 | 6,34 | 1 951 |
| Dél-Alföld | 2 521 801 | 8,83 | 1 951 |
| Észak-Alföld | 2 752 839 | 9,64 | 1 841 |
| Észak-Magyarország | 2 055 096 | 7,20 | 1 720 |
| Country in total | 28 548 800 | 100,00 | 2 878 |

Source: Own edition, based on (KSH 2015)

**Area of the Northern Great Plain region, which includes Hajdú-Bihar, Jász-Nagykun-Szolnok and Szabolcs-Szatmár-Bereg counties, is 17 729 square kilometres, its population is around 15% of the total national population thus this is the second biggest and simultaneously the most populous rural region of the country (BARANYI 2008). Intensive agricultural activities can performed on 60% of its area. Despite its advantageous abilities, it is in the next-to-last place of the regions' competitiveness sequence.**

Presentation of the features causing the Northern Great Plain region's competitiveness disadvantage happen based on (KSH 2015, pages 9-24). The source contains the most recent (regarding 2012/2013) time-serial annual statistical data of KSH, sorted by area.

According to the available data, 4 basic factors affecting the development will be presented henceforth:

- organizational background;

In Hungary, a powerful concentration characterizes the distribution of numbers of enterprises. Of course, the largest number of enterprises was and is present in the central areas. 34.17% of the more than 1 million 666 thousand profit-oriented enterprises had registered offices in the central region in 2013. The concentration is more powerful with regard to the joint enterprises; dominance of Central Hungary and the Transdanubian areas is even more evident. This degree of the joint enterprises' presence results in a high level specific economic performance. If number of the joint enterprises is extrapolated onto thousand capita then situation of the Transdanubian regions appears more favourable in comparison with Central Hungary.

Considering the main activity of the enterprises, the services sector is the most representative in each region; its measure is more than 80% in the Central Hungarian area. Most of the enterprises performing an industrial activity operate, in addition to the Central Hungarian region, in the Southern Great Plan regions and in the middle part of Transdanubia. 40% of the enterprises performing an agricultural main activity have their registered offices in the two mentioned Great Plain regions.

- capital investment from abroad;

Value of the foreign capital per capita shows significant divergences in respect of the individual regions. Far fewer foreign capital arrives in the less developed regions than in case of the Central Hungarian, Western and Central Transdanubian areas since the abilities of the less developed areas are far worse in respect of infrastructure, economy as

well as available labour force. In 2012, the capital stock arrived in the areas exceeded 18 trillion HUF, more than 60% of it operated in the enterprises having their registered offices in Central Hungary and 18.6% in the ones having their registered offices in the Western Transdanubian region. Share of the Northern Hungarian enterprises was 3.7% (KSH 2013a).

- transport infrastructure, human capital;

In our country, the most common mode of transport is the road transport in point of both passenger and freight transports. At the end of 2013, the length of the national road network was 31 760 km, its main part (23 160 km) was side-network. Road density of the main network is different by regions. With regard to network of the main roads, Western Transdanubia possesses the most favourable value, the motorway network is the most extensive in Central Hungary, fifth of the total network is concentrated there. Northern Great Plain has the shortest motorway section. Expressway can be reached within 10 minutes only from 14% of the Hungarian townships, more than fourth of these townships can be found in Southern Transdanubia. Based on data of 2012, less than 5% of the Great Plain townships lie in such a close distance from one of the expressways.

Beside the transport infrastructure, quality of a given region's human resources is extremely important as well. Within the population, rate of the people completed only the eighth class of the primary school or finished a vocational training school show significant territorial roughness. In the economically disadvantaged regions, their rate within the employees is well above the average, for example it exceeded the 45% in the Northern Great Plain region in 2012. We need to highlight that the rate of the people completed only the eighth class of the primary school (14.2%) is the highest in this region. In 2012, number of the people with higher education increased within the total population of Hungary, it was and 1.7 in case of those who have a high school graduation and 4.3% in case of those who have college or university degree (KSH 2013b). The growing was the biggest (8.1%) in Central Transdanubia and the lowest in Northern Great Plain (4.0%).

- research-development;

Measure of the sources on the research-development is another important indicator for development and competitiveness of a given area. Value of the researching expenditures calculated on current prices has been continuously increasing since the millennium, the amount sorted by regions was 414 741.1 million HUF in 2013. More than 60% of this amount has been spent on R&D activities in the Central Hungarian region. This is not surprising because the following things has a key role in forming the territorial differences of research and development: a given region's number of the enterprises performing innovative activities, development as well as researching activity of the institutional system for the higher education. In 2013, more than 50% of the research-development places with the most headcounts functioned in the Central Hungarian region. 9.58% of the research-development places operated in the Northern Great Plain region and number of the employees was 2624.

## 4. Summary, proposals

The persons dealing with theoretical and practical researching of the competitiveness defined the concept of competitiveness generally at corporate as well as natural levels. In the extending global competition, there is a bigger and bigger importance of conception definition and examination of the regional competitiveness.

During the past few years, models suitable for examining the regional competitiveness have been published in the specialized literature in large number. According to the pyramid model presented in this essay, in Hungary, sequence of the competitiveness was determined based on GDP per capita. The most recent available data regarding

2012/2013 show that the economic performance of the Northern Great Plain region is greatly lagging behind the more developed regions of Hungary. The Northern Great Plain region is one of the most disadvantaged regions of our country; it gets to grips with challenges for creating all conditions of the economic recovery so its capital attracting ability is extremely low. The lower wages and the main subventions are not enough attractive for the companies.

Significant part of the foreign enterprises arriving in the disadvantaged regions of Hungary are present as a so-called industrial transplant, they do not want to build up any connections with the Hungarian economy (IVITZ et al., 2014).

This temporality is symbolized by the fact that these enterprises mainly rent the area of activity, the production hall and even the labour force so they are able to move to another country in a short time in case of more favourable conditions.

The investment in innovation, the intensified support for developing the human resource and other non-material productive factors are required in order to increase the region's competitiveness. Such conditions need to be established in the Northern Great Plain region that are attractive for those large companies which wish to operate not just as an assembly plant but they want to build diversified connections with the companies thus they can become motors of the Hungarian economy.

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# SOCIAL POLICIES TO STIMULATE SOCIAL INCLUSION OF DISINSTITUTIONALIZED YOUTH IN THE ROMANIAN LABOR LAW SYSTEM

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**Abstract:** This paper aims to present social policies to stimulate social inclusion through employment of disinstitutionalized youth in the existing Romanian legal system in two main dimensions, namely: a first dimension that is designed to increase the employment opportunities for persons seeking a job and a second dimension that seeks to ensure the stimulation of employers(entrepreneurs) to hire this vulnerable group. The doctrine analysis and of the governing legislation, and also the conclusions of a focus group organized with specialists involved in this process have allowed at the end of the study the formulation of proposals for *lege ferenda*, to guide the legislator to perfecting the referred social policies, in particular to their application with real benefits to ensure social inclusion through employment of this socially vulnerable group.

**Keywords**: social policy, disinstitutionalized youth, social inclusion, active measures;

**JEL classification: A14**

## 1. Introduction

The term *social policy* designates "activities/actions carried out by/through the state (strategies, programs, projects, institutions, actions, legislation) whose purpose is to promote/influence the welfare of the individual, family and community in a society and welfare of society as a whole" (Pop, 2002: 598).

According to Law no. 292/2011 for Social Work, article 6 letter p, *the vulnerable group* designates "individuals or families who are at risk of losing their capacity to meet the needs of daily living because of disease, disability, poverty, addiction to drugs or alcohol or other situations that lead to economic and social vulnerability".

At the same time, the stipulations of Article 5 pct.IV[3] of Law no. 76/2002 regarding the unemployment insurance system and the stimulation of employment expressly include *disinstitutionalized youth* in the category of young people at risk of social exclusion, as a vulnerable group, for which there were developed a number of social policies designed to promote/affect welfare .

The phrase youth at risk of social exclusion, in the mentioned rules, understand the term as *the individual aged 16-26 years, who fulfills the requirements of Section IV (where the term unemployed is defined), the individual registers at the agency for employment of the jurisdiction he resides or, where appropriate, the jurisdiction of the residence and falls into one of the following categories:* the individual is in the child protection system or comes from this system; the individual has disabilities; the individual has no family or whose family can't ensure support; the individual has dependent children; the individual has executed one or more imprisonment; the individual is a victim of trafficking.

We believe that the analysis of legislation that stimulates social inclusion through labor of disinstitutionalized youth, in this case the rules of law contained in Law no. 76/2002 on the unemployment insurance system and stimulating employment, in Law no.

116/2002 on combating social exclusion, in Law no. 335/2013 regarding the internship for university graduates, and also Law. 279/2005 regarding apprenticeship at work, republished, must be preceded by general principles governing this matter.

These principles are found in both, the Labour Code and the Law. 292/2011 of Social Work, and are: the right to work and freedom of work (Article 3 Paragraph 1 of the Labour Code), equal treatment and non-discrimination (Article 5, Paragraph 1 of the Labour Code), social protection of employees (Athanasiu et al, 2007: 17,18) the principle of consensus and good faith (Article 8 Paragraph 1 of the Labour Code), the principle of social solidarity (Article 5 Letter a of Law no. 292/2011), the principle of activation (Article 5 Letter m of Law no. 292/2011).

**2. Policies to stimulate social inclusion through labor of disinstitutionalized youth by increasing employment opportunities for people looking for a job**

This category of social policies include, primarily, *active measures to increase employment opportunities for persons seeking employment, subjected to the dispositions of Article 53 of Law no. 76/2002 on the unemployment insurance system and stimulation of employment*, namely:

- *Information and counseling which* is a set of services offered to people looking for a job, services free of charge, as follows: providing them with information on the labor market and the evolution on occupations; assessment and self-assessment of personality for vocational guidance; the development of the ability and self confidence of people looking for a job, in order to enable them to make decisions regarding their career; training methods and techniques in finding a job (presentation at interview, compiling a CV). (Article 58 of the Law no.76 / 2002).
- *Mediation of labor* means services of linking employers with people looking for a job in order to determine employment.

County agencies for employment are required to identify vacancies and make them known to the individual who is looking for a job. Participation to mediation services is mandatory for the unemployed receiving unemployment benefits.

In pursuit of measures to boost employment, employment agencies are required to prepare for each person looking for a job, *the individual mediation plan*.

- *Proffesional Training.*

Individuals seeking employment can participate in training programs to ensure their growth and diversification of professional skills in order to ensure mobility and labor market reintegration.

The training programs provide, by law, initiation, qualification, training and specialization of individuals looking for a job, they are offered the possibility of acquiring specific theoretical and practical knowledge of new jobs that increases their chances of employment. (Article 63 Paragraph 2 of Law no.76 / 2002)

*Forms through which the training is done* are: courses, internships and specialization, and other forms according to the law.

Access to training programs is through the work of professional information and counseling or mediation (Ţiclea, Georgescu, 2013: 121).

Vocational training programs for individuals seeking work is organized distinctly on levels of training and specialization, as well as categories and groups. (Article 64 of the Law no.76/2002)

- *Assessment and certification of professional skills in other ways than formal*

In order to certify professional skills acquired in other ways than formal, individuals referred to in Article 66 Paragraph (1) registered at employment agencies can receive, free of charge, service evaluation and certification of vocational skills acquired in other ways

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than formal, whose funding is provided from the unemployment insurance budget, *one time for each period when the individual is looking for a job.*

They can enter, free of charge, in the assessment and certification of vocational skills acquired in other ways than formal, only individuals who obtain professional competence assessor recommendation. People who do not get the recommendation referred to above and decide to enter the evaluation process itself with competent units for which they have not obtained this recommendation, support the equivalent of this. (Article 70[1] Paragraph 3, 4 of Law no.76/2002)

▪ *Advice and assistance to start an independent activity or starting a new business*

This service is provided to individuals who are seeking employment, at their request, in the *form of legal, financial or investment advice*. Services may be given by both, the county Agencies for Employment and other private companies, professional organizations, foundations and specialized associations, with whom the agencies have contracts under the law. (Article 71 paragraph 1 of the Law no.76/2002)

▪ *Completing the wages of employees*

Thus, according to the law, individuals who have been established the right to unemployment benefits, after the termination of employment relationships and are hired and working normal hours, and therefore because of employment, it ceases to pay unemployment benefits, they benefit until the end of the period for which they were entitled to unemployment benefits for a monthly amount, given by the unemployment insurance budget, representing 30% of the unemployment benefit, determined and, if necessary, updated in accordance with the law (Article 72 paragraph 1 from the Law no.76 / 2002).

Individuals who don't benefit from these dispositions: persons who are hired by employers who they were in employment relationships in the last 2 years and those for which the payment of unemployment benefit has been suspended pursuant to art. 45 paragraph 1 letter c and subsequently, following a change in the individual employment contract duration, the paying of unemployment benefits ceases pursuant to Art. 44 letter a.

The persons referred to in the preceding paragraph receive this amount, and when, in the period for which they are entitled to unemployment benefits, the employment relationship is terminated with their first employer and fits, full working hours, within 30 days at another employer.

At the same time, graduates of higher educational institutions and special schools graduates, aged 16 or over, registered at employment agencies, if they engage in full-time for more than 12 months, they benefit, from the unemployment insurance budget, for a premium equal to the framing reference social indicator in force on classification (art.73[1] par. (1) of Law no. 76/2002 with subsequent amendments).

Graduates who were entitled to unemployment benefit established and engage in during the period of the incentive, with full hours of work benefit, from the unemployment insurance budget, an amount equal to the unemployment benefits to which they were entitled, under law until the end of the period of it, if they didn't get hired.

These rights are granted to graduates who retain employment relationships for a period of at least 12 months of employment.

Who don't benefit from these dispositions (Art. 73[1] paragraph 5): graduates who after graduation had employment relationships; graduates who are hired by employers who were in employment relationships in the last 2 years; graduates who at the time of the request are in a form of education; graduates of educational institutions to which employers are required by law to have employment; graduates for which the unemployment benefit payment was suspended pursuant to Art. 45 para. (1) letter c) and latter, as a result of changing individual labor contract duration, the payment for unemployment benefits ceases pursuant to Art. 44 letter. a).

People who benefit from employment incentive equal to the first social reference indicator in force on classification referred to in paragraph (1) have the right to maintain the premium granted and where, in the 12 months of employment, the employment relationship is terminated to their first employer and falls, within 30 days, to another employer, given that employment at the second employer is performed under the same conditions, i.e. full-time for more than 12 months.

- *Stimulation of labor mobility*

*For people receiving unemployment benefits (including young people) who are employed at a distance greater than 50 km of residence*, the law provides for a *first employment* which is equal to twice the value of the social reference indicator in force on the date of grant. (Article 74)

For people who have found a job in another town and as a result, *moving house/changing house*, the law provides for them to benefit from a *first installation,* equal to seven times the reference social indicator, in force on the date of installation.

If their (the people above mentioned) *employment relationship terminates before reaching a minimum of 12 months, they are required to repay the amounts received.*

*First employment* and *first installation* called *mobility incentives* are granted on request, including *long-term unemployed* registered at employment agencies, *who do not receive unemployment benefits.*

First of employment does not stack with the first installation.

The mobility incentve is for people who employ for a period of *at least 12 months*.

Also, following the amendment and completion of the Law no.76/2002 by *Law no. 250/2013, the enactment mentioned includes express dispositions, specific (special) on promoting labor market participation of young people at risk of social marginalization.*

Article 93[1] of the enactment expressly lists the ways to ensure the promotion of labor market participation of young people at risk of social exclusion, including disinstitutionalized youth, namely, social custom accompaniment; outreach and advocacy of young people at risk of social exclusion among employers; subsidized jobs.

Among these measures, the first two categories are designed to provide increased employment opportunities for persons seeking employment.

- *The customized social accompaniment* is performed by the National Agency for Employment through territorial employment agencies under a solidarity contract, and is a set of services that are granted free for young people at risk for social marginalization and consist of: information and counseling; labor mediation; work placement with an employer whose offer of employment has been selected as suitable for the training they have and other conditions contained in the registration dossier as a person looking for a job, at an agency for employment. (Article 93[2] paragraph 1)

The solidarity contract referred to in paragraph (1) shall be concluded between the Agency for Employment and the young individual for a period of up to 3 years, but no less than a year, given that, at the signing of the solidarity contract, the age of the young individual is under 26.

- *Information and promoting the interests of young people at risk of social exclusion among employers*

Under the provisions of art.93[3] of the Law no.76/2002, information activities and promotion of the interests of young people at risk of social exclusion among employers in the labor market integration of these individuals, aims to: promote awareness and the law among regional actors, local and social partners; dissemination of information on the benefits of employment for these individuals; direct interaction with employers who have vacancies; identifying insertion employers.

**3. Policies to stimulate social inclusion through labor of disinstitutionalized youth by stimulating employment for employers**

This category of measures primarily includes those contained in the text of the Law no. 76/2002 in respect of:

  ▪ *Subsidized employment*

Stimulating employers to hire the unemployed is achieved primarily through subsidized employment. The main condition set by the law in this regard is the employment of categories of unemployed that the law mentions for an indefinite period, individual employment contract can be in any form permitted by law, noting facilities granted in proportion to the actual time worked (Oprea , 2012: 36).

The grant is a monthly amount granted for a period of 12 months for each graduate employed by the employer for an indefinite time (Article 80, Law 76/2002).

If they employe on indefinite time, graduates among people with disabilities, employers receive for each employee for a period of 18 months, the amounts provided above, according to each individual's education (Article 80 paragraph 2). Employers are exempted same period of paid contributions to the unemployment insurance budget, related to the graduates employed.

During the 18 months, graduates can pursue a form of training organized by the employer, under the law and the expenses will be borne, at the request of the employer, by the unemployment insurance budget.

Employers who hire graduates in the specified conditions are required to maintain employment relationships or their service at least 18 months after their conclusion.

In the doctrine (Oprea, 2012:43) the following idea was expressed: that the employee shall repay aswell the benefits received and if termination of employment or service occurred earlier than 12 months: following the execution of a sentence of imprisonment; due to the prohibition to practice a profession or function, as a safety or additional penalty; as a result of disciplinary dismissal; following the resignation; following dismissal in case the employee is in custody for a period exceeding 30 days; by law, the official was dismissed from public office.

In case of professional inadequacy, physical and/or mental inaptitude of the employee, the employer and the employee will not refund the amounts received.

Employers who employ, according to the law, unemployed individuals whom, within 5 years from the date of employment, meet the law, the conditions for requiring partial early retirement or for the granting of old-age pension, if they don't meet the requirements to ask for the partial early retirement, benefit monthly, on employment, until the conditions in question are met, an amount equal to the reference social indicator in force, given the unemployment insurance budget.

Employers who employ, for an indefinite period, unemployed aged over 45 or unemployed single parent of single parent families, receive monthly over a period of 12 months, for each person employed in these categories, an amount equal to value of the social reference indicator in force, with the obligation to maintain employment or service relationship for at least 18 months.

The facilities listed, except the exemption from contribution to the unemployment insurance budget, owed by the employer for those individuals, employers benefit in relation to the number of employees, fulfilled their obligation, under the law, to give employment to people with disabilities, and employers who do not have this legal obligation, whether they employ disabled people for indetermined duration and keep them for employment for at least 2 years.

Employers who terminate employment relationships within 18 months, are required to repay, in full, to employment agencies the amounts for each person who ceased employment relationship previous to the 18 months period, plus interest reference to the

National Bank of Romania in force on the date of termination of employment, if it was terminated for the reasons referred to in art. 83 para. (2). Also, in such a situation, employers can no longer benefit from a new grant from the unemployment insurance budget for a period of 2 years from the date of termination of employment (Article 85 ^ 1 of Law no. 76 / 2002).

- *Providing loans on favorable terms to create new jobs;*

To create new jobs through the establishment or development of small and medium enterprises, cooperative units, individual enterprises, family businesses and independent activities carried out by authorized persons may be granted from the unemployment insurance budget, loans on favorable terms.

Loans are granted based on the feasibility projects, proportional to the number of jobs to be created, for a period of up to 3 years, for investment, including a grace period not exceeding 6 months or a year to ensure production, with an interest rate of 50% of the reference rate of the National Bank of Romania.

Individuals who benefit credits, under the law, with the same interest rate those aged up to 30 years old, who have student status for the first time and attend classes full time at a state or private institution of higher education, authorized or accredited under the law.

These loans are granted to students who set up or develop, individually or together with other students who meet the requirements of the law, small and medium enterprises, cooperative units, individual enterprises, family businesses or pursuing an economic activity as authorized person.

The beneficiaries of granted loans under the above mentioned conditions must satisfy the *following conditions* (Article 86 paragraph 7): to have more than 249 employees and/or cooperative members with employment relationships; core business is carried out in production, services or tourism; at least 60% of the new jobs created by the establishment or development of small and medium enterprises or cooperative units to have employed staff from among unemployed registered at employment agencies; staff employed activity is maintained for at least 3 years; jobs considered in granting loans are not vacancies resulting from the termination of employment of employees in the 12 months prior to the conclusion of the credit agreement.

- *Granting of facilities*

Employers who employ people from unemployed category for a period of at least 6 months, *pay unemployment insurance budget by 2.5% less*. "Reducing contribution is given as of the next fiscal year, for a period of 6 months, and it is to reduce the amount due, monthly, by 0.5% for each percentage of the share of the new hired staff, as provided in paragraph 1, the average number of staff employed under individual contract of employment, in that year. "(Article 93 paragraph 2 of Law no. 76/2002).

Also, the Romanian legislator adopted in 2013 a special regulation which provides subsidized employment for higher education graduates. Thus, under article 28 of Law no. 335/2013 regarding the internship for university graduates, employers who enter into a internship contract in terms of the enactment mentioned, receive monthly at their request, from the unemployment insurance budget, during the contract period, for that trainee internship, an amount equal to 1.5 times the social indicator references of unemployment insurance and employment stimulation, from the funds allocated for this purpose. The amount mentioned is not given to employers from public institutions and authorities, it is granted only to private sector employers (Moarcăş Costea, 2013:107).

It is given to employers proportional to the actual time worked by the trainee and the employer can not receive double funding for the same person.

But if after the completion of the internship contract, the employer ceases the individual employment contract of the person concerned, the employer can not benefit anymore for the same post, another measure to stimulate employment, provided by law.

At the same time, this category also includes policies subsidizing employment for individuals employed under a contract of apprenticeship in the workplace.

The rule of law which includes such a provision in its content is Law. 279/2005 regarding apprenticeship at work, republished.

Thus, under Article 4, paragraph 1 of the enactment of the dispositions mentioned, the apprenticeship contract work is an individual contract of employment of a particular type, fixed-term ended, under which a person, called apprentice undertakes to prepare professional and work for and under the authority of a legal or natural person, called employer who undertakes to ensure the salary and the conditions necessary for training.

An employer who enters into a contract of apprenticeship in the workplace, can receive monthly, on request, from the unemployment insurance budget, during the contract of apprenticeship, for that disciple, an amount equal to 60% of the social reference indicator from the unemployment insurance and stimulation of employment (Article 15 paragraph 1), which is granted in proportion to the actual time worked as an apprentice, and for the period of annual leave of the disciple.

Who won't benefit from this disposition: employers who prior to the signing of the contract of apprenticeship in the workplace, have had with the person another apprenticeship contract work signed (Article 16).

Employers who benefit from those facilities are required to maintain their employment relationship during apprenticeship contract.

If the disciple does not get the second time the certificate of competence, adequate of all proffesional occupations of those specific professional skills or qualifications, in accordance with standard employment or training standard, the employer is obliged to return the whole proceeds, to the county employment agencies or the one in Bucharest, received from the unemployment insurance for that disciple, plus the reference rate of the National Bank of Romania in force on the date of the second decision of the Commission assessment, issued according to the law (Article 18 paragraph 2).

Also, if the contract of apprenticeship employment is terminated before the date specified in the contract, the employer is obliged to reimburse the county agency for employment, respectively the one in Bucharest, proceeds from the unemployment insurance for that apprentice plus the reference rate of the National Bank of Romania in force on the date of termination of the contract of apprenticeship, if its termination has occurred for the following reasons: following the agreement of the parties, the date agreed upon by them; following the finding of nullity of the individual labor contract, the date on which the invalidity has been established by agreement or by final judgment (termination of contract); by dismissal for reasons not related to the employee.

For these amounts returned, the employer has the right of recourse against the disciple who maliciously or negligently failed to fulfill its obligation under Art. 14 letter b), namely to participate in the evaluation process and to make all necessary efforts to obtain the certificate of professional competence (Article 18 paragraph 4).

As mentioned above, following the amendment and completion of the Law no.76 / 2002 by Law no. 250/2013, the enactment mentioned includes express dispositions, specific (special) on promoting labor market participation of young people at risk of social marginalization of the final measure, it is intended to stimulate insertion employers which conclude in solidarity constracts.

Thus, they receive monthly, from the unemployment insurance budget for each person in this category, an amount equal to the basic salary set at the individual's

employment, but not more than twice the reference of the social indicator, in force at the time of employment until the expiry of the solidarity contract (Art. 93[4] para 1).

Employers who terminate the employment contracts of young people at risk of social marginalization, before the end of the period of the solidarity contract, for the reasons set out in art. 83 para. (2) a) are obliged to repay in full, territorial Employment Agencies proceeds from the unemployment insurance budget for every young person at risk of marginalization for which the employment relationship is terminated before that date, plus the interest rate referenced by National Bank of Romania, in force on the date of termination of service.

To receive the aforementioned amount, legal dispositions set out a number of conditions, namely:

- employment is made as provided by Law no. 53/2003, republished, with subsequent amendments, i.e. the Labour Code, under an individual contract of employment for a fixed period, until the expiry of the contract of solidarity, or an individual employment contract of indefinite duration;
- the job that is young individual is placed in is a vacancy, which was communicated to the territorial Employment Agency;
- other conditions are met as prescribed by law, established according to Article 95, for granting this amount.

Also, if at the expiry of the period for which the solidarity contract was concluded, the insertion employer maintains employment relationship with the young individual who was hired in terms of Article 93[4], then they benefit monthly, under the law, for this person, from the unemployment insurance budget, a sum amounting in 50% of unemployment benefits, due under the law, that the young man would have received if the employment relationship should have been ended at that date for reasons not attributable to the person. The amount referred to in Paragraph (1) An employer shall receive during the contract, but not more than 2 years. (Article 93[6] of Law no.76/2002)

## 4. Conclusions and *lege ferenda* proposals

In conclusion, we note that in the Romanian legal system there are a number of legal dispositions, some general, set as active measures addressed to individuals seeking employment and also for employers, more specifically intended for young people at risk of social marginalization, category in which disinstitutionalized youth are included.

As shown in the presentation, we structured the identified social policies in two dimensions, namely: a first dimension refers to measures designed to increase employment opportunities for people looking for a job and a second dimension that refers to measures aimed at stimulating employment for employers. Noting that the largest share of returns comes from the second dimension, the legislator grants important measures addressed to employers, however we believe that it is necessary to consider whether they are aware of the existing dispositions, if they use them and which would be grounds for not accessing these opportunities that exist.

Based on the existing legal dispositions and in accordance with the proposals resulting from a focus group organized with specialists who are involved in the proccess of social inclusion of disinstitutionalized youth, we consider as a necessary legislative intervention in this area for:

- Adopting legislation to encourage employers through various financial measures (subsidies, tax exemptions, etc.);

- Regulation of the obligation for employers to hire a certain number of young people from the disinstitutionalized youth category, similar to the dispositions in Article 78 Paragraph (2) of Law no. 448/2006 on the protection and promotion of rights for disabled persons, namely:

"The authorities and public institutions, legal persons, public or private, with at least 50 employees are obliged to employ disabled individuals (people from the disinstitutionalized youth category) at a rate of at least 4% of the total number of employees"

If, however, this requirement is not met, the authorities and public institutions, legal persons, public or private can choose to fulfill one of the following two requirements (according to Article 78 Paragraph (3) :

- To pay, monthly, to the state budget an amount representing 50% of the gross minimum wage in the country, multiplied by the number of jobs they have not hired people with disabilities;
- To purchase products or services from authorized protected units, based on partnership, in an amount equivalent to the amount owed to the state budget as provided in subparagraph a). ".

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# PUBLIC PRIVATE PARTNERSHIP OFFERS NO MAGIC SOLUTIONS, BUT A METHOD FOR RESOLVING COMMUNITY NEEDS.

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*Public-private partnership (PPP) is considered an important tool in financing public sector investments, its purpose being to provide more capital to invest in the most efficient manner.*

*PPPs development has become more important as the economic and financial crisis has challenged the ability of the public bugets to raise adequate financial means and to allocate resources to specific projects. Local governments agree with the participation in realization of PPPs, which leads to increased efficiency, a shorter implementation and a value of the provision of services as large as possible. The advantages of implementing concern: appropriate sharing of risks and responsibilities; mainly public sector retains sovereign powers and the private sector has tasks requiring the implementation; private investment lifecycle as decisive elements of the forms of stimulation of PPP is long; it provides a long-term contractual relationship and offers innovation, in particular by specification of results, level of service and payment mechanisms .*

*In the Member States of the European Union, the adoption of public-private partnership was made differently from one sector to another and from one country to another. At this point one can distinguish three types, namely: " Advanced PPP adopters" with very important projects in the transport sector (road, rail) and in the construction of public buildings and equipment (schools, hospitals, prisons ) but also in the environment sector( water / waste treatment, waste management ); "Medium PPP adopters ", with projects completed or under execution and excellent results in the transport sector; " PPP adopters at a low level ", where PPP is lacking in all sectors and is in a preliminary stage of adoption. Great Britain, Spain and Romania are three countries and at the same time three levels of adopting, corresponding to the three types of PPP adopters.*

*Although the partnership is thought as one which must bring benefits to both parties involved in the implementation, it can happen that the Partnership and Cooperation effort to fail. Reasons for failure may be due to several reasons, including the lack of an adequate legal framework, which restricts the possibility of the government to engage in forms of partnership with the private sector or the lack of mutual understanding of the specific sector of the government and the private areas.*

## 1. Introduction

"Geography has made us neighbors. History has made us friends. Economics has made us partners and need ... made us allies. Those whom God hath joined man should not separate." John F. Kennedy. (Ton A. C. 2014)

Public private partnership (PPP) is a method of cooperation between the private sector (ie companies, NGOs, business associations), and a public authority in order to realize a profit that may lead to economic and social development of communities to meet the needs of people of that community. European Commission, which enshrined this notion by the

Green Paper on Public Private Partnerships (2004), considers this type of partnership as a "cooperation between public and private entities that involves the establishment of a joint venture entity that implements public contracts or concessions." (Chamber of Commerce, Industry and Agriculture Galati 2007-2013).

Public-private partnership is considered an important tool in the public sector in order to provide more capital to invest in the most efficient manner.

It can be an effective means to deliver infrastructure projects, to provide public services and innovation generally in the context of economic recovery efforts.

In some cases, PPPs involve the financing, design, construction, renovation, management or maintenance of an infrastructure. "While the combination of real growth of services demand and scarcity of resources of a public authority requires finding a feasible alternative to provide the service, it is important to note that a partnership of a public Authority with the private sector is viewed as an effective way to doing business. Services, whether public or private, are best delivered by professionals working other than in-house employees who are concerned only with the operating or focus only on a few goals. Partnership is used only as a reaction to a decrease in resources of the Public Authority". (Paul Andreea Maria 2009).

Patrice Noisette defines public-private partnership as "an association of decisions and public and private funds within the same system of action, with the objective to satisfy both the expectations of consumers and citizens ." (Noisette P. 1994; 261-282)

This definition stresses the guarantee recognition and solidarity of objectives of proportional sharing of risks and remuneration and permanent adaptation of public and private sector activities in the environment.

Starting from these considerations, it can be said that public-private cooperation offers several advantages, most obvious being: accelerating the achievement of objectives and planned infrastructure projects; conjugation of taking over of responsibilities and risks of the private sector layoffs; prompt public sector services and making payments; reduce overall project costs; stimulating their contractual obligations; improving the quality of public utility services; improving public sector management through exposure of services to the rigors of competition.


**2. Research Methodology**


The paper combines qualitative and quantitative research, using specific methods, document analysis and content analysis. To achieve the objectives we turned to a series of bibliographical sources consisting of books, accounting regulations, tax and legal studies and articles published in various national and international bodies in the field. To this end, we collected data from the European Commission, the European Investment Bank (EIB), the European Commission, Institute for Public Policy Bucharest (IPP), Chown Dewhurst (Independent UK and International tax advisers ) in order to realize an analysis of the level of achievement of the EU Public Private Partnership .


**3. The results of research**

At EU level, the concept of Public Private Partnership is defined as cooperation between the private and public sector for the purpose of ensuring funding for key projects aimed at achieving common goals, such as promoting alternative energy sources, energy efficiency and efficient use of resources, climate change response , sustainable transport, providing high quality and affordable health services, and achieve significant research projects such as the Joint Technology initiatives designed to give Europe a leading role in strategic technology. According to the report commissioned by the German Federal Department of Transport Construction and Real Estate Service "the term Public Private Partnership"

refs to a long-term cooperation regulated by contract between the public and private sectors, for the effective discharge of public duties by combining resources needed (eg knowhow, operating funds, capital, personnel) and by partners and the distribution of the duly existing project risk, in accordance with risk management competence of project partners." (South East Europe 2013: 4 )

In world practice we define three models of partnership, namely:

**The French model** which involves reorganizing businesses, depicting a construction of relations between business and the government in which municipal property the engineering infrastructure objects is maintained. Their management is performed by business representatives on a contract basis.

This model is called the "French model" since it was initiated in France, being the first country that made public-private partnership in various forms since ancient times. Currently, it can be found in many countries especially in developing countries. It is a way to form, based on competition, partnerships between business and power, wearing different forms.

The main feature is that power does not take a direct part in the management itself. By indices formulated as objective and by the monitoring system, business representatives are obliged to operate contract tasks, and in case of violation and failure of pre-established indices they may take measures to correct the situation. The advantage of this model is the fact that it brings sufficient investment in the system and minimizes the risks.

**The British model** aims at the privatization of objects, ie their conversion into privately owned companies. In the water supply field this system has been widely used in two countries: the United Kingdom and Chile. The essence of the model is to privatize communal sphere of fixed assets by the private structure and to remove it of local government responsibility for the provision of utility services. In order for this method not to lead to "*natural monopoly*", tariffs for communal services are coordinated by government institutions. This model was applied in the city of Tallinn since 1990.

**The German model** consists in transforming municipal enterprises in areas such as service supplies of water supply and sewerage and thermal power sector into joint stock companies, the controlling stake or 100 % of the shares belonging to the municipality.

In this case the founder forwards all the infrastructure of the company as part of the statutory fund. Although fixed assets fall within the statutory fund of the company, local government remains the main owner. The disadvantage of this model is the fact that it is not based on a real entrepreneurial activity and does not solve the main problem of creating an efficient management.

Control is exercised by the local government, which lacks sufficient funds and private business is not interested to invest in such conditions: power and business interests are different. This model aims at improving the quality and accessibility of power utilities while business representatives expect immediate benefits and profits.

In Germany funds for reconstruction and modernization of housing are offered as grants or loans from the state budget , the cost of which is very small.

This way there have been materialized the four main characteristics of public-private partnership:

• Increase efficiency by appropriate sharing of risks and responsibilities; mainly public sector retains sovereign powers and the private sector has tasks requiring the implementation;

• private investment lifecycle as decisive elements of the forms of stimulation of PPP is long; provides a long-term contractual relationship; and

• provides innovation, in particular by specification of results, level of service and payment mechanisms, as a new way of describing the services to be provided.

In the Member States of the European Union, the adoption of public-private partnership was made differently from one sector to another and from one country to another. At this point one can distinguish three types, namely:

• "Advanced PPP adopters" which occur in countries such as France, Britain, Germany, Italy and Ireland. Here there have made very important projects in the transport sector (road, rail) and the construction of public buildings and equipment (schools, hospitals, prisons) but also in the environmental sector (water/waste treatment, waste management).
• "Medium PPP adopters" in countries such as Portugal and Spain , with many projects completed or under execution and excellent results in the transport sector. However, other areas are experiencing serious difficulties, requiring a legislative revival
• "PPP adopters at a low level" (the last coming in the field), in countries that are still trying an approach to public-private partnership, Romania, Bulgaria, Luxembourg and Sweden. It is lacking in all sectors and it is in a preliminary stage of adoption.
Most EU member states have either limited experience of PPPs or none at all. Others, such as the UK and Ireland have created specialized departments or use traditional instruments for developing partnerships. In Belgium we meet different levels of their adopting, medium in Flemish Region while in the Walloon Region we meet a low level. In Greece we also meet higher levels of public private partnership (Athens International Airport , transport, sport and entertainment) while in other areas the partnership is nonexistent.
In the Seventh Framework Programme for research in technology, it has been introduced a new type of PPP European level programs. This new instrument was created to promote European research in fields where the objectives are of a very large importance and the classical instruments proved insufficient. Joint Technology Initiative (JTI) was conducted under Article 171 of the EC Treaty, which allows Community joint ventures to achieve properly the Community programs of research , technological development and

demonstration programs. (Catana Emilia Lucia 2007: 6). "This will allow mobilization of private and public investment for recovery and structural change in the long term." (Mihai Petrescu 2010: 56)
The first ITCs have been developed for five areas: innovative medicines, aeronautics, fuel and hydrogen cells, nano-electronics and embedded computing systems. The JTIs have very large total budgets ranging from 1 and 3 billion EUR amount that can be used by 2017.
In three of ICT 's (innovative medicines , Clean Sky, Fuel and Hydrogen Cells (electrochemical system that converts chemical energy into electrical energy)), public resources are made only from Community funds, provided only by ITC budget , while for the other two ICTs, ARTEMIS (nano) and ENIAC (embedded Computing Systems), resources are combined with funds of the participating Member States or countries associated to the Seventh framework Programme. Contributing partners on projects in which they are involved is taking place "in goods" . Both partners the public and the private , contribute to the running costs (administrative) of the ITC .
Worldwide, according to data published by the OECD (Organization for Economic Co-operation and Development), total PPP projects total nominal value in US dollars and continents, between 1985 and 2011 are shown in the following chart .

**Chart 1:** The proportion of the total amounts of PPP projects by continents in the period 1985-2011

The proportion of the total amounts of PPP projects by continents Percentage

- Europe — 46%
- Canada — 6%
- United States of America — 9%
- Asia and Australia — 24%
- Africa and Middle East — 4%
- Mexico, Latin America and the Caribbean — 11%
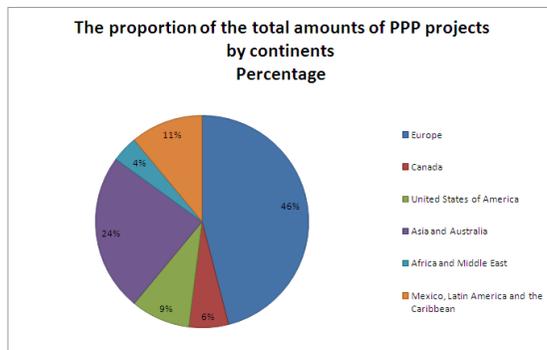
Provided by authors; source: Istrate & Puentes, 2011

As may be noticed, Europe PPP projects dominate the market with 46 % of the world. The first private finance initiative contract was implanted in 1992 in the UK. Europe is followed by Asia and Australia with 24%. US recorded a 9% share of the total global projects realized, recording a total of 377 type PPP infrastructure projects. Mexico, Latin America, the Caribbean recorded 11% Canada 6 %, while in Africa we find the lowest rate of 4 %. Middle East, although it is a global business center yet the most sensitive area of the world in terms of strategic, political, economic and cultural point of view, contains only 4%.

**Great Britain, Spain and Romania** are three countries and at the same time three levels of adopting PPP, corresponding to the three types of PPP adopters. That was why I selected them for this study.

*Great Britain* is the second country to adopt public-private partnership. Public Private Partnership projects were introduced in 1992 and have been grouped under the name of Funding by Private Initiative (PFI), an institution that belongs to the Ministry of Finance . Extensive experience in this field makes preparing a major PPP contract to last about a year, at the end of which it is achieved the ultimate goal of PPP: "Value for money" (value for funds invested). Public-private partnership followed a long way in the UK in 2013, a total of 935 PPP projects being carried out with total amounting to 66 billion pounds. According to remarks made by Brian Davies 88% of PPP contracts in the UK end prematurely and cost overruns in 21 % of cases can be made to the private company, if they do not have  absolutely objective reasons . ( Alexandru Marinescu , 2010: 227-228 ).

English higher education institutions are independent bodies, part of the private system. However, they receive significant amounts of public funds the proper administration of which is a liability to the Higher Education Funding Council of England and, ultimately, to Parliament. In 2011 in the UK it was launched a grandiose project for the construction of homes for PPP students (Falmouth College of Arts- FCA). It was designed. built, financed and operated by Sanctuary Housing Association (SHA) , as a private partner for a period of 25 years. Risks related to empty properties is assumed by FCA and the financial risk too. FCA pays predetermined amount SHA, students also contributing with a reasonable amount. Another impressive PPP project is carried out in the UK waste management. In 1998, Kirklees city, town lacking space in landfills, has adopted a strategy and waste management. In this regard it was signed an agreement with United Waste Services Limited (UWS) in order to provide integrated solutions for waste management. The parties have created the project company Kirklees Waste Service Limited, which was required to reduce by 60% the waste meant for the landfills by recycling, reuse or energy recovery. Investment by UWS was worth 41 million pounds, for which it received a government loan

of 33 million pounds. It should be depreciated by charging a fixed fee for the entire duration of the contract.

**Spain** PPPs were first adopted in the mid 90s, even though similar types of public-private arrangements have been also used in the 70 and 80s to build highways. The first railway that connects Madrid to Seville was built in 1992 entirely with funds from the EU and from the government. The focus on infrastructure was great, as demonstrated the PPP Infrastructure Plan developed by Aznar government between 2000 and 2007. It has provided a total investment of 103 billion Euros by 2010 for the development of railway and road construction. PSOE government approved a plan for 2005- 2020 which continues to give priority to the railway construction in the detriment of road construction. PPPs were developed in the health sector: Madrid Nuevas Infraestructuras Sanitarias 2007 designed nine new hospitals in Madrid.

But until now, only the project for a hospital was launched in 2004 with a 30-year concession for the construction, commissioning and maintenance of the project. If this reaches its goal, the program will be implemented in other areas of the country.

Despite the successes described above, the expansion of PPPs in other sectors is not quite accelerated. For example, the national water management project was abandoned by the new government due to strong environmental opposition, being replaced with projects that target the construction of desalination plants. Drawbacks observed in the implementation of PPPs in Spain are related to project financing.

Access to international capital markets is rather limited due to the dominance of local actors. The existing legislative framework is not very clear regarding the rights of the parties, if problems arise during implementation.

**In Romania** financing infrastructure projects through partnership is possible due to legal regulations that have been issued since 2002. They have allowed local authorities to know the peculiarities of public-private partnerships as a way to support local development generally and faster and effective settlement of local issues of public interest.

The success of achieving partnerships between public sector organizations and the private one is not due only to the specific characteristics of this approach, but it depends mainly on the intensity of cooperation relations between government and business representatives locally.

In developed countries, a significant role in the development of public-private partnerships do not have only the parties directly involved in the partnership contract , but also some local and central institutions holding a significant responsibility regarding the establishment of partnerships between the public and private sectors.

The most interesting PPP projects, at the level of intent yet, are targeting the areas of health, construction, infrastructure, IT , transport and energy. Maramures County Council plans to expand and modernize the airport in Baia Mare (estimated 44 mil. Euro), but also to build a concrete bridge over the river Tisa and road infrastructure linking the border crossing checkpoint in the Sighetu Marmatiei-Slatina (Slotvino) Ukraine (estimated 11 mil. Euro).

In the field of IT, Ministry of Justice plans to achieve Integrated Information System for Electronic Access to Justice (SIIAEJ), which will provide litigants the opportunity to submit electronic documents pending cases in courts , and conducting acts of procedure , as much as possible in electronic format (estimated value 20 mil. Euro. In energy, the Municipality of Tulcea is targeting a high efficiency cogeneration plant in Tulcea county and Braila Municipality aims to create a system of eco-efficient street lighting.

One of the areas potentially interested in launching PPP projects is the transport field. To attract additional grant funds from business, CFR SA is preparing to launch several projects under PPP or concession, such as achieving high-speed lines, the construction and arrangement of modern intermodal terminals, and other projects aimed at increasing

attractiveness of rail transport as a mode of transport. These are projects with high investment value, such as the project of high-speed rail route: Border Hungary-Romania-Bucharest-Constanta. In terms of road transport in 2013 were concluded three concession projects Comarnic-Brasov, Craiova-Pitesti and the south belt of the capital. Vinci-Strabag-Akor association won the bid last year to achieve the section of highway Comarnic-Brasov. It should be ready in 2017.

This year Bulgaria has signed an agreement with Romania on future PPP in the construction of three bridges over the Danube which were included in the strategic investment plan for the Danube European Commission. Future bridges will be Silistra-Calarasi, Oriahovo-Bechet, Nikopol-Turnu Magurele .

Lack of successful projects conducted in public-private partnership in Romania, is a very big problem that will adversely affect the country's development in the medium and long term. In this respect, Razvan Iorgu, managing director of CBRE Romania, the local market leader in real estate consultancy said: "The fact that there are no successful projects conducted by PPP denotes, in particular, investor distrust in the Romanian state." ( Icleanu Elena 2014).

President of the Chamber of Commerce of Great Britain considers that for a good activity in the PPP in Romania "a few conditions are necessary, such as the existence of a stable cash flow, punctual and full payment of all services provided under the contract, the existence of a stable and commercial law a stable rate of profit. " (Alexandru Marinescu , 2010: 227-228)

 Since the Structural Funds were only accessible in proportion of 10% of the amounts allocated to Romania in 2007-2013, and the state does not have enough income to fund the necessary investments for economic recovery, PPP is a solution for fundraising. John Chown, founder president of JF Chown & Company said that Romania should seek PPP policies for pensions policies, taxes and capital market. Because of the aging of population, Romania has big spending on pensions and, starting in 2060, pension expenditure is to be second place in the EU, after Slovenia, with a budget share of pensions in GDP of 27.7 %. ( Alexandru Marinescu , 2010: 227-228 )


## 4. Conclusion

Development of PPP has become increasingly important as the economic and financial crisis has challenged the ability of the public budgets to raise adequate financial means and to allocate resources to important policies and specific projects.

The interest of the public sector for innovative financial instruments grew, as well as the political will to create conditions for more efficient ways of achieving infrastructure projects, whether in the transport, social, energy or environmental sector. On the other hand, the interest of the private sector to use PPPs could be limited by the current regulatory framework and new economic constraints and other factors namely public sector capacity to carry out PPP projects.

The main reason for local governments to participate in the development of partnerships should be taking advantage of high efficiency, a shorter implementation and a greater value of services provision. All these advantages should be part of the competition between private partners.

 Although the partnership is thought as one which must bring benefits to both parties involved in the implementation, it can happen that the Partnership and Cooperation effort to fail. Causes for failure may be due to several reasons, including: lack of an adequate legal framework, which restricts the possibility of the government to engage in forms of partnership with the private sector or the lack of mutual understanding of the specific sector of the government and the private area.

To ensure the success of such collaborations and avoid a big fiasco it is needed primarily a coordination of activities and decisions; a quality management of the joint action, which requires acceptance by the other parties of the operating rules and common rules; partnership agreements well negotiated and structured legally; monitoring of the private partner in all phases of the investment and in exploitation, which requires from the public sector knowledge regarding enterprise management. Lack of appropriate competences in the public institutions could create difficulties in managing the partnership;

At the moment, Romania is still in a nascent stage in terms of accessing public private partnership as an instrument of development. Member experiments presented, which had first initiatives in this field, are a lesson for other countries that have not yet assumed the risk of a public-private partnership .

In Spain a recent amendment was introduced for "the state tax support" with greater financial and structural flexibility. The changes that need to be made for future PPPs and for better access to international capital markets will depend largely on interpretation of the legislative process. Its introduction should be treated with special care; prevention must be introduced in subsidizing partnerships which can not be completed.

Whereas, through PPP projects, private financial resources will complement the effort of public administrations and the risks will be split between the public and private sectors, certainly this kind of projects could play an important role for a quick and healthy economic development. "However, we should not idealize such projects or consider them a / or the only lifeline of the economy." (Vass July 2013)

In Romania, especially at local government level there can be developed beneficial partnerships, which may be successful in areas of particular importance in achieving government objectives to meet citizens' interests, especially to improve the quality of public services and their cost effectiveness.

Local authorities have a key role in the partnership, because they have the powers necessary for the planning and sale of land and buildings, have real estate resources, maintain water supply systems, oversee systematization of housing and industrial development.

A concrete example of involving local authorities in achieving a successful local partnership which is already known by the positive effects not only on local communities, but also by the benefits of public service, resulted from the partnership at national level is the Mobile Service of Emergency, Resuscitation and Extrication (SMURD), established as a public health service, aimed at providing qualified emergency first aid to reduce mortality and complication rates, to provide equal opportunities for all patients and significantly decrease the time of arrival of a specialized medical team to critically ill patients.

The involvement of local authorities allowed the development of SMURD structure in several counties in Romania, by establishing crews within local governments, municipalities and civilian firefighters.

Of all the more or less success stories, you should remember that PPP is not an end in itself but it is useful as long as it improves service quality and economic efficiency, so as to fulfill expectations summarized in the much used phrase "value for money". (Manolea Luiza 2011: 2)

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# THE ROLE OF ENERGY IN ECOLOGICAL SUSTAINABILITY

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**Abstract:** *The rapid population growth leads to greater daily demand for energy, causing nations to diversify their portfolios and seek new sources of energy, including renewable to provide more energy. In a universe with seriously exhausted natural resources, severe urbanization, climate change and conflicts that go beyond borders, the issue of overpopulation unquestionably causes worldwide debates and can generate a snowball effect for the global economy or human society. Population's increase in the nearby future will have a central role in challenges such as: global warming, air and water contamination, increase in the level of poverty, food scarcity, deforestation, desertification, health problems and resource shortages. The transformation into a sustainable environmental model, situated in a post-carbon economy, will imply setting barriers to industrial progress (will have to be sustainable and environmental friendly) and also to population growth (will have to follow a normal pace). But, the level on vulnerability and uncertainty in the evolution of energy has been threatened lately by major events that took place all around the world. Security of supply, new geopolitical perspectives and ecological and sustainability issues are yet again on the bleeding line. Therefore, the goal of this theoretical article is to give an overview of the current situation concerning the role of energy in ecological sustainability. It expresses routes in which humans and enterprises can act in order to contribute to ecologically sustainable development. The subject of how we live on a congested planet represents the most critical sustainability of all. We are witnessing our current risks and we can also envision our possible, and particularly desirable, future: a steady human population, living and protecting the nature and planet, having finite needs of goods, services, or energy, and maintaining a healthy Earth for us and the animals that also depend on it. This is not a fantasy but an obligation for all of us. Consequently, we have to engage ourselves in building up this better future, with sustainability and prudent actions.*

## 1. Introduction

Over the last two centuries the mankind have witnessed an untold growth and wealth mainly due to the industrial development. Unfortunately, this complex evolution has led to damaging the surrounding environment. Therefore, the earth is facing many environmental problems, such as global warming, oil spills, coastal contamination, ozone depletion, deforestation and desertification, loss of biodiversity, acid rain, industrial accidents, and toxic waste dumping (Pryde, 1991: 276; Smil, 1993; Shrivastava, 1995; Worldwatch Institute, 2013).

In 1991, there was a belief that the world population will double from 5.5 billion to 11 billion by 2030 (Ehrlich and Wilson, 1991). But, current studies show that world's population is likely to grow from 7.3 billion now to 9.6 billion in 2050 and to 10.9 billion in 2100 (Gerland,

et al., 2014). To fulfil people's needs, in increase in the number of population means also increasing the production of goods and energy. Therefore, Food and Agriculture Department of the United States (FAO) projects that global agricultural production in 2050 will be 60 percent higher than in 2005/2007 (Alexandratos and Bruinsma, 2012). Moreover, we can expect global energy demand to grow by 36% between 2011 and 2030 (British Petroleum, 2012) and the total energy consumption is projected to grow by as much as 55% by 2030 as the combined effect of population growth and the improvement of living standards  (Royston, 2010). Using the current technologies, having the same social organization, and pursuing the same production practices, these increases in production and consumption will generate more environmental degradation (Meadows, et al., 1972; Frosch and Gallopoulos, 1989; Commoner, 1990).

The issue of whether the human advancement trading off on its current direction without compromising the future prosperity remains the key centre of the current ecological debates around on the planet.

The world is vast, yet people are numerous, and our utilization of the planet's air, outside layer, woods, fisheries, waters, and assets is currently a power like that of nature. Then again, we are brilliant and versatile, and that is the reason which maybe aides clarifying why such a large number of vital financial and ecological patterns appear to be going in clashing and even inverse ways. Are things turning upward or downward?

As far as the improvement in this area is concerned, the world has already achieved one of the targets of the Millennium Development Goals (Goal 7: Ensure Environmental Stability) which was aiming to halve, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation, this percentage being decreased by fifty percent until 2010 (compared to the 1990 levels) (Worldwatch Institute, 2013). Therefore, it can be contended that monetary thriving is on the ascent and essential needs in many parts of the world are progressively being met (UNICEF and World Health Organization, 2012; Kharas and Rogerson, 2012).

A controversial matter is the environment, and as far as this is concerned, the advancement in this field comprises various actions. Lately, there was a rising public awareness of issues related to environmental change, rainforest casualty, and a decline in biological diversity. Many governments are involving in different tasks meant to lessen their nations' gas emissions or, if this is not possible, to prevent further growths of these discharges. The renewables are becoming more used and faster than the fossil fuels (but not with the same amount of resources). Such patterns do not lead specifically in any quantifiable approach to genuine sustainability (the use of fossil fuels is growing in emerging world powers such as India or China). Nevertheless, they help in building the groundwork for environment's sustainability. One essential pattern, nonetheless, is both quantifiable and reasonable by its strict definition (in Article 9): a 1987 global treaty stresses that the worldwide utilization of ozone-draining substances has declined to the point where the atmosphere's sun-screening ozone layer is viewed as prone to repair itself, after years of human-created damage (United Nations, 1987).

It is not clear, notwithstanding, that any of these improvements and natural patterns show that really sustainable advancement is happening. Safe water is becoming available to more individuals, but conceivably to the detriment of keeping up stable supplies of renewable freshwater in streams or underground aquifers for future generations. Diminishing the extent of individuals in destitution is promising, but what if this is only a scenario where the instruments of advancement, as the use of fossil fuels to support and enhance development, contribute essentially to expanding the proportion of individuals in scarcity in the future.

Additionally, financial improvement is facing special requirements in different nations, as population and consumption are increasing the interest for natural resources, food and

energy past what it is supplied. The cost of resources, such as food, fossil fuels, minerals and other primary commodities that depend on non-renewable assets has moved upwards in the recent years, and all the shocks created in the market have led to rebellions, such as the African ones from 2007-2008 (Berazneva and Lee, 2013) or the 2012 Indian blackouts that affected over 300 million people (Bernstein, et al., 2012).

Even if there are some nations that are not in this state, the growing number of humans is translated in eating more food, using more energy, damaging more landscapes and using more commodities that ever before. Therefore, integrated and worldwide available solutions for these issues have to be found for a tolerable future for everyone.


## 2. The Role of Efficiency

In the nearby future, the energy demand is expected to grow by 37% to 2040 on planned policies, with an average rate of growth of 1.1% (International Energy Agency, 2014). Given the speeding up rate in the use of renewables that is required to address energy needs without using fossil fuels, energy efficiency measures are fundamental to guarantee that new renewables counterbalance the fossil fuel power generation (Renewable Energy Policy Network for the 21st Century, 2014). Energy preservation is particularly imperative in the setting of sustainability requirements, as even renewable sources can have huge effects on the environment and resources.

Economic policies are more important when it comes to accessibility or about efficiency/inefficiency of energy weight distribution on the long term. For example, low prices kept artificially in Egypt have failed to maintain demand at a sustainable level, which led to blackouts (generated by power plants fuelled by gas). Energy efficiency measures work synergistically with renewable energy systems such as wind, solar, hydro, tidal and wave, that are designed to use the natural flows of energy or sunlight into power, and do not require inefficient and polluting processes such as the ones used to extract energy from fossil fuels and nuclear power-plants.

The efficiency of using renewable resources has to take into account the ecological, economic and social requirements. While availability of resources and natural requirements represent an issue towards creating particular renewable energy frameworks in particular areas, these restrictions can be overcome through proper planning, responsible ecological administration and the usage of clean and broadly accessible substitute innovations.

Therefore, it is required for sustainable renewable based energy planning a proper coordination as an efficient and solid power grid to connect numerous generation and distribution electricity sources over wide geographic areas, empowering the coordination between renewable facilities. For instance, the energy produced by wind farms may differ depending on time of day, as some of them can produce more in the morning and others in the afternoon; similarly, their power may depend on the time of the year. Therefore, wind and solar based power generators can be merged as they reach a climax not in the same time. Integrating these correlative assets can go far to finding a solution to renewable's discontinuity in generation and can produce a more integrated and reliable grid for energy supply based on renewables. Combining the renewables with conventional energy sources is similarly imperative in the process of producing efficient energy.

The implementation of renewable energy based systems should take place especially at a local level. The energy projects developed around this type of energy must be completely incorporated with regional features that guarantee the protection of the environment, consider specific administrations in that area, and completely take into account the privileges of individuals living near those terrains (Boucher, et al., 2011; World Commission on Dams, 2000). Renewable energy projects that would truly harm the

encompassing environment or undermine nearby people ought to be forgo or relocated.

All the developments done in the field of renewable energy have also to take into account the needs for sustainable water utilization and to safeguard the usage of rare assets meant for human consumption. Water shortage has now effects on every continent as around 1.2 billion individuals worldwide are affected and more than 500 million humans are at danger (UN-Water, 2007; United Nations, 2013). In areas where water is rare, alternative technologies ought to be utilized to minimize water utilization.

Additionally, apart from taking into consideration regional and local peculiarities, sustainable renewable energy projects should be also worldwide-centred. This is surely valid for the climate crisis, which can be solved only if all nations diminish their greenhouse gases emissions (Sawin and Moomaw, 2009). Also, there is a need for strict regulations in the energy field as extraction of rare resources is incrementing around the globe in the run for renewable energy, power grid and storage innovations. There has to be taken actions in order to mitigate further soil erosion, surface and groundwater contamination, avalanches, and fauna and flora damages. Reusing materials ought to be reinforced for supportable energy improvement. These incorporate mass materials, such as concrete, copper, and steel, and also rarer or dangerous materials, as neodymium and cadmium.

The economic, financial, technological and asset-oriented difficulties to switching to a completely practical worldwide energy framework are colossal, yet they can be completely tended to with arrangements that exist today (British Petroleum, 2014). There is a chance for a new era of genuinely manageable and feasible energy power grids.


## 3. Getting to Sustainability

In spite of scattered endeavours to ascribe advance on environmental change to the United Nations summit in Rio de Janeiro in June 2012, the agreement continues that it created intense debates but with no noteworthy activity. Environmental change is just the most conspicuous ecological pattern that threatens sustainability.

The consumer society is the one that governs the world today. Consumerism has ended up undermining both human prosperity and the planet's life-sustainability capacities (Assadourian, 2010). At the same time, it is a wilfully designed method for living, consolidated by colossal amounts of money spent yearly on broadcasting, sponsorships, tax reductions, and advertising. Therefore, we have to replace this culture of consumerism with a society of sustainability.

Numerous social choices may qualify as practical. However, certain qualities appear to be discriminating. Therefore, various researchers have devoted their studies on these issues, and the economy is perceived as being focused on human prosperity instead of on monetary development as an end in itself (Costanza, et al., 1997). Additionally, another solution encountered in scholarly articles if represented by changes of companies responsible for more than 60 percent of global gross domestic products and which are also producing trillions of dollars of externalities and sometimes apply a malevolent influence on national strategies (Sukhdev, 2012). Another solution is represented by transforming externality exposure into routine corporate reporting (Hohensee, 2013).

Energy is maybe the most overwhelming test before us. In a genuine sense, using fossil fuels to generate power is the creator of present day civilization threatened to be obliterated by its own architect. One of the arrangements proposed to mitigate this risk is to take a genuine prudent approach and leave fossil fuels in the ground by diminishing their power (Princen, et al., 2013), the transition to renewables being a must. But, the flaws and qualities of renewables are many, such as the fact these are second-class

compared to fossil fuels (Murphy, 2013).

The energy problem is not the only one that should raise concerns in the sustainability area. Global agriculture is also at a defining moment. As presented in the beginning of this paper, billions of people are suffering from hunger or malnutrition, as in the same time, many individuals are overweight, while the system throws away enormous amounts of nourishment. Farming can help take care of different issues through diminishing food waste, finding ways to innovate the farming process and concentrating on producing nourishing rather than unhealthy food.

Therefore, the sustainability issue questions the incentives for humans to accomplish all these changes. If the civilizational survival is not inspiration enough, unfortunately, some eco-disasters could be the force to drive the people to act. Moreover, all the changes will have to be connected with the political action aimed towards building up systems that offer solutions and activate nations.

The societies where humans live are characterised by cultures which follow certain standards, stories, ceremonies, values, symbols, and customs that direct almost the greatest part of our decisions, from what we eat and how we raise our kids to how we function, move, play, and celebrate. Shockingly, the consumerism is part of our culture as well, as it was supported in the last centuries by a nexus of business and governments around the world, turning into a prevailing ideal model in most societies. More individuals are characterizing themselves as a matter of first importance through how they consume and are endeavouring to possess or utilize constantly stuff, whether in style, food, travel, hardware, or innumerable different other items and services (Assadourian, 2010).

However, consumerism is not a suitable social ideal model on a planet whose frameworks are profoundly stressed and that is presently home to more than 7 billion individuals, let alone on a planet with 10.9 billion people as it was projected for 2100. Therefore, to build a sustainable human civilization that can support itself and the generations to come without affecting the planet, consumer-related societies will have to be redesigned into societies of sustainability, so that living reasonably feels as common as living as a consumer does today (United Nations, 2013).

## 4. A culture of Sustainability

Moving past consumerism can be difficult, and that is why opponents see this move as an involution, a return in the Stone Age, where the main source of food can be offered by hunting and raw agriculture. But, a proactive approach aimed to help the Earth and not bring it to exhaustion, can find solutions for mankind to keep up a respectable personal satisfaction for all at a much lower level of impact.

Based on an environmental vision, first introduced in 1998 by the Swiss Federal Institute of Technology in Zürich (ETHZ), the average world citizen should act in reducing his overall average continuous energy usage to no more than 2,000 watts (48 kilowatt-hours/day) by 2050, without lowering his current standard of living (Spreng and Semadeni, 2001). This idea was furthermore comprised in a research conducted in 2006, which estimated an equitable and sustainable level of consumption (Stulz and Lütolf, 2006). Their research subscribed to the vision introduced in 1998 that from an energy viewpoint, supporting the use of renewables as base towards sustainability, the average human could constantly utilize 2,000 watts of energy (or 17,520 kilowatt-hours every year) for the majority of his or her needs, including nutrition, transportation, water, administration and assets (Stulz and Lütolf, 2006). In Figure 1 in can be observed the top 10 countries in terms of Total primary energy consumption per capita in 2011 and the level suggested in the researches presented before.

**Figure 1:** Total Primary Energy Consumption per Capita in 2011 for selected countries (kWh/person)
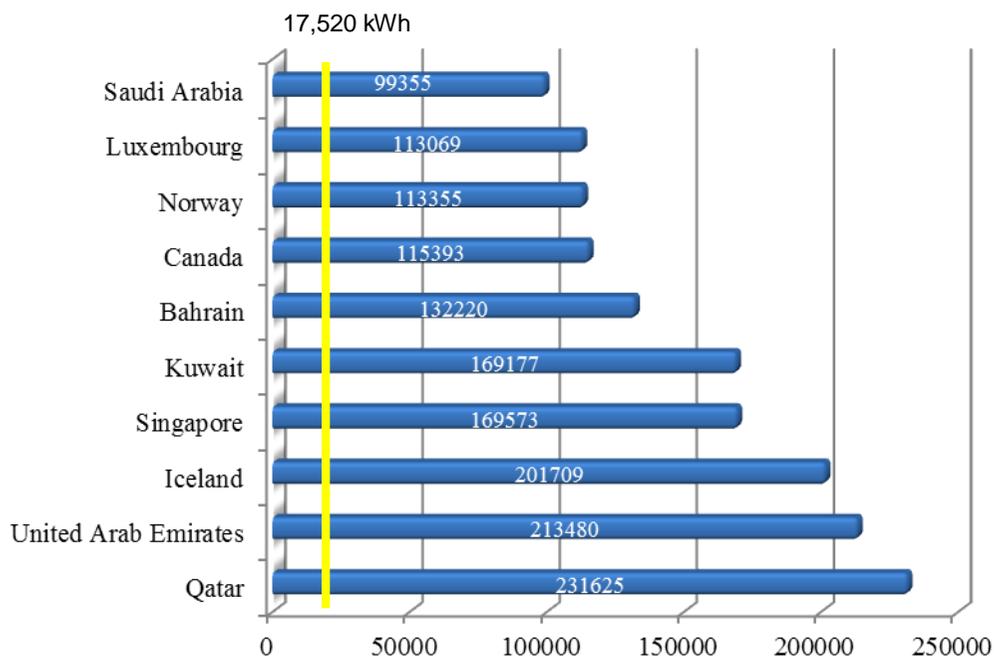


Source: Authors' calculation based on the data provided by U.S. Energy Information Administration, 2015

Note: The data were provided in Million Btu per Person, and the transformation into KWh/person were done according to the conversions rate 1MMBtu=$10^6$Btu and 1kWh=3,412.1414799Btu (Green, 2014: 29)

The research conducted in 2006 was analysed further, as people started to ask themselves what means living off with this amount of energy. Therefore, in 2009, an Australian specialist and innovator, Saul Griffith, broke down a 2,000-watt way of life at an individual level and observed that he would need to possess one tenth as much stuff as he had that day and make it work for ten times as long as before. Moreover, he would need to fly now and then, drive rarely (and generally in environmentally friendly vehicles completely stacked with travellers), and turn into a vegetarian (Griffith, 2009).

Basically, a 2,000-watt way of life resembles the path a significant part of the world lives today, or better, but without praised privileges of the high-income way of life: eating meat every day, about daily access to a private auto (regularly with only one traveller), cooled homes, family pets, and free access to flights that can travel around the world. These extravagances will never again be routinely available to most individuals in a genuinely sustainable society. However, they may be accessible as rarer pleasures, similar to the way these are perceived now by low-income families.

These lost consumer extravagances will be troublesome penances to acknowledge after a lifetime with free access to them. However, rarer utilization of these could transform them in more agreeable activities, such as getting away to a cool bistro on an extremely hot day or appreciating meat at special events. Balancing these lost customer extravagances will more likely enhance wellbeing of individuals, will offer more spare time to people, less stress, fortifying groups (as individuals depend on one another rather than on privatized

administration), and will stop the decay of major environments on which a steady human development rely on.

## 5. In conclusion
The fossil fuels are becoming the resources we must manage to live without them even if we cannot do without them. On one hand, coal, oil and gas are the soul of advances of industrial civilization. They have unleashed the bewildering advance in human productivity. On the other hand, sustaining their flame will roast the Earth to the point of being indistinguishable. The hydrocarbons that remain after the fossil fuels' processing, the Earth environment is overwhelmed and the atmosphere is polluted. Changing to renewable energy sources and different lifestyles is the test of our times.

The change is needed, the transition has to be made, but people have to believe in it and see beyond consumerism. Now, many people think that if they accept the next energy transition, it will be similar to the past moves, when the path towards providing energy went from human power to animal power, from animal to wood, from wood to coal, and from coal to oil (Smil, 2010: 17-20). This transition is seen as a way to have access to higher speeds, enhanced work profitability, and even more choices of goods and services that are ready to be consumed – this is the view resulted from observing the changes that happened during the evolution of energy (Princen, et al., 2013).

This is the time to pick a new perspective and a new future. It should be acknowledged the fact that Earth's resources of fossil fuels are limited and their exhaustion is close. The inquiry humankind faces at this crossroad is how to deal with the transition in order to avoid catastrophic climate and other ecological effects. Without a doubt, this is no simple assignment. It will and is being opposed by many parties that have an enormous stake in supporting the worldwide consumer-based society – from the fossil fuel industry and big players in the agribusiness sector, to food processors, auto producers, sponsors and many others. Yet, given that consumerism and the utilization of fossil fuels are not in harmony with the prospering of a sustainable planet, either we discover approaches to pry our social examples away from the grasp of those with a personal stake in keeping up consumerism or Earth's environment will decline and cut down the consumerism era in a much crueller way.

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# ON THE UTILITY OF ENFORCING DIRECTIVE 2013/34/EU IN THE FIELD OF THE SOCIAL RESPONSBILITY OF THE PUBLIC ORGANISATIONS

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**Abstract:** *This work analyses the utility and possibility of extending the legislation adopted at the European Union level – in the field of reporting the socially responsible results of the joint-stock companies, limited liability companies, partnerships limited by shares, general partnerships, and limited partnerships – also in the case of the public organisations. The scientific work starts from the concept of the corporate social responsibility, a concept including five types of responsibilities: ecologic responsibility, economic responsibility, juridical responsibility, ethical responsibility, and philanthropic responsibility. Further to the analyses of the results of a quantitative marketing research performed in 2014 in Braşov municipality, Romania, and Directive 2013/34/EU of the European Parliament and Council regarding the annual financial statements, consolidated financial statements and related reports of certain types of enterprises, as well as of the special situation, in most of the cases, of the performed activity and profit achieved by the public organizations, the de lege ferenda proposals have been exposed regarding the possibility of extending the juridical regulations concerning the philanthropic component of the social responsibility also on the public organisations. The marketing research on "Attitudes and opinions of the Braşov citizens regarding social responsibility" has had the final sample made up 386 persons, with a random error of ± 4.99%, which can be considered a minimum limit of representativeness. Thus, the results of this research are representative for Braşov town, and can also be extended in the case of other large towns from Romania. The analysed results have revealed the view of the questioned Braşov citizens regarding the reporting activity and the manner of reporting from the business operators of the socially responsible activity. The juridical analysis of the provisions of Directive 2013/34/EU of the European Parliament and Council regarding the annual financial statements, consolidated financial statements, and related reports of certain types of enterprises have determined an answer to the question: "Is it useful and necessary the extension – de lege ferenda – of the legislation regarding the philanthropic component of the social responsibility also in the sector of the activities performed by the public bodies?"*

**Keywords:** public organization, philanthropic responsibility, social responsibility, quantitative marketing research, juridical analysis.

**JEL classification:** M31.

## 1. Conceptual aspects regarding the corporate social responsibility

The social responsibility can also be characterized as being the firm obligation of a economic operators to act beyond the legal obligations or those imposed by economic restrictions, and to pursue long-term objectives to the use of the community. The

respective economic operators is considered responsible not only towards their owners (shareholders) but also towards clients, providers, employees, governmental organisms, creditors, local communities, public opinion.

At present, the social responsibility of the economic operators must be regarded from a complex perspective. We consider that the social responsibility of the economic operators is what the community expects from a economic operators ecologically, economically, legally, ethically and philanthropically. In my opinion, the social responsibility includes all these types of responsibilities: ecological responsibility, economic responsibility, legal responsibility and philanthropic responsibility. [Poțincu, 2012]

Being aware of this fact, several economic operators globally have started to change their way of reporting their results to the public and shareholders. Some economic operators have started to add a section related to the environment in their annual reports, although in some cases, it only contains a simple formal statement related to the environmental policy. Other economic operators submit to the public annual detailed environmental reports. This section has forced other economic operators to start doing the same, and even submit reports related not only to their financial results, but also to attaining ecological and social objectives.

One of the Romanian economic operators submitting such reports is SIVECO Romania. The corporate social responsibility report of 2008, published by SIVECO Romania, is the first of this type in the Romanian IT industry. Its concept, methodology and implementation are original steps taken in the Romanian business environment.

The corporate social responsibility report evaluates the social and environmental performance of an economic operator. On the one hand, one considers the positive impact generated by the company at the level of the management structures, production processes, and relations with the main partners of the company. On the other hand, the social and environmental challenges are evaluated, so that the management would approach them proactively.

This report is a changing instrument within the economic operator, an instrument through which the economic operator communicates to the co-interested groups the standards, objectives and economic and social performance, takes the feed-back of these groups and redefines their priorities according to it. The report suggests a series of essential social responsibility principles: transparency, good corporate governing, sustainability, corporate civism. The report promotes a set of current corporate social responsibility themes such as proactive evaluation and approach of the social and environmental impact, research and technological investment, education investment with the purpose of informational inclusion, preoccupation for quality. Prepared periodically, the report intents to suggest a set of standards which would provide good practice models to the IT community and the Romanian economic operators. (Crahmaliuc, 2009)

## 2. Analysis of the results of a quantitative marketing research on the consumers of the Braşov municipality regarding the implementation of the social responsibility to the business operators from Romania

We consider it necessary to mention that the term business operator does not distinguish between the private or public form of the capital, as long as it is an "authorised natural or legal entity, that within its professional activity, manufactures, imports, stores, transports, or markets products or parts of them, or provides services," as stipulated in the annex of the Romanian Consumption Code, Law no. 296/2004, republished in 2008.

Thus, the term business operator represents both the public and private organisations. In this respect, the marketing research, performed in 2012 in the Braşov municipality, Romania, has aimed at getting to know the view of the Brașov citizens regarding the adoption of a socially responsible behaviour both from the public and private

organizations, as long as they perform a commercial activity.

Within the marketing research, performed in 2014, on "Attitudes and opinions of the Brașov citizens regarding social responsibility", their opinion has been analysed regarding the reporting of the socially responsible results.

The final sample was made up of 386 persons, with a random error of ± 4.99%, which can be considered a minimum limit of representativeness.

Considering the fact that the size of the sample has been established probabilistically, simply random, and taking into account the fact that the level of the admitted error is ± 5%, and the probability of guaranteeing the results is 95%, we consider that the results of the research are representative for the entire adult population of Braşov municipality, and – also – these could also be extrapolated at the level of other municipalities with a similar size and structure of the population from Romania.

Thus, to the question "Do you consider that the reports regarding the social responsibility of the business operators from Romania should be notified to the public?", the answer of the questioned Brașov citizens is presented in diagram no. 1.
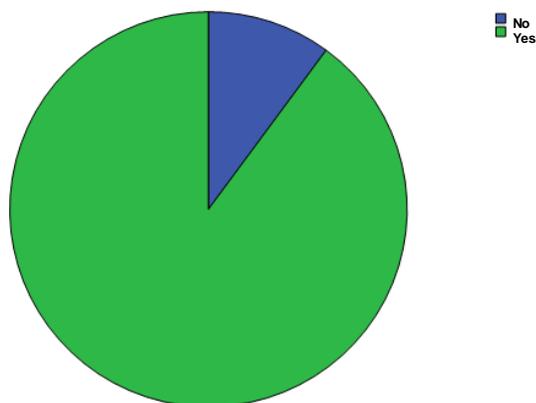


**Figure 1:** Analysis of the question "Do you consider that the reports regarding the social responsibility of the business operators from Romania should be notified to the public?"
Source: Quantitative marketing research performed by the authors

According to the data in table no. 1, more than 8 out of 10 questioned citizens think that reporting the social responsibility activities is important. The transparency regarding this reporting is considered to be very important for the questioned Brașov citizens.

**Table 1:** Do you consider that the reports regarding the social responsibility of the business operators from Romania should be notified to the public?

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | NO | 34 | 8,8 | 10,1 | 10,1 |
|  | YES | 303 | 78,5 | 89,9 | 100,0 |
|  | Total | 337 | 87,3 | 100,0 |  |
| Missing | 88 | 4 | 1,0 |  |  |
|  | 99 | 45 | 11,7 |  |  |
|  | Total | 49 | 12,7 |  |  |
| Total |  | 386 | 100,0 |  |  |

Source: Quantitative marketing research performed by the authors

As for the evaluation of the way the reports regarding the social responsibility of the business operators are notified to the public, the questioned Brașov citizens consider that these are either not transparent, or are only partially notified to the public; only 6.8% of them consider that the business operators notify, to a great extent, their own social responsibility reports to the public.

**Table 2:** How do you evaluate the way different business operators notify their own social responsibility reports to the public?

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | They are not notified | 139 | 36,0 | 41,4 | 41,4 |
| | They are only partially notified to the public | 174 | 45,1 | 51,8 | 93,2 |
| | They are notified to the public to a great extent | 23 | 6,0 | 6,8 | 100,0 |
| | Total | 336 | 87,0 | 100,0 | |
| Missing | 88 | 5 | 1,3 | | |
| | 99 | 45 | 11,7 | | |
| | Total | 50 | 13,0 | | |
| Total | | 386 | 100,0 | | |

Source: Quantitative marketing research performed by the authors

Based on the analysis of the two previously asked questions, one can note an interest of the citizens in knowing the social responsibility reports of the business operators, as more than 8 out of 10 questioned citizens have expressed their opinion on the reporting activity and way of reporting by the business operators on their socially responsible activity.

## 3. The field of enforcing the provisions of directive 2013/34/EU, and uselessness of the extension in the field of the public enterprises/organisations

Directive 2013/34/EU of the European Parliament and Council regarding the annual financial statements, consolidated financial statements, and related reports of certain types of enterprises, amending Directive 2006/43/CE of the European Parliament and Council, and abrogating Directives 78/660/CEE and 83/349/CEE of the Council, is the main normative document adopted at the European Union level in the social responsibility field, a normative document which is mandatory for the European Union member states.

Directive 2013/34/EU imposes the European Union member states, including Romania, the obligations to request the reporting of the socially responsible results from the medium and large business operators.

The rest of the normative documents adopted up to now in the special field of the social responsibility are not mandatory. In this respect, we are considering the Resolution of the European Union Council regarding the Green Card on social responsibility 2002/C 86/03, and the Resolution of the European Union Council on social responsibility 2003/C 39/02.

We shall further analyse the provisions of Directive 2013/34/EU, a normative document adopted at the European Union level regarding the private organisations operating on the

European market, including Romania, an European Union member state.

The object of the directive is the preparation of the annual and consolidated statements, and related reports, in order to understand the evolution of the activities, results and status of an enterprise. One can note the use of the term enterprise, without distinguishing between the form of the public or private capital, but the European normative document mentions in its annexes that it refers to the joint-stock companies, limited liability companies, partnerships limited by shares, general partnerships, and limited partnerships. Thus, directive 2013/34/EU of the European Parliament and Council mentions, in its preamble, the fact that it complies with the fundamental rights and principles acknowledged by the Chart of the fundamental rights of the European Union. Obviously, the promotion and legislation of the CSR development rights considers, as a fundamental element, the compliance with the rights of all categories of stakeholders, including consumers or employees.

In its initial form, i.e. draft, the directive stipulates the obligation to include in the annual financial report, also non-financial information, including information related to environmental and personnel matters, only for the enterprises with over 500 employees.

Art. 1 letter a) of the proposal provided that "the annual report contains a precise analysis of the evolution of the activities, results and status of the enterprise, as well as a description of the main risks and uncertainties it is facing. This is a balanced and exhaustive analysis of the evolution of activities, results and status of the enterprise, in relation to the volume and complexity of these activities."

"For the enterprises with an average number of employees during the financial year of over 500, which, on the date the balance sheet has been prepared, either have a balance sheet exceeding 20 million euro total, or have a net turnover of over 40 million euro, the analysis also includes a non-financial statement containing information regarding at least the environmental aspects, social aspects and personnel-related, compliance with the human rights, fighting corruption, and bribery, including:
- a description of the policy adopted by the enterprise in relation to these aspects;
- results of these policies;
- the risks related to these aspects and the manner in which the enterprise manages the respective risks."

In case an enterprise does not enforce policies regarding one or several of these aspects, the organisation is obliged to offer an explanation regarding the reasons why it does not proceed in this respect.

According to Directive 2013/34/EU, the medium enterprises are defined – in Art. 3 align. 3 – as "the enterprises which are not microenterprises or small enterprises, which on the date of the balance sheet, do not exceed the limits of at least two of the following three criteria: [have] the total balance sheet [lower or equal to] 20,000,000 euro, [have] the net turnover [lower or equal to] 40,000,000 euro; [have] the average number of employees during the financial year [lower or equal to] 250."

The large enterprises are defined, in align. 4, as "enterprises which on the date of the balance sheet, exceed the limits of at least two of the following three criteria: [have] the total balance sheet [over] 20,000,000 euro, [have] the net turnover [over] 40,000,000 euro; the average number of employees during the financial year [over] 250."

Align. 2 of Art. 3 shows that the provisions of Directive 2013/34/EU are applied to the public or private enterprises which fulfil two of the required criteria: [have] the total balance sheet [over] 4,000,000 euro, [have] the net turnover [over] 8,000,000 euro; the average number of employees during the financial year [over] 50. One notes an extension of the area of enterprises which are obliged to report their non-financial results, i.e. their socially responsible activity, from the public or private enterprises with over 500 employees, to the enterprises with over 50 employees, if they have the total of the balance sheet over

4,000,000 euro, or the net turnover over 8,000,000 euro.

Although, at a first sight, it would be interesting for these European provisions to be applied also to the field of the public organisations, we rally to the reason that the reporting of the non-financial results of the enterprises should not be extended to the field of the public institutions.

Firstly, in the case of the public enterprises performing commercial activities, the profit shall automatically be invested in social causes, being used by the state in several social fields or even for supporting that public institution whose activity has a social nature, the provided products or services having a very low price, or even being partially subsidised by the state.

Thus, we consider that the philanthropic component within the social responsibility should not be considered in the case of the public organisations, although the aspects related to the transparency of the performed activity have a great significance also in the case of these organisations.

In this respect, we state that the other types of responsibilities included in the social responsibility – the juridical responsibility, the economic responsibility, the ethical responsibility, and the ecological responsibility – must be considered and correctly and completely implemented in the activity of the public institutions. The management of a socially responsible public organisation leaves no room for abuses in relation to their own stakeholders – consumers, employees, natural environment – or the failure to comply with all the elements integrated in the juridical responsibility and ethical responsibility.

Also, the compliance with the economic responsibility has its own role in the development and self-support of the public organisation, while the compliance with the ecologic responsibility by the public organisation has its own sense in a global context.

Thus, any other legislation aiming at the social responsibility aspects, except for the one regulating its philanthropic component, must mandatorily be complied with by the public organisations, similarly as in the case of the private one.


## 4. Conclusions and proposals

Although there is an interest from the consumers regarding transparency, in performing the reporting activity of the socially responsible results to the public of the respective business operators, we consider that the provisions of Directive no. 34/2013 should not be extended also to the public organisations, considering the intrinsic nature of these institutions.

The philanthropic component of the social responsibility is not important, as compared to the rest of the components: juridical, economic, ethical and ecologic.

In order to develop good relations with several categories of stakeholders – consumers, employees – it is very important to integrate the social responsibility in the management of the public organisations, with the previously mentioned exception.

Even if there is no money invested in several social responsibility actions, a correct and transparent activity, while complying with the legislation in force, and the ethical norms regarding their own stakeholders, in order to obtain a profit, develop and support as many workplaces as possible, and paying attention to the natural environment, is very important in developing the management of the public organisations, i.e. adopting a socially responsible management.

De lege ferenda, we consider it important to extend the several legislative preoccupations available at national and European level regarding social responsibility also in the field of the activities performed by the public organisations, with one single exception: regulating the philanthropic component of the social responsibility, for reasons explained in the previous section.

## 5. Acknowledgements

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# ROMANIAN AGRICULTURE IN EUROPEAN CONTEXT

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***Abstract***
*This paper presents the main features of Romanian agriculture, as part of the European agricultural sector. Based on statistical data, the article presents an analysis of the main problems that Romanian agricultural sector faces, such as fragmentation, preponderance of small and non-competitive farms, high employment but very low labour productivity, and modest crop and animal output.*

## Introduction

Before 1990, the Romanian agriculture was structured according to principles of collective ownership and state management and planning. The transition to the market economy has imposed a series of challenges for the agricultural sector which have not been properly managed, so that they resulted in structural problems, such as fragmentation and small size of farms, and efficiency problems, as the productivity of the agricultural sector is very low, compared to the EU average.

The paper is structured in three sections which analyze the features of the Romanian agriculture compared to other countries in the European Union or to the European average. These sections focus on the structural features, employment and labour productivity in the agricultural sector and the agricultural output.

## Structural analysis

In Romania, the transition to the market economy was not properly managed and this has negatively influenced the agricultural sector. In the absence of a coherent strategy, the regulations and measures adopted have lead to a great fragmentation of land and farms.

As Table 1 shows, about 70% of the Romanian farms are very small (less than a hectare), and they hold one third of the agricultural land in Romania, consisting of gardens, pastures and hayfields, less productive soils. 27% of the total number of farms are subsistence and semi-subsistence farms, holding 21% of the agricultural land and producing for own consumption, while 1,5% are commercial family farms, which hold 10,2% of the agricultural land. Unlike developed European countries like Germany, in Romania the commercial family farms have the lowest representation and are marginalised by agrarian policies.

**Table 1 – Agrarian Structure of Romania, 2012**

| Type of farm | Size (hectares) | Number (thousands) | % of total number | Surface (thousands hectares) | % of total surface |
|---|---|---|---|---|---|
| Small unfunded households | <1 | 2740 | 71,1 | 5073 | 34,5 |
| Subsistence and semi-subsistence farms | 1-10 | 1044 | 27,1 | 3108 | 21,2 |
| Commercial family farms | 10 - 50 | 60 | 1,5 | 1494 | 10,2 |
| Companies | 100 – 55000 | 12 | 0,3 | 5010 | 34,1 |
| Total | - | 3856 | 100,0 | 14685 | 100,0 |

*Source: Otiman, 2012*

In Romania, there are only 12.000 agricultural companies that exploit between 100 and 55.000 hectares of land, representing only 0,3% of the total number of farms. These companied hold together 34% of the agricultural land in Romania, mainly arable land (more than half of the country's arable land) located in the most favourable agricultural areas of Romania (Otiman, 2012).

The large number of subsistence or semi-subsistence farms is one of the biggest problems of Romanian agriculture, as it has negative social effects. Subsistence farms have limited access to other sources of income than agriculture and, therefore, the welfare of a significant proportion of the rural population depends considerably on the farm profitability, which is rather small, due to low capital endowments and low labour productivity.

**Employment and labour productivity**

Agriculture is the most important activity in the rural areas in Romania, and labour is a very important production factors. One of the main features of Romanian agriculture is the great number of workers employed in agriculture. Romania is the country with the largest employment in agriculture within the European Union (Figure 1).

For example, in 2012, 29% of the employed population in Romania was working in the agricultural sector. This is highest rate in the European Union and Romania is followed at great distance by Croatia, Greece and Poland (employment in agriculture around 13% of total employment).

In developed European countries the number of people employed in agriculture has diminished for several decades, reaching a level beyond the necessary limit (which lead to the usage of immigrant labor), while in Romania the situation is quite the opposite. An atypical process has been registered in the last decade of the past century, as Romanian labour force shifted from non-agricultural activities to agriculture, mainly by labour rationalization in non-agricultural sectors and early retirement. As labour surplus already existed in agriculture, the productivity of the new employees was null or almost null (Popescu, 2009).

**Figure 1 – Employment in agriculture (% of total employment)**
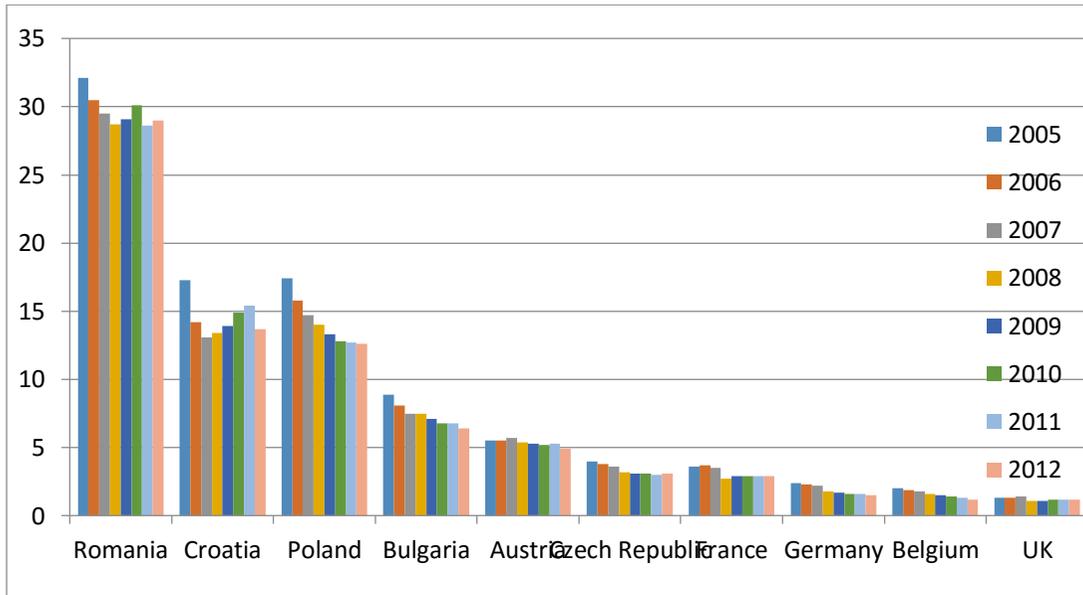


*Source: Author`s calculations, World Bank Data*

Moreover, developments regarding rural population have a negative impact on the labour market of these regions. Within the last century, alongside with economic development, there has been a massive migration of rural population to urban areas and in recent years this has been amplified by the migration of young people to other countries, in search for higher income. As a result, the rural areas are nowadays confronted with problems regarding aging and declining population, declining birth rates and depopulation.

Under these circumstances, most of the people employed in agriculture are old, which influences their productivity. Labour productivity is an important factor which determines farms` economic performance and adequate income for farmers. In general, labour productivity in agriculture developing countries is very low, compared to the levels registered in developed countries. This is also the case of Romania. As Figure 2 shows, labour productivity in Romania is almost the smallest in the European Union, about six times lower than the EU 28 average. While in Romania the labour productivity has been oscillating around 5 Eur. per hour worked, the EU 28 average has been fluctuating around 30 Eur. per hour worked. In the European Union, Bulgaria has been the only country that has registered smaller labor productivity than Romania.

**Figure 2 – Labour productivity in Agriculture (Euro per hour worked)**
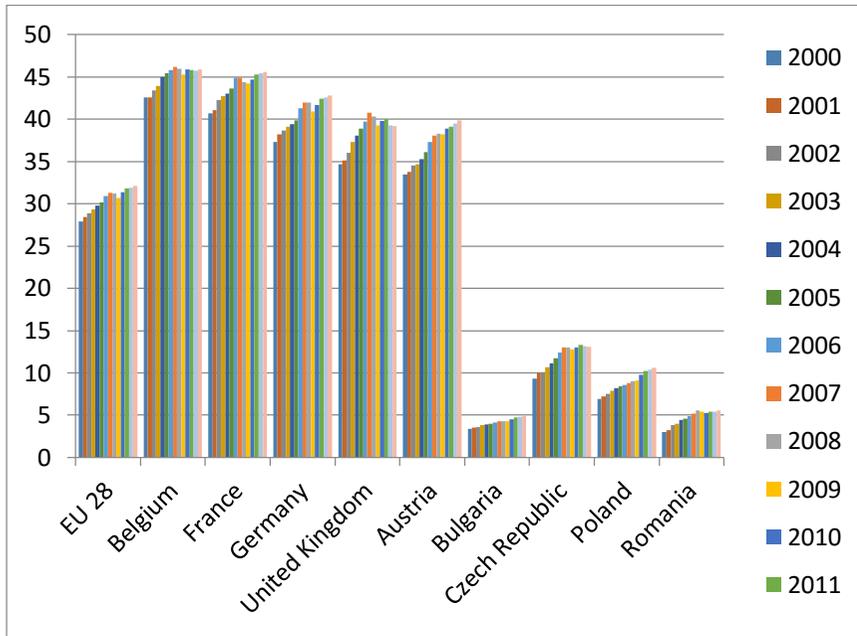


*Source: Author`s calculations, Eurostat Data*

For example, in 2013, labour productivity in Romania was 5,6 Eur. per hour worked, the second smallest in the EU28, after Bulgaria (4,9 Eur. per hour worked), and a lot under the EU28 average, of 32 Eur. per hour worked. The greatest labor productivity in the EU28 was achieved, in 2013, by Norway (69,6 Eur. per hour worked), followed by Denmark (53,4 Eur. per hour worked).

**Agricultural output**

Romanian agriculture`s contribution to Gross Domestic Product is very high compared to other European countries, more than three times higher than the European average, of 1.7% (Ministerul Fondurilor Europene, 2013). Although the labour productivity in this sector is almost the lowest in the European Union, the Gross Value Added (GVA) of Romanian agriculture exceeds the ones of Austria, Bulgaria, Croatia and other European countries, but is low above the ones of the developed economies, such as France or Germany (Figure 3). However, in 2011 and 2012, the GVA of Romanian agriculture represented only 5,3% and 3,9% respectively of the total GVA of the EU28.

**Figure 3 - Gross Value Added of the Agricultural Sector (million Eur.)**
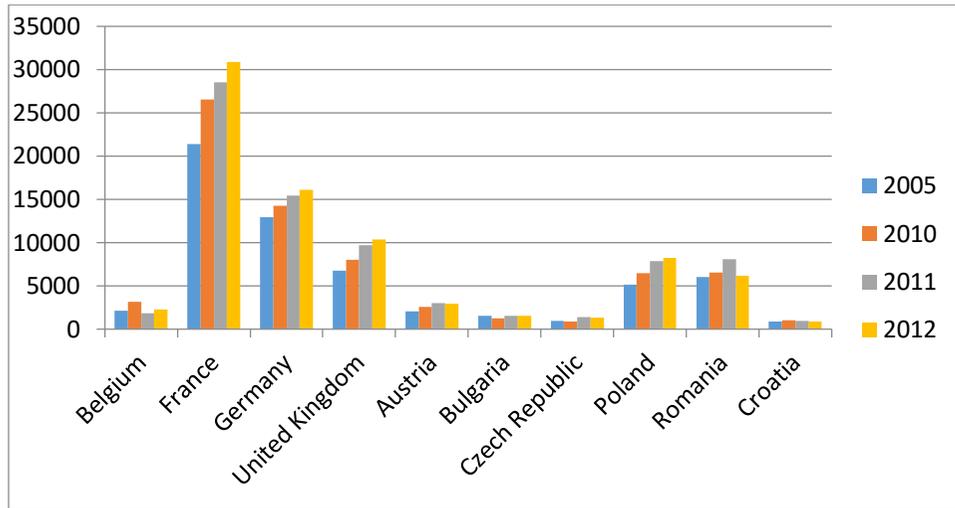


Regarding crop production, it is important to mention that the cultivated surfaces have diminished, in the period 2005 – 2012, both in Romania and in European Union. Under these circumstances, in this interval, the Romanian production of grain and potatoes has decreased, while the production of sunflower, rapeseed and sugar beet increased. In 2012, Romania was the fifth producer of cereals in the European Union, after France, Germany, Poland, UK and Spain, the second producer of sunflower after France, and the sixth producer of potatoes after Germany, Netherlands, France, UK and Belgium.

All in all, Romania`s total crop output is comparable with the ones of Poland or UK (Figure 4), and represented 6,2% and 4,3% respectively of the European crop output in 2011 and 2012. In 2012, Romania occupied the 8th place within the EU countries in terms of value of crop production (Cadrul National Strategic Rural).

**Figure 4 - Crop output (million Eur.)**
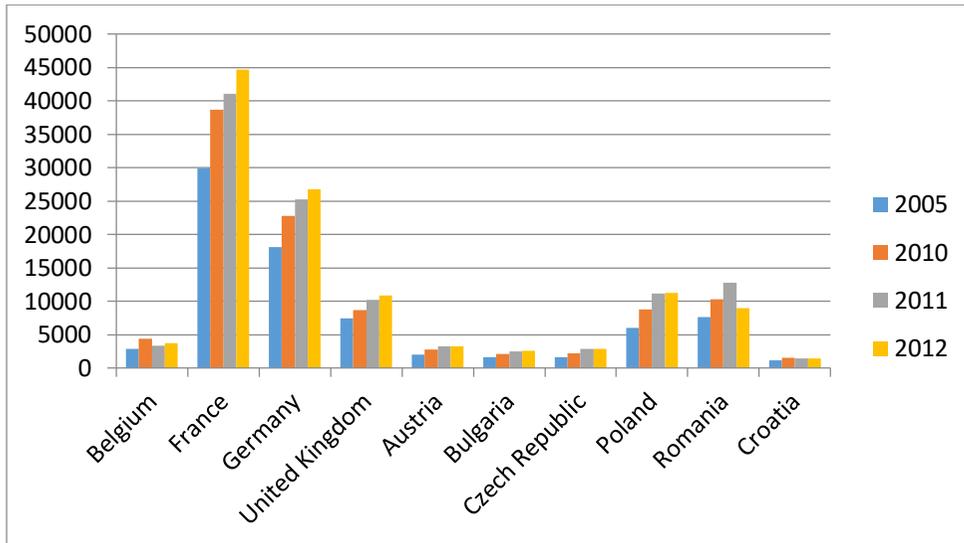


Source: Author`s calculations, Eurostat Data

The animal production in Romania, increased in the period 2005 - 2012 by 13,2%, ranking 8th place in the EU in 2012, after France, Germany, Italy, Spain, UK, Netherlands and Poland (Cadrul National Strategic Rural).

In Romania, within the period 2005 – 2012, cattle effectives declined by almost 30%, while in the European Union the same indicator dropped by 3,6%. In 2012, nine EU countries registered higher numbers of cattle effectives than Romania. For example, in France, cattle effectives were 9,5 times higher than in Romania.

Regarding swine effectives, Romania registered a downward trend, similar to the European Union. In 2012 swine effectives in Romania were 20,5% under the number registered in 2012, and their level was more than five times lower than the ones in Germany.

On the other hand, sheep and goat effectives have registered an upward trend in 2012 compared to 2005, by 16%. Therefore, in 2012, Romania had the 4th biggest number of sheep and goat effectives, after UK, Spain and Greece.

**Figure 5 - Animal output (million Eur.)**
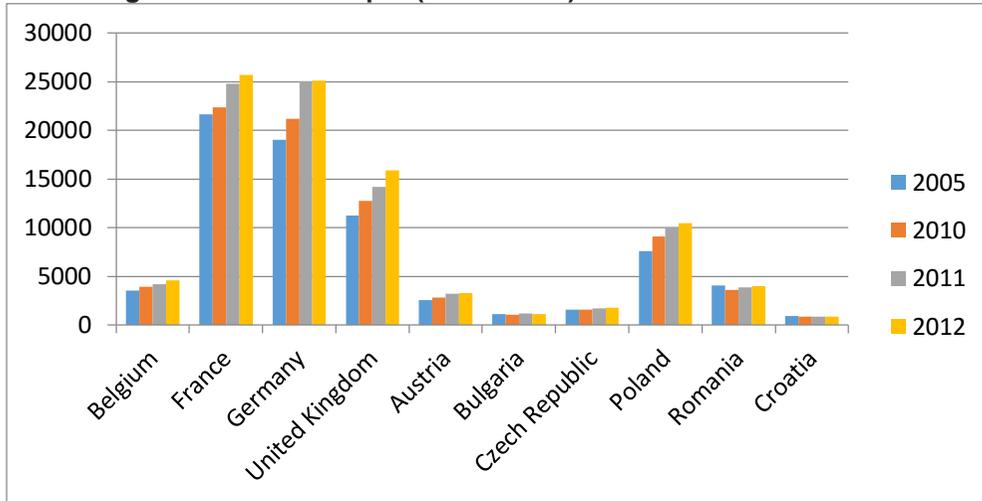


Source: Author`s calculations, Eurostat Data

Similarly, the poultry effectives have increased by 7% in 2012 compared to 2005, and Romania came on the 9th place in the European Union in this respect, after France, UK, Poland, Germany, Spain, Italy, Hungary and Belgium.

**Conclusions**

Low performance and competitiveness of the Romanian agriculture have been caused by improper agricultural policy in the context of low and diminishing investment to this sector. Therefore, in certain respects, Romanian agriculture is far beyond the developed European countries, and even beyond some of the developing ones.

Agriculture is an important sector of the Romanian economy, and almost one third of the employed population activates in this sector, but, unfortunately, labour productivity is a lot lower than in other European countries.

Under these circumstances, Gross Value Added (GVA) of Romanian agriculture is far below the ones of the developed economies. Although Romania is situated among the greatest five producers of cereals or sunflower within the European Union, the overall crop ouput is a lot lower than in developed countries, and regarding animal output, Romania`s situation is even worse.

In order to achieve a competitive agriculture, Romania should implement appropriate agricultural policies in order to determine the concentration of production into profitable and effective medium-sized agricultural companies. Also, agriculture`s financing should be improved so that it provides proper capital endowment, incorporating modern technology.

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# EFFICIENT USE OF ROMANIA'S AGRICULTURAL POTENTIAL BY INCREASING LABOR PRODUCTIVITY

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**Abstract:** *Romania has a significant agricultural potential and agriculture in our country has an important share among sectors of the national economy. However, even if the Romanian labor productivity in agriculture had a positive development in the period 2007-2014, the level is lower than that achieved in the agricultural performance in the European Union. In order to improve labor productivity in Romanian agriculture, it is necessary to take a series of measures in order to reduce the disparities in this sector compared with the performance level from EU. For increasing the Romanian labor efficiency in agriculture, it is necessary to encourage investment and to improve the level of technology in mechanization; for the physical work done by Romanian farmer, to adjust with the performance benefits of using mechanization.*

**Keywords: productivity, labor, evolution, gaps, measures**

**JEL classification:** Q1,Q18

## Introduction

In order to have an efficient agricultural sector, Romania must reach a level of labor productivity in agriculture adjusted with the performers in the agricultural sectors of the European Union. At present, Romanian agriculture records a large share of employment in agriculture compared to the agricultural sectors of the EU Member States. However, the value of agricultural production in Romania is at a lower level than its natural potential and its main competitors from the common market. In this research we analyzed the value of agricultural production developments in the post-accession period to the European Union on three sectors (vegetable, animal production and services in agriculture) compared with the other EU agricultural sectors. We considered important to an analysis of the main indicators on labor productivity level in Romanian agriculture, namely we investigated: the value of agricultural production in EU Member States in the 2014, employment in agriculture in the EU Member States in the period under review, the share of employment in agriculture in total employment in the EU, evolution of labor force employed in Romanian agriculture in the period, evolution of the labor productivity in the European Union.

## Table no. 1- Value of agricultural production in the EU member states, 2014

| State | TOTAL Mil Euro | VEGETAL Mil Euro | % | ANIMAL Mil Eur | % | SERVICES* Mil Euro | % |
|---|---|---|---|---|---|---|---|
| Belgium | 8,083.29 | 3,373.98 | 41.74 | 4,662.80 | 57.68 | 39.41 | 0.49 |
| Bulgaria | 3,819.28 | 2,485.06 | 65.07 | 1,086.74 | 28.45 | 271.31 | 7.10 |
| Czech Republic | 4,744.60 | 2,815.94 | 59.35 | 1,820.87 | 38.38 | 106.77 | 2.25 |
| Denmark | 10,470.44 | 3,339.67 | 31.90 | 6,575.90 | 62.80 | 548.58 | 5.24 |
| Germany | 51,042.70 | 24,040.20 | 47.10 | 25,142.50 | 49.26 | 2,005.00 | 3.93 |
| Estonia | 853.72 | 382.85 | 44.84 | 428.75 | 50.22 | 41.87 | 4.90 |
| Ireland | 7,411.62 | 1,811.20 | 24.44 | 5,193.63 | 70.07 | 406.11 | 5.48 |
| Greece | 9,742.00 | 6,795.24 | 69.75 | 2,609.82 | 26.79 | 354.03 | 3.63 |
| Spain | 41,003.24 | 24,409.37 | 59.53 | 16,115.18 | 39.30 | 475.40 | 1.16 |
| France | 70,914.13 | 39,682.63 | 55.96 | 26,895.00 | 37.93 | 4,293.60 | 6.05 |
| Croatia | 2,316.00 | 1,431.93 | 61.83 | 792.49 | 34.22 | 96.53 | 4.17 |
| Italy | 48,485.95 | 26,650.53 | 54.97 | 16,567.08 | 34.17 | 5,113.96 | 10.55 |
| Cyprus | 695.81 | 357.44 | 51.37 | 338.01 | 48.58 | 0.35 | 0.05 |
| Latvia | 1,142.75 | 602.09 | 52.69 | 508.77 | 44.52 | 32.56 | 2.85 |
| Lithuania | 2,522.98 | 1,546.01 | 61.28 | 936.17 | 37.11 | 44.86 | 1.78 |
| Luxembourg | 415.17 | 191.42 | 46.11 | 218.76 | 52.69 | 3.56 | 0.86 |
| Hungary | 7,635.89 | 4,557.48 | 59.68 | 2,709.27 | 35.48 | 0.00 | 0.00 |
| Malta | 119.74 | 48.82 | 40.77 | 70.92 | 59.23 | 0.00 | 0.00 |
| Netherlands | 26,752.84 | 12,897.99 | 48.21 | 11,245.84 | 42.04 | 2,467.99 | 9.23 |
| Austria | 6,607.26 | 2,864.51 | 43.35 | 3,440.36 | 52.07 | 285.97 | 4.33 |
| Poland | 22,801.23 | 11,003.04 | 48.26 | 11,295.69 | 49.54 | 490.06 | 2.15 |
| Portugal | 6,469.85 | 3,598.06 | 55.61 | 2,740.07 | 42.35 | 134.20 | 2.07 |
| Romania | 15,036.00 | 10,938.40 | 72.75 | 3,888.15 | 25.86 | 168.38 | 1.12 |
| Slovenia | 1,151.25 | 584.03 | 50.73 | 548.03 | 47.60 | 19.20 | 1.67 |
| Slovakia | 2,120.96 | 1,166.39 | 54.99 | 828.77 | 39.08 | 122.04 | 5.75 |
| Finland | 4,087.93 | 1,500.37 | 36.70 | 2,486.56 | 60.83 | 101.00 | 2.47 |
| Sweden | 5,765.67 | 2,653.09 | 46.02 | 2,773.31 | 48.10 | 353.27 | 6.13 |
| United Kingdom | 30,683.53 | 11,664.46 | 38.02 | 17,679.43 | 57.62 | 1,259.00 | 4.10 |
| TOTAL UE | 392,895.83 | 203,392.21 | 51.77 | 169,598.87 | 43.17 | 19,235.00 | 4.90 |

*Source: calculations on EUROSTAT data*

*\*data from 2013*

From Table 1 it appears that the total agricultural production in the year 2014 in European Union reaches significant values (392,895.83 million), from the lowest values recorded in the total production of Malta (119.74 million Euro), Luxembourg (415 170 000 Euro), Cyprus (Euro 695.81 million) and Estonia (Euro 853.72 million), at the highest total value of output produced by France (70914.13 million), Germany (51042.70 million), Italy

(48485.95 million), Spain (41003.24 million) and the UK (30683.53 million). In Romania vegetable farming sector has the highest share (10938.40 million), ranking with values close to those reported by the Polish vegetable agriculture (11003.04 million) and from that of Great Britain (11664.46 million). Regarding the animal production sector of Romania (3888.15 million Euro) recorded similar values as Austria (3440.36 million) and recorded by Belgium (4,662.80milioane Euro), which places Romania, in terms of performance in the animal production, between Member States with lower agricultural performance (although has significant areas with high potential for the animal production, as well as climatic conditions). Moreover, Romania, although present conditions to conduct both agricultural sectors (plant and animal), the value of the vegetable production (72.75%) is higher than the animal production (25.86%). Livestock farming sector in Romania has the lowest percentage (25.86%) compared to the EU livestock sector. Only two Member States recorded values close to that of Romania registered in the animal production, namely Greece (26.79%) and Bulgaria (28.4%). In conclusion, Romania has the highest share of vegetable sector (72.75%) in total value of agricultural production from the European Union, but without important values, which are below that of Poland (10,938.40 compared to 11,003.04 million). Moreover Netherlands ahead in this chapter Romania (12,897.99 compared to 10,938.40 million), although its agricultural potential is lower Romania (in terms of areas for agriculture and the climatic conditions). As regards the services sector in agriculture, they are found to have greater importance in Italy (10.55%), Netherlands (9.23%) and Bulgaria (7.10%)

**Graph no. 1 – Value of the agricultural production in EU member states, 2014**
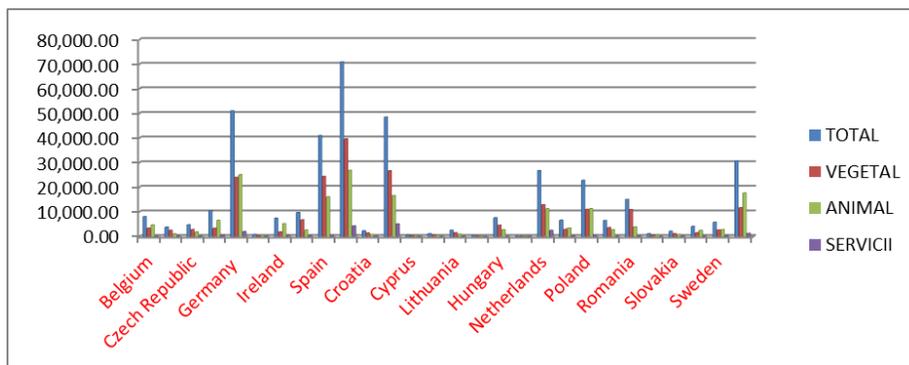


*Source: calculations on EUROSTAT data*

In chart 1, we find that the highest value of agricultural production at the level of 2014 is attributed to vegetable sectors of European Union agriculture, being hated and livestock sectors of the service. Among the Member States with significant agricultural sectors in Germany, slightly ahead livestock sector vegetable sector. In the other countries that have significant agricultural sectors, vegetable sector ahead livestock sector. In Romania vegetable agriculture is the most important, followed at a considerable distance from the animal. Another exception is the UK, where the values of animal production are much higher than the vegetable sector.

**Table no. 2 – Employment in agricultural in EU Member States in the period 2007 – 2014**

-thousands pers-

| STATES | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|---|---|---|---|
| UE | 11,909.3 | 11,690.3 | 11,381.8 | 10,341.8 | 10,074.1 | 10,020.5 | 9,930.4 | 9,719.3 |
| Belgium | 66.0 | 64.9 | 63.0 | 61.9 | 57.6 | 58.1 | 57.9 | 57.0 |
| Bulgaria | 494.4 | 465.1 | 435.8 | 406.5 | 375.8 | 347.4 | 321.2 | 299.0 |
| Czech Republic | 127.0 | 120.7 | 114.6 | 108.8 | 106.2 | 105.8 | 105.1 | 105.1 |
| Denmark | 58.8 | 58.1 | 55.1 | 54.2 | 52.1 | 52.4 | 52.7 | 52.7 |
| Germany | 554.2 | 543.1 | 532.2 | 522.0 | 518.0 | 514.0 | 503.0 | 504.0 |
| Estonia | 32.9 | 31.2 | 29.3 | 25.4 | 24.4 | 23.1 | 22.3 | 22.0 |
| Ireland | 150.2 | 147.9 | 146.5 | 165.6 | 165.6 | 165.6 | 165.6 | 165.6 |
| Greece | 574.8 | 572.7 | 570.6 | 441.5 | 449.4 | 458.0 | 467.0 | 454.5 |
| Spain | 998.2 | 1,012.4 | 922.0 | 963.8 | 903.3 | 889.7 | 841.7 | 824.3 |
| France | 867.1 | 847.7 | 827.6 | 809.1 | 799.2 | 788.4 | 781.0 | 774.0 |
| Croatia | 209.0 | 205.0 | 203.0 | 202.0 | 199.0 | 202.0 | 196.3 | 193.6 |
| Italy | 1,216.0 | 1,182.0 | 1,149.0 | 1,161.0 | 1,124.0 | 1,085.0 | 1,084.0 | 1,071.0 |
| Cyprus | 25.9 | 25.9 | 25.9 | 25.4 | 25.4 | 25.3 | 25.0 | 25.0 |
| Latvia | 107.4 | 99.2 | 92.9 | 85.9 | 88.3 | 84.5 | 82.9 | 77.2 |
| Lithuania | 158.0 | 150.9 | 147.1 | 143.4 | 142.8 | 145.4 | 144.8 | 147.0 |
| Luxembourg | 3.8 | 3.7 | 3.6 | 3.7 | 3.7 | 3.8 | 3.6 | 3.6 |
| Hungary | 459.3 | 430.1 | 442.3 | 444.2 | 437.0 | 433.3 | 444.4 | 445.3 |
| Malta | 4.2 | 4.2 | 4.2 | 4.9 | 4.9 | 4.9 | 5.0 | 5.0 |
| Netherlands | 185.8 | 181.7 | 179.7 | 150.4 | 149.1 | 147.3 | 147.0 | 145.7 |
| Austria | 135.5 | 132.3 | 130.9 | 127.5 | 125.6 | 125.1 | 124.3 | 122.1 |
| Poland | 2,299.3 | 2,299.3 | 2,213.8 | 1,914.8 | 1,914.8 | 1,914.9 | 1,937.1 | 1,937.1 |
| Portugal | 351.3 | 343.3 | 337.9 | 309.4 | 299.0 | 296.6 | 285.6 | 276.8 |
| Romania | 2,205.0 | 2,152.0 | 2,152.0 | 1,639.0 | 1,532.0 | 1,573.0 | 1,564.0 | 1,444.0 |
| Slovenia | 84.0 | 83.2 | 80.2 | 77.0 | 78.0 | 80.8 | 82.7 | 83.6 |
| Slovakia | 91.3 | 90.3 | 86.0 | 56.1 | 57.4 | 57.1 | 54.2 | 53.1 |
| Finland | 90.9 | 88.7 | 86.9 | 82.1 | 81.2 | 79.5 | 75.9 | 74.9 |
| Sweden | 68.6 | 67.4 | 66.4 | 65.3 | 64.2 | 63.1 | 62.1 | 61.0 |
| United Kingdom | 290.5 | 287.4 | 283.3 | 291.1 | 296.1 | 296.4 | 294.0 | 295.0 |

*Source: calculations on EUROSTAT data*

Table. 2 shows that the evolution in agricultural employment in EU Member States in the period 2007-2014 decreases from 11,909.3 thousand persons in 2007 to 9719.3 thousand persons in 2014. In Romania it is found that the evolution of employment in this period

considered significant a decrease from 2,205 thousand persons in 2007 to 1,573 thousand persons in 2012 (for 2013 and 2014 there are no data). However, even if the evolution of agricultural employed in Romania is decreasing (from 2,205 thousand persons in 2007 to 1.573 thousand persons in 2012), still, it is the second largest state in the EU in the period, after Poland (from 2299.3 thousand in 2007 to 1914.9 thousand persons in 2012 and 1937.1 thousand persons in 2014). However, it appears that the evolution of employment in the agricultural sector in the UK is increasing (from 290,500 people in 2007 to 295.0 thousand in 2014), being among the few Member States, and the only one with high agricultural potential, along with Ireland (from 150,200 people in 2007 to 165,600 people in 2014) and Malta (from 4200 persons in 2007 to 5000 persons in 2014), which increases their number of employed in agriculture in the period. The remaining Member States register declines more or less large of the employment in agricultural activities during 2007-2014.

**Table no. 3- Share of employment in agriculture in total employment in the EU between 2007 - 2014**

| STATES | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|---|---|---|---|
| European Union (28 countries) | 5.5 | 5.4 | 5.4 | 5.4 | 5.2 | 5.1 | 5.0 | 5.0 |
| Belgium | 1.6 | 1.6 | 1.5 | 1.4 | 1.3 | 1.3 | 1.3 | 1.3 |
| Bulgaria | 19.4 | 19.3 | 19.7 | 19.7 | 19.6 | 18.9 | 19.2 | 19.4 |
| Czech Republic | 3.3 | 3.2 | 3.3 | 3.1 | 3.2 | 3.3 | 3.3 | 3.2 |
| Denmark | 2.6 | 2.6 | 2.6 | 2.6 | 2.5 | 2.6 | 2.6 | 2.6 |
| Germany | 1.7 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.5 | 1.5 |
| Estonia | 4.6 | 3.9 | 3.9 | 4.2 | 4.4 | 4.5 | 4.2 | 3.7 |
| Ireland | 5.2 | 5.4 | 4.9 | 4.5 | 4.5 | 4.7 | 5.7 | 5.7 |
| Greece | 11.1 | 10.9 | 11.2 | 11.4 | 11.4 | 12.1 | 12.6 | 12.5 |
| Spain | 4.0 | 3.8 | 3.9 | 4.0 | 4.0 | 4.0 | 4.1 | 4.0 |
| France | 3.1 | 2.9 | 2.9 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 |
| Croatia | 13.6 | 12.7 | 13.3 | 14.2 | 14.5 | 12.2 | 10.7 | 9.5 |
| Italy | 3.9 | 3.8 | 3.8 | 3.9 | 3.8 | 3.7 | 3.7 | 3.7 |
| Cyprus | 4.5 | 4.3 | 4.8 | 4.5 | 4.5 | 3.6 | 3.9 | 3.8 |
| Latvia | 8.1 | 7.6 | 8.4 | 7.8 | 8.0 | 7.8 | 7.6 | 7.4 |
| Lithuania | 10.1 | 8.0 | 9.0 | 8.8 | 8.5 | 8.8 | 8.4 | 9.2 |
| Luxembourg | 1.3 | 1.3 | 1.3 | 1.3 | 1.2 | 1.2 | 1.2 | : |
| Hungary | 7.5 | 7.1 | 7.1 | 7.2 | 6.9 | 7.2 | 6.9 | 6.8 |
| Malta | 2.2 | 2.0 | 2.2 | 2.1 | 2.0 | 1.9 | 1.8 | 1.7 |
| Netherlands | 2.4 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.4 |
| Austria | 5.2 | 5.0 | 5.0 | 4.8 | 4.7 | 4.5 | 4.4 | 4.3 |
| Poland | 14.6 | 14.0 | 13.3 | 13.0 | 12.9 | 12.6 | 12.0 | 11.5 |
| Portugal | 11.6 | 11.4 | 11.6 | 11.2 | 11.1 | 11.7 | 11.7 | 11.6 |
| Romania | 30.6 | 29.6 | 30.1 | 31.6 | 30.0 | 30.6 | 30.2 | 29.2 |
| Slovenia | 8.7 | 8.3 | 8.3 | 8.3 | 8.3 | 8.2 | 8.4 | 8.3 |
| Slovakia | 3.8 | 3.6 | 3.5 | 3.4 | 3.3 | 3.2 | 3.4 | 3.3 |
| Finland | 4.9 | 4.8 | 4.9 | 4.8 | 4.6 | 4.5 | 4.5 | 4.7 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Sweden | 2.0 | 2.0 | 2.1 | 2.2 | 2.3 | 2.3 | 2.2 | 2.2 |
| United Kingdom | 1.2 | 1.2 | 1.3 | 1.3 | 1.3 | 1.3 | 1.2 | 1.4 |

*Source: calculations on EUROSTAT data*

From Table 3, it is found that the overall share of employment in agriculture in total employment in the EU in the period 2007-2014 decreases from 5.5% to 5% of the EU population. Regarding Romania, it appears that there is a decrease, but it is quite small (from 30.6% in 2007 to 29.2% in 2014). As Cretan (2015, p.64-74) underlines a "comparative analysis of the share the agro-food sector holds in total gross value added with the share the same sector has in total employment reveals that, in Romania, the workforce employed in the agro-food sector brings less value added than the labour employed in other sectors of the economy, with high implications on labour productivity".

**Graph no.2 - Share of employment in agriculture in total employment in the EU between 2007 – 2014**
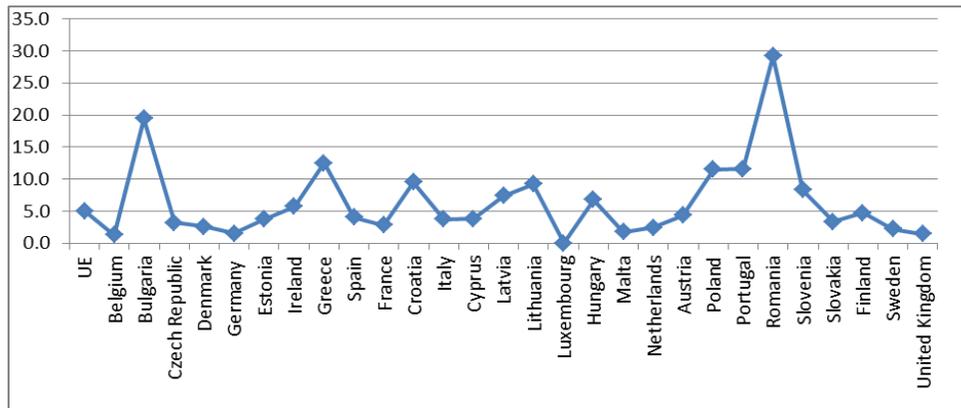


*Source: calculations on EUROSTAT data*

Chart. 2 shows that the share of population employed in agriculture in Romania in 2014 recorded the highest percentage in total employment in the European Union. Also, Bulgaria records the second highest share of EU farming population in the year 2014. However, the analysis of statistical data recorded by Romania and Bulgaria, show significant differences for the share of employment in agriculture both state, compared to the situation in other Member States of the EU in 2014.

**Graph no.3 – The evolution of the labor force employed in agriculture in Romania in the period 2007 - 2014**
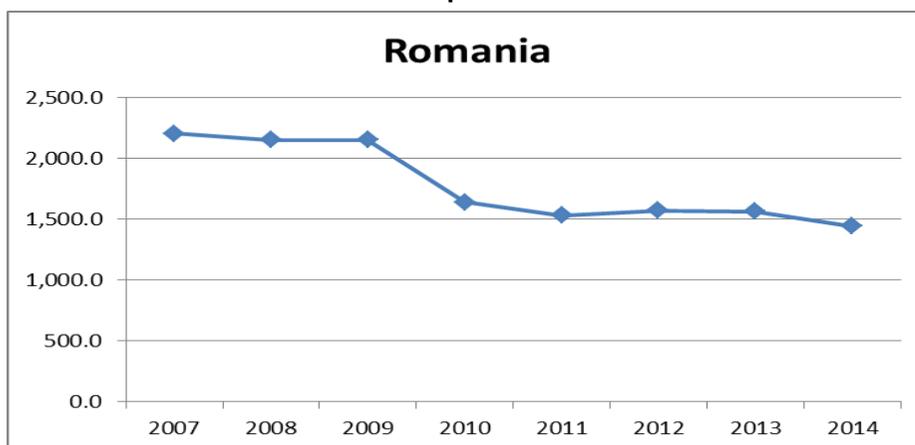


*Source: calculations on EUROSTAT data*

In chart 3, it is noted that during 2007-2014, the evolution of labor employed in agriculture has recorded an overall decline. More specifically, the largest decrease was recorded from 2009 to 2010, followed by a period of stagnation between 2011 and 2012, and at the end of the period (2013-2014) work force in agriculture decreased slightly Romania.

**Table no.4- Evolution of labour productivity in the European Union in the period 2007-2014**

| | | | | | | | | thousands Euro/worker |
|---|---|---|---|---|---|---|---|---|
| **STATES** | **2007** | **2008** | **2009** | **2010** | **2011** | **2012** | **2013** | **2014** |
| European Union | 29.67 | 31.88 | 29.08 | 34.21 | 38.39 | 39.67 | 40.58 | 40.42 |
| Belgium | 111.58 | 114.80 | 108.65 | 124.79 | 137.56 | 150.87 | 148.76 | 141.81 |
| Bulgaria | 6.14 | 8.92 | 7.89 | 8.58 | 10.75 | 11.98 | 12.81 | 12.77 |
| Czech Republic | 33.43 | 39.05 | 31.73 | 36.55 | 44.57 | 45.01 | 46.01 | 45.14 |
| Denmark | 153.73 | 155.30 | 152.01 | 176.97 | 203.38 | 224.34 | 208.71 | 198.68 |
| Germany | 83.27 | 91.91 | 81.90 | 87.91 | 100.85 | 102.60 | 103.73 | 101.28 |
| Estonia | 19.71 | 19.59 | 17.91 | 24.18 | 30.77 | 36.80 | 39.27 | 38.81 |
| Ireland | 39.78 | 41.54 | 34.23 | 34.01 | 40.01 | 42.47 | 46.02 | 44.76 |
| Greece | 18.21 | 17.86 | 17.25 | 22.52 | 22.20 | 22.01 | 20.99 | 21.43 |
| Spain | 41.39 | 39.86 | 39.90 | 40.69 | 43.99 | 45.77 | 50.92 | 49.74 |
| France | 75.30 | 79.07 | 74.74 | 81.77 | 88.82 | 94.85 | 91.54 | 91.62 |
| Croatia | 13.42 | 14.91 | 14.14 | 14.10 | 14.04 | 13.40 | 12.53 | 11.96 |
| Italy | 36.85 | 40.23 | 38.13 | 38.09 | 42.55 | 45.14 | 47.33 | 45.27 |
| Cyprus | 23.44 | 23.27 | 24.47 | 25.75 | 26.50 | 27.19 | 27.62 | 27.83 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Latvia | 8.81 | 9.65 | 8.57 | 10.26 | 11.38 | 14.75 | 14.49 | 14.80 |
| Lithuania | 12.63 | 14.50 | 11.89 | 13.53 | 17.08 | 19.33 | 18.31 | 17.16 |
| Luxembourg | 89.78 | 94.12 | 85.45 | 82.59 | 87.46 | 105.92 | 115.99 | 115.33 |
| Hungary | 14.15 | 17.80 | 12.88 | 13.49 | 17.35 | 16.91 | 17.13 | 17.15 |
| Malta | 28.46 | 30.70 | 29.07 | 24.31 | 24.63 | 24.59 | 25.02 | 23.95 |
| Netherlands | 125.30 | 131.58 | 124.27 | 162.31 | 167.12 | 176.30 | 186.41 | 183.62 |
| Austria | 42.71 | 46.16 | 42.18 | 46.48 | 54.05 | 54.99 | 53.59 | 54.11 |
| Poland | 8.69 | 9.43 | 7.84 | 10.26 | 11.80 | 12.04 | 12.09 | 11.77 |
| Portugal | 17.27 | 18.60 | 17.78 | 20.34 | 20.96 | 21.53 | 23.48 | 23.37 |
| Romania | 5.98 | 7.84 | 5.96 | 8.60 | 10.97 | 8.34 | 10.40 | 10.41 |
| Slovenia | 13.42 | 14.15 | 13.23 | 14.41 | 15.86 | 14.15 | 13.77 | 13.77 |
| Slovakia | 21.07 | 24.90 | 20.23 | 31.39 | 37.89 | 39.80 | 42.16 | 39.94 |
| Finland | 40.17 | 41.74 | 40.63 | 45.42 | 52.28 | 56.91 | 57.32 | 54.58 |
| Sweden | 71.10 | 71.30 | 60.70 | 76.52 | 86.56 | 96.14 | 97.80 | 94.52 |
| United Kingdom | 75.02 | 82.49 | 72.84 | 77.60 | 87.02 | 95.26 | 98.03 | 104.01 |

*Source: calculations on EUROSTAT data*

From table 4, it appears that labor productivity in the European Union in the period 2007-2014 had a positive development from 29 670 Euro per worker in 2007 to 40 420 Euro per worker in 2014. However, it notes that the Romanian labor productivity in the agricultural sector is the lowest in the European Union, even if the indicator is positive, almost double from 5980 Euro per worker in 2007 to 10 410 Euro per worker in 2014. It appears that Bulgaria is the second Member State with worst result on labor productivity in agriculture between the EU Member States, from 6140 Euro per worker in 2007 to 12 770 Euro per worker in 2014. Slovenia stagnates in labor productivity in the agricultural sector or (from 13 420 Euro per worker in 2007 to 13 770 Euro per worker in 2014). Although previous analysis show that Britain has increased the share of employment in agriculture, this records also an increase in labor productivity in agriculture in the period under review, from 75 020 Euro per worker in 2007 to 104 010 Euro per worker in 2014. The only two Member States that labor productivity declines during analysis are Croatia (from 13 420 Euro per worker in 2007 to 11 960 Euro per worker in 2014) and Malta (from 28,460 Euro per worker in 2007 to 23 950 Euro per worker in 2014).

As Istudor N. and Petrescu I.E (2015, pp. 4-9) underline that in order to ensure Romania's macroeconomic stability, financial policies promoted by the State and the European Union should stimulate savings and investment, so the labor productivity in the agricultural sector could increase.

**Graph no. 4– Evolution of labor productivity in the agricultural sector in Romania in the period 2007 – 2014**
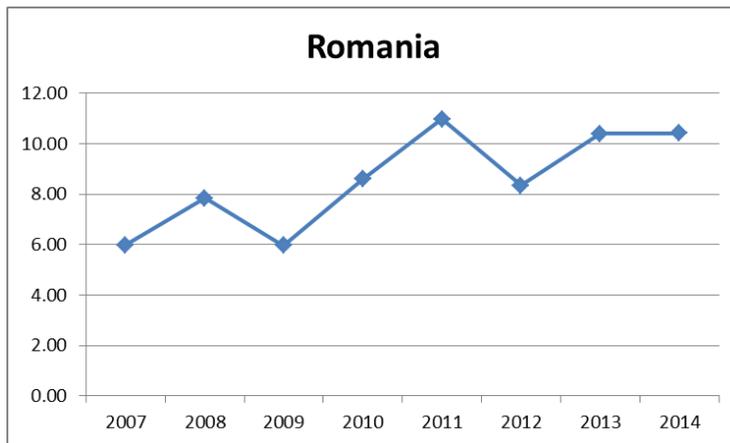


*Source: calculations on EUROSTAT data*

Chart. 4 shows that overall productivity gains in agriculture in Romania in the period 2007-2014 is positive. However, between 2011 and 2012 there was a decrease, and between 2013 and 2014 there is stagnation. Although Romania has a positive trend in labor productivity in agriculture, in fact, the previously calculated data indicates that there is a significant difference compared with other European Union member states in this respect, and their elimination or even diminution is imperative to increase the competitiveness of Romanian agriculture.

**Conclusions**

Romanian labor productivity in the agricultural sector is a performance indicator that expresses the efficiency with which it operates the agricultural activity in our country. The analysis was found that the Romanian agricultural sector shows important differences in this respect with the main competitors of the single market. However, the Romanian agriculture is based mainly on crop production (72.75%) and less on the animal production (25.86%) or services in agriculture (1.12%). Even if Romania is found that the evolution of the employed population during 2007-2014 in agriculture is decreasing from 2.205 thousand persons in 2007 to 1.573 thousand persons in 2012, it is the second state with the largest population employed in agriculture from the EU in the period under review. The only Member State that records a greater evolution of the number of people employed in agriculture is Poland (from 2299.3 thousand persons to 1914.9 thousand persons in 2007 thousand in 2012 and 1937.1 thousand in 2014) but with relatively poor results in terms of agricultural production obtained.

The analysis of performances shows that labor productivity in agriculture in Romania is the lowest in the European Union, even if the indicator is positive, almost doubled (from 5980 Euro per worker in 2007 to 10 410 Euro per worker in 2014). Bulgaria is the Member State which recorded the second worst performance in labor productivity of EU agricultural agriculture (from 6140 Euro per worker in 2007 to 12 770 Euro per worker in 2014). In order to improve labor productivity in the Romanian agricultural sector, it is necessary to

take a number of measures in order to reduce the disparities in this area to these sectors of the EU farm performance. To improve work efficiency in Romanian agriculture, it is necessary to increase investment in order to improve the level of technology and mechanization because the physical work made by Romanian farmer, to adjust the performance benefits of using mechanization. To increase the chances that this goal can be achieved, it is viable to increase the absorption of European funds for agriculture for the period 2014-2020.

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# THE ECONOMIC IMPACT OF THE DIGESTIVE DISEASES ACROSS THE EU MEMBER STATES. THE COSTS ANALYSIS IN CHOLECYSTECTOMY

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**Abstract:** *United European Gastroenterology provide wide studies and researches on the economic impact of the digestive diseases across the countries that are members of the European Union, very useful in planning health services, in making the case for investment in research where there are clear gaps in knowledge, and in reflecting the economic differences across the EU member states in the funding available to support health services. These studies reflect that there are important disparities in the accessibility to high-quality healthcare even among the industrialized countries. Out of all the digestive diseases, the gallstone disease is one of the most common and expensive of the health problems, in industrialized countries, like those of the European Union are. In general, symptomatic or complicated gallstone disease is treated by cholecystectomy, with surgical removal of the gallbladder. The advent of laparoscopic cholecystectomy has revolutionized the management of the gallstone disease, causing an increase in the rate of cholecystectomies. This study represents an analysis of the hospitalization costs involved by two surgical treatment options: laparoscopic cholecystectomy and open cholecystectomy. The investigation of the costs was done according to the type of intervention chosen and comprised the direct costs of hospitalization, including diagnostic tests and general expenses of medical assistance, pharmaceutical and medical supplies. The results are based on the analysis of the costs of cholecystectomies in the surgical department of the Emergency County Hospital Oradea for the year 2014 (781 cases). The average cost per hospitalized patient was 1.970 RON, lower in patients with laparoscopic cholecystectomy (1.579 RON). The average cost per patient with open cholecystectomy was 55% higher than for laparoscopic surgery (2.442 RON). Even if the laparoscopic operation cost is higher because of the equipment it uses, the reduction of the number of complications and of the average length of hospitalization results in a significant reduction of the hospitalization costs.*

**Keywords:** *hospitalization costs, digestive diseases, Gallston desease, laparoscopic cholecystectomy, open cholecystectomy.*

## Introduction

United European Gastroenterology provide wide studies and researches on the economic impact of the digestive diseases across the countries that are *members* of the European Union, very useful in planning health services, in making the case for investment in research where there are clear gaps in knowledge, and in reflecting the economic differences across the EU member states in the funding available to support health services. These studies reflect that there are important disparities in the accessibility to

high-quality healthcare even among the industrialized countries. Out of all the digestive diseases, the gallstone disease is one of the most common and expensive of the health problems in industrialized countries, with an overall prevalence of 10-20% (Everhart, 1999).

Available epidemiological data show a significant variation in the prevalence of this disease among the population, depending on ethnicity. It was noticed a higher frequency in the Caucasian, Hispanic population and among the inhabitants of Western America, and lower in Eastern Europe, African-American and Japan (Farthing, 2014)

Numerous studies have shown that the formation of gallstones is determined by several factors, some of them unchangeable: ethnicity, age, sex, other changeable: diet, sedentary lifestyle, obesity, rapid weight loss and the use of some medicines (Stinton, 2012). The advent of laparoscopic cholecystectomy has revolutionized the management of gallstone diseases, causing an increase in the rate of cholecystectomies (Shaffer, 2005; Marshall, 1994).

Laparoscopic cholecystectomy is less invasive and with lower surgical risk compared to the classical surgical procedure, which resulted in increasing the number of surgeries, especially among patients at high risk for conventional intervention and of those with mild symptoms (Shaffer, 2005; ARCE, 2013).

Even if the progress in the medical field influences positively the postoperative evolution of patients open operated, the laparoscopic procedure is preferable when it is appropriate for the patient because it is superior in terms of patient recovery time, pain and complications. The cost of a laparoscopic intervention is higher than that of a classical intervention this being determined by the specific equipment and tools used in this type of surgery, but because of the advantages listed above, the total direct costs can be significantly reduced by using this procedure (Kang, 2003; Strasberg, 1993; Cook, 1994, ARCE, 2013).

Given the high prevalence of this disease and the surgical treatment options, this study attention is directed towards the analysis of the hospitalization costs involved by laparoscopic cholecystectomy and open cholecystectomy.

**Material and methods**

We analysed the costs of cholecystectomies in surgical department, of the Emergency County Hospital Oradea for the year 2014. In the studied period 5.979 cases were discharged from surgery, the percent of patients with cholecystectomy was 13.06% (781 cases) as it can be seen in Figure 1.



Cholecystectomies
13.08%

86.92%
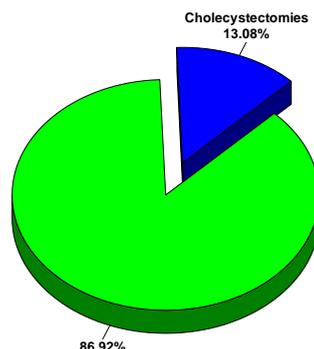
**Figure 1:** The percent of patients with cholecystectomy

The investigation of the costs was done according to the type of intervention chosen and comprised direct costs of hospitalization, including diagnostic tests and general expenses of medical assistance, pharmaceutical and medical supplies.

Statistical analysis was performed using SPSS 19. We calculated average parameters, frequency ranges, standard deviations, tests of statistical significance by Student method (t test) and $\chi^2$

**Results**

Of the 781 cases, 72.60% were laparoscopic cholecystectomies and 27.4% open cholecystectomies, of which 2.43% after the attempted laparoscopic cholecystectomy (table 1).

**Table 1:** The distribution according to the type of surgery

| Type of intervention | No. of cases | % |
|---|---|---|
| Laparoscopic cholecystectomy | 567 | 72.60 |
| Open cholecystectomy | 214 | 27.40 |

The prevalence of complications was 9.70% among the patients with laparoscopic cholecystectomy and 21.96% among the patients with open cholecystectomy (p<0.001), especially in elderly patients (table 2).

**Table 2:** The prevalence of complications related to the type of surgery

| Type of intervention | No. of cases | % |
|---|---|---|
| Laparoscopic cholecystectomy | 55 | 9.70 |
| Open cholecystectomy | 47 | 21.96 |

The average length of hospitalization was 5.04 days, the lowest being for the laraposcopic cholecystectomy (3.92 days) significantly lower than the open cholectystectomy (7.14 days) (p=0.021) (table 3 and figure 2).

**Table 3:** The average length of hospitalization

| Type of intervention | Minimum | Maximum | Average |
|---|---|---|---|
| Laparoscopic cholecystectomy | 1 | 9 | 3.92±1.37 |
| Open cholecystectomy | 3 | 12 | 7.14±2.06 |
| **Total** | **1** | **19** | **5.04±2.33** |
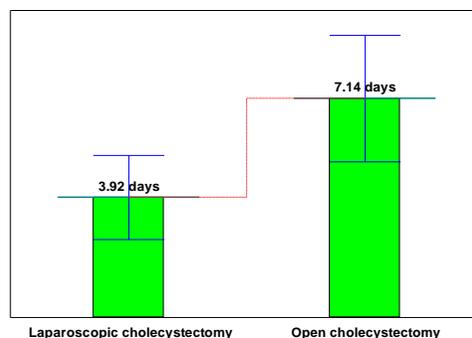


**Figure 2:** The average length of hospitalization

The average cost per hospitalized patient was 1.970 RON, lower in patients with laparoscopic cholecystectomy (1.579 RON). The average cost per patient with open cholecystectomy was 55% higher than for laparoscopic surgery (2.442 RON). The cost of laparoscopic cholecystectomy in patients without complications was 1.020 RON/patient vs. 1.351 RON in open cholecystectomy (32.45% higher), and 1.608 RON vs. 2.732 RON in patents with complications (69.90% higher). The results are presented in table 4 and figure 3.

**Table 4:** The costs of cholecystectomy

| Type of intervention | Cost/patient (RON) | Cost of drugs and sanitary materials / patient (RON) |
|---|---|---|
| Laparoscopic cholecystectomy | 1.579 | 323 |
| Without complications | 1.020 | 272 |
| With complications | 1.608 | 464 |
| Open cholecystectomy | 2.442 | 470 |
| Without complications | 1.351 | 375 |
| With complications | 2.732 | 746 |
| **Total** | **1.970** | **399** |

The cost per patient include: drugs and medical supplies, the cost of medical tests and procedures (radiological and / or functional examinations), accomodation and meal costs. The cost of patients with complications are greater because both, drugs and sanitary materials consumption, are higher, and also the number of days of hospitalization / accommodation + meals).

The laparoscopic interventions are minimally invasive; therefore, the consumption of material is less, and the incidence of complications lessen, thereby the consumption of drugs and length of stay is decreasing.
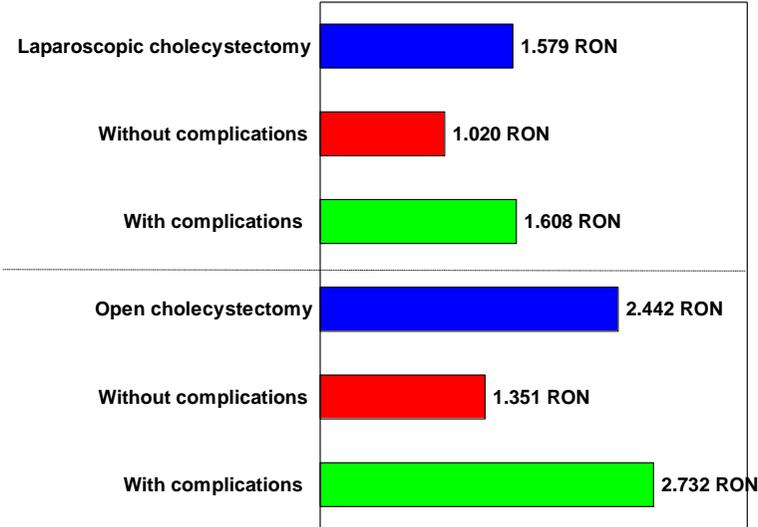


**Figure 3:** The costs / pacient of cholecystectomy

The costs of drugs and sanitary materials were 399 RON, with 46% higher in patients with open cholecystectomy vs. laparoscopic surgery (470 RON vs. 323 RON). In patients without complications the costs was 37.88% higher, and in patients with complications - 60.78% higher.

**Conclusions**

There are significant differences between laparoscopic cholecystectomies and open cholecystectomies in terms of cost, which is mainly due to differences in postoperative care costs incurred by hospitals.

The cholecystectomy costs depend primarily on the type of surgery and age of patients, which leads to more frequent complications.

Even if laparoscopic operation cost is higher, the reducing of the number of complications and of the average length of hospitalization results in a significant decreasing of the hospitalization costs.

The economic evaluation found that laparoscopic cholecystectomy involves lower costs and better outcomes than open cholecystectomy.

Given the advantages presented by the laparoscopic surgery interventions vs. opened surgery interventions, it can be estimated that, with the increasing number of laparoscopic surgery (surgical pathology whatever), would significantly decrease the costs / patient.

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# THE EUROPEAN UNION STATE AID: AN OVERVIEW

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**Abstract:** *This paper summarizes the economic significance of state aid and the main principles of European state aid control. It starts with a definition of state aid in European context and exceptions to the general ban of state aid. Then they are explored the motives for granting state aid, ranging from the correction of market failures over political motives to political economy considerations. They are described some procedures and coordination of granting state aid, then how state aid control fits into the framework of European competition policy before we comment extensively on the more economic approach to state aid control, as implemented by the European Commission, and the state aid action plan. Control of state aid is of increasing importance in the context of European competition policy in order to maintain a fair level of activity of all enterprises participating in the European markets, regardless of the Member State in which they reside. The theoretical fundamentals of state aid are important to be studied and applied. Were distinguished and described the main approaches in the evolution of economic theories in the field of State aid. Criteria were established to determine the government's actions as state aid and intervention methods analyzed. It is important to think about the implications of state aid at an early stage. Doing so allows assistance to be designed and given more quickly and effectively and avoids potential problems later. A program of assistance that does not follow the rules could be forced to close. Giving state aid illegally could result in the money having to be clawed back with possibly very serious consequences for the recipient. The European Commission monitors and controls state aid in the EU by requiring member states to notify the Commission in advance of proposed state aid in order to ensure compliance. If a European company believes that a competitor is receiving illegal aid then they should complain directly to the Commission on the complaints form. The Commission is obliged under the Procedural Regulation to act on any evidence of potential illegal aid and will therefore take complaints seriously, but all these aspects are described in the present research.*

## 1. State aid-general overview and definition

State aid is defined as an a**dvantage** in any form whatsoever conferred on a **selective basis to undertakings** by national public authorities. Therefore, subsidies granted to individuals or general measures open to all enterprises are not covered by this prohibition and do not constitute State aid (examples include general taxation measures or employment legislation).

State or through State resources promotions are selective incentives and may take various forms (e.g. For example grants, interest rate subsidies and tax exemptions, guarantees, government shares in a company or any part thereof, provision of goods and services on preferential terms, etc.). General measures, however, are not classified as State aid because they are not selective and apply to all companies irrespective of their size, location or sector. (Hancher,2012). The definition of State aid is based on the interpretation

of Article 107(1). The rules on State aid concern measures with which the public sector grants aid or other benefits to undertakings. The form of the aid is not significant. The general form of aid is direct aid to the recipient, but e.g. a rent lower than the market price of a real estate is considered aid. Undertakings are defined as entities engaged in economic activities regardless of their judicial form. The characteristics of an aid measure are laid down under Article 107(1). First of all, the case should involve channelling public resources (incl. municipalities and EU funding) to undertakings. In addition, the measure must distort, or risk to distort, competition by favoring the aid recipient. Another requirement of the aid is that it also affects trade between the Member States. The precondition for applying the State aid rules is that all these characteristics are fulfilled.

State aid is basically prohibited under Article 107(1). However, paragraphs 2 and 3 of Article 107 define the exemptions under which aid measures can be authorized. Member States cannot themselves assess the eligibility for aid, but a prior notification procedure is applied. Aid under Article 107 must, as a rule, be submitted to the Commission for approval before its implementation (Article 108(3). Aid granted without prior notification is illegal. In this case the undertaking can be ordered to pay the aid back.

Where a public body provides financial support to an undertaking, it is necessary to consider whether such support constitutes state aid. The EC Treaty declares that state aid, in whatever form, which could distort competition and affect trade by favoring certain undertakings or the production of certain goods, is illegal.(Biondi,2004).

## 1.1. Conditions for the financial support

Financial support must also meet all these conditions set out in article 107 for it to be considered as state aid:

**-**The support is granted by the state or through state resources

This includes all public and private bodies controlled by the state. State resources include tax exemptions and also funds not permanently belonging to the state but which the state may direct, such as EU Structural Funds.

**-**The support distorts or has the potential to distort competition

If the support strengthens the position of the beneficiary relative to other competitors then this criteria is likely to be met. The potential to distort competition does not have to be substantial or significant, and this criterion may apply to relatively small amounts of financial support (Phedon,2008).

**-**The support confers a selective advantage to an undertaking

a) A benefit to an undertaking, granted for free or on favorable (non-commercial) terms, could be state aid. This includes the direct transfer of resources, such as grants and soft loans, and also indirect assistance - for example, relief from charges that an undertaking normally has to bear, such as a tax exemption or the provision of services, loans, at a favorable rate. Support that targets particular businesses, locations, types of firm e.g. SMEs or sectors will be considered selective. By contrast; general tax measures, such as business taxation, when applied equally to all undertakings fail this test and are not considered as state aid.

b) The State Aid rules only apply in respect of financial support to undertakings, that is to say any entity which is engaged in economic activity. If support is provided to an entity engaged in a non-economic activity, then it cannot be state aid. Therefore, support given to individuals, through the social security system for example, would not be considered as state aid.

Economic activities are those which involve the placing of goods or services on a given market. It should be noted that it is not necessary for the goods or services to be supplied at a profit for them to be economic activities. Also, in determining whether an entity is an

undertaking it is important to look at the activity and not the form, thus public sector bodies and charities would be undertakings in respect of any economic activities that they undertake.(Blauberger,2012).

-The support affects trade between Member States

The Commission's interpretation of this is broad - it is sufficient that a product or service is tradeable between member states, even if the recipient of support does not itself export to other EU markets.(Bartosch,2009)

## 2. Procedures and coordination

The Commission is authorized under Article 108 of the EU Treaty to control State aid. The underlying principle of the State aid procedures is that the Commission must be notified in advance of all planned aid schemes or of individual aid not belonging to authorized aid schemes (Article 108(3)). For instance, aid granted by municipalities is individual aid outside any aid scheme.(Mihai,2008)

The objective of the notification procedure is that the Commission can verify the compatibility of any aid with the common market. New aid schemes or individual aid cannot be introduced or implemented before the Commission's authorization. Without the Commission's authorization the aid granted is useless, and it can be collected with interest from the undertakings that received the aid. If the responsible authority deems a measure to be State aid subject to Article 107, the measure must be notified to the European Commission. The Ministry of Employment and the Economy assists in matters of interpretation, but each authority is in the end responsible for assessing the State aid nature of a measure.

The aid notification is made in a coordinated manner through the Ministry's Labor and Trade department. During the notification process, the Ministry also acts as the contact link between the national authorities and the European Commission. In preparing aid schemes, the authorities should take into account that the notification procedure takes around 4 - 6 months. The measure cannot be implemented before the Commission's authorization. However, there is no need to make an aid notification, if the case involves *de minimis* –aid or is covered by the general block exemption regulation. The Ministry gives guidelines for procedures concerning the general block exemption regulation. A summary of block-exempted aid measures must be forwarded via the Ministry to the Commission to be published in the Official Journal of the European Communities. The EC Treaty states in particular, the circumstances under which State aid may be allowed. Permitted are: the development of disadvantaged regions, promoting small and medium-sized enterprises (SMEs), research and development (R & D), environmental protection, training, employment and culture. Among the most controversial types of State aid**,** requiring detailed consideration by the Commission, including rescue and restructuring aid, financial transactions between the state and state-owned enterprises, which include aid and aid to companies in certain sensitive sectors such as steel, shipbuilding and automotive –sector. It is not permitted general investment aid for large companies outside well-defined disadvantaged regions, export aid and aid to cover the operating costs of firms (operating aid).

If a company receives public funds under € 200,000 over a period of three years, this will not be regarded as State aid, since such amount does not affect trade between Member States. This simplification allows the Commission to focus on more important cases. Generally speaking, Member States are required to notify the Commission planned aid prior to their implementation means of a notification. A company which receives government support gains an advantage over its competitors. Therefore, the Treaty generally prohibits State aid unless it is justified by reasons of general economic

development. To ensure that this prohibition is respected and exemptions are applied equally across the European Union, the European Commission is in charge of ensuring that State aid complies with EU rules. The functioning of the internal market depends largely on a level playing field for economic operators. Subsidies that an EU Member State grants individual companies may distort free competition in a particular degree. Under aid not only direct financial assistance to companies, debt relief or subsidized loans are to be understood, but also guarantees, tax incentives or the provision of land, goods and services at special rates. To ensure fair competition in Europe to guarantee the EU Member States have given strict rules, the conditions under which aid is allowed and when not.

Basically, the Treaty on the Functioning of the European Union (TFEU) provides for a prohibition of State aid. However, this aid prohibition does not apply without exception. Aid compatible with the common market may approve the European Commission. For example, support in the field of regional development, labor market policy, environmental policy or research and technology policy can be considered compatible under certain conditions with the common market.

The control of state aid is the sole responsibility of the Commission and is this the right in policy areas where it has no subject matter jurisdiction (e.g. As tax policy, employment policy) to exercise their competition supervision. Therefore, all aid projects must be displayed or notified to the Commission ("notified") and approved by her.(Popescu,2014).

For basic issues of European State aid control policy at the national level, the Federal Ministry of Economy and Energy responsible. The Federal Ministry of Economy and Energy represents the Federal Republic of Germany in most state aid proceedings with the European Commission. Only in the special areas of agriculture, transport and social housing, this task is performed by the Federal Ministry of Food, Agriculture and Consumer Protection and the Federal Ministry of Transport, Building and Urban Development.(Bidilean,2011).

In particular, the responsibilities include the initial registration of individual aid or schemes in the European Commission, support of notification, and - according to European Commission approval of aid measures - the mediation between the Commission and the various national aid donors (federal and state ministries and local authorities) in the implementation of the measure (eg., in the form of annual reports), including any recovery procedures (with negative Commission decision).


## 3.State aid vs.not state aid

To be State aid, a measure needs to have these features:
-there has been an intervention by the State or through State resources which can take a variety of forms (e.g. grants, interest and tax reliefs, guarantees, government holdings of all or part of a company, or providing goods and services on preferential terms, etc.);
-the intervention gives the recipient an advantage on a selective basis, for example to specific companies or industry sectors, or to companies located in specific regions
-competition has been or may be distorted;
-the intervention is likely to affect trade between Member States.(Dragan,2013).

Despite the general prohibition of State aid, in some circumstances government interventions is necessary for a well-functioning and equitable economy. Therefore, the Treaty leaves room for a number of policy objectives for which State aid can be considered compatible. The legislation stipulates these exemptions. The laws are regularly reviewed to improve their efficiency and to respond to the European Councils' calls for less but better targeted State aid to boost the European economy. The Commission adopts new legislation is adopted in close cooperation with the Member States.

It is important to note that the European Court of Justice has sole competence over what is and what isn't a State aid. The only way we can determine for certain that State aid is present is to notify a measure to the European Commission for legal certainty. However the State Aid Unit is able to provide advice based on case precedents from the European Court, as well as direct guidance from the EC itself.

**Table 1:**Comparison between state aid and not state aid situation

| Likely to constitute State aid: | Unlikely to be State aid: |
|---|---|
| Grants to firms for investment, research and development, employee training, etc. | Aid to individuals, charities, organizations and public bodies not involved in an economic activity Commercial payments for services rendered, where a company is contracted by a public body in accordance with Scottish & EU competitive tendering requirements |
| Loans and guarantees below market rates | |
| Free or subsidized consultancy advice | General measures, which can apply to all firms throughout the European Union, with no discretionary power |
| Cash injections to, and writing off losses of, public enterprises | |
| Sale or lease of public land or property at discounted rates | |
| Selectively promoting companies using public funding | |
| Contracts not open to competitive tendering | |
| Discretionary deferral of or exemption from tax, social security and other payments to the State | |
| Legislation to protect or guarantee market share | |
| Funding/cash injections to social enterprises and charitable organizations who are engaged in economic activity | |
| Public funding of privately owned infrastructure | |

Source:Sutter Franz Philipp,*Das EG-Beihilfenverbot und sein Durchfuhrungsverbot in Steuersachen*

### 3.1. The European legislation in the state aid rules
The European legislation in the State aid field was modified starting with July 1st, 2014 (State Aid Modernization - SAM). Romania, through the Competition Council, along with

Sweden, Germany and Hungary, is part of the board of working group that aims at finding solutions for improving the cooperation both between Member States and cooperation between Member States and the European Commission to apply the new rules in the state aid field, the SAM implementation, State aid assessment, the obligation to ensure transparency in granting state aid, the best practices regarding compliance with the General Block Exemption Regulation. The General Block Exemption regulation consolidates into one text and harmonizes the rules that were previously existing in 5 separate regulations. The European Commission adopted the General Block Exemption regulation on the 29 August 2008, reducing the administrative burden for the public sector, the beneficiaries and the Commission. The GBER covers a range of pre-approved state aid areas that do not require individual approval from the European Commission in advance. Aid granted under cover of the regulation only has to be notified within 20 days of the aid being granted. The regulation authorizes aid in favor of SMEs, research, innovation, regional development, training, employment of disabled and disadvantaged workers, risk capital and environmental protection. The regulation also introduces aid measures supporting female entrepreneurship, such as aid for young innovative businesses, aid for newly created small businesses in assisted regions, and measures tackling problems like difficulties in access to finance faced by female entrepreneurs. Through the European reform in the state aid field, the European Commission wishes to realize itself an ex-post control on how the State aid rules are observed and the State aid facilities to be checked at national level. The European Commission's activities will focus more on complex cases and on the assessment of facilities after being granted and less on ex-ante analysis, therefore, the responsibility of the Member States on granting state aid will increase.

## 4.In conclusion

State aid is a Member State's financial aid to business which meets all the criteria in Article 1071 (1) of the Treaty on the Functioning of the European Union (The TFEU). Article 107(1)2 declares that State aid, in whatever form, which could distort competition and affect trade by favouring certain undertakings or the production of certain goods, is incompatible with the common market - unless the Treaty allows otherwise. The starting point of European Union State aid policy is that aid given by individual EU Member States to industrial and commercial undertakings is prohibited as incompatible with the Internal Market. This prohibition is not absolute and there are a number of areas where State aid is seen as necessary and fair. A complex framework of EU State aid rules is designed to ensure that such aid is compatible with the needs of the Internal Market. Within the framework set out in the TFEU and Council Regulations made under Article 109 TFEU, the European Commission has a key role in reviewing existing aid and in deciding on plans to grant or alter aid. In exceptional circumstances, the Council may decide that aid is compatible with the Internal Market and thereby block Commission action: however, the requirement for unanimity means that such decisions are made very rarely. The main purpose of EU state aid control is to limit the possible negative repercussions of national state aids on European market integration.

## 5. Acknowledgements

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# AGRICULTURAL EXPORTS, GROWTH ENGINE FOR ROMANIA

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**Abstract**: The evolution of Romanian imports from the EU market was affected significantly, especially in 2009 and 2010 (due to lower domestic demand of operators and households). The global financial and economic crisis of 2008 strongly felt in Europe and affected its countries. The purpose of this paper is to analyze the main agricultural exports and food products that Romania can export to EU countries, but also outside the European Union.

## Introduction

In 1961, Romania produced 4 million tonnes of wheat and 5.75 million tonnes of maize, the average production per hectare is 1.34, respectively 1.67 tonnes. In the mid 80s, Romania reached a production of 8.5 million tonnes of wheat (1988) and 11.9 million tonnes of maize (1985), which is the maximum of the years. Average yield per hectare in those years was 3.6, respectively 3.8 tonnes.

In 2004, agriculture accounted for 12.5% of GDP, the added value generated by the agricultural sector increased by 19%, compared to 2003. In other words, a quarter of the increase by 8.5% of GDP in 2004 was due to agriculture. For comparison, in 2009 agriculture accounted for only 6.3% of GDP.

Compared to other countries in terms of production per hectare: in 2009, in France, the average yield per hectare was 9.1 tons of corn, respectively 7.4 tons of wheat, in Romania the production is is 3,4 respectively 2.4 tons.

In 2006 Romania managed to equalize (at dollar parity) GDP per capita from 1988. Compared to the EU average of GDP per capita in 2007, of US $ 26,208, and the world's one, of 8191 dollars, Romania had a level of 7523 dollars, almost 3.5 times lower than the European one, and below the world's average.

## Body of paper

Romanian crop balance is positive since 2009. The most favorable situation is seen in the case of cereals, where the difference between exports and imports has increased steadily.

The live animals and animal products have a trend of deficit decline since 2008.
In 2012, exports exceeded imports at vegetal crops by about 554 mil.EUR. The excess of grain crops was about 963 mil. EUR.

Year 2013 is the first year with positive balance (€ 331 million), mainly due to crop products, where exports exceeded imports by 1.533 million euros.

Food, beverages and tobacco deficit remains around an average of about 880 million euros, hence the need to focus on processing raw materials.

In the period 2010-2013 the first places among Romania's exports of agricultural products were occupied by corn, wheat, sunflower seeds, tobacco, rapeseed and barley. Other agricultural products with higher share of export value were: sunflower oil, poultry and livestock of bovine animals, sheep and goats.
Regarding imports of agricultural products from the period 2010-2013, in the top stood sugar, pork, corn, soy grits, prepared foods and raw tobacco. Other agricultural products with higher share of import value: sunflower seeds, bakery, pastry and coffee.

In the first three months of 2014, Romanian agri-food trade balance recorded a surplus of 9.4 mil. Euros, compared with a deficit of  308.9 mil. Euros, in the same period of 2013. Romania exported food products in total worth of 1,169.8 mil. EUR, with 324.7 million euros more than in the first quarter of 2013 (+ 38.4%), while imports, amounted to 1160.4 million euros, were located at a similar level to the one recorded in the same period in 2013.

Compared to the first quarter of 2013, exports of agricultural products in the first three months of 2014 increased in most categories: corn (137.7 mil. EUR), wheat (54.4 mil. EUR), cigarettes (25 5 mil. EUR), sunflower seeds (24.4 mil. EUR), sunflower oil (20.6 mil. EUR) etc. Notable are the additional proceeds from exports of nuts: 12.2 mil. Euro in the first quarter of 2013.

The European Union was the main partner in Romania's agricultural trade. Thus, in the first quarter of 2014, deliveries of agricultural products to that destination had a value share of 60.7%, and purchases of EU Member States have held a share of 81.3%.

Among the factors of pressure on the trade balance, highlights:
• dependence on technological structures and energy imports and domestic production of raw materials;
• relatively slow rithm of restructuring and privatization of the economy and industry;
• negative influences of developments in the domestic and foreign markets (especially in recent years), who have "favored" increasing imports and eroding export competitiveness.
It may be noted the approach of the Romanian exports and imports (at a more aggregated level) to the structure of intra-Community trade in agricultural products and foodstuffs, relatively more homogeneous, indicating a convergence of business model, but also the one of consume.
For the entire financial programming period 2007-2013, have been allocated 9.32 billion euros for Romania, for specific objectives of rural development.
The allocation for the RDP 2014-2020 is EUR 8.016 billion, of which for processing has been allocated 469 million euros.


**Conclusions - Boosting exports and future estimates**
The priority is the increasing of the exports of medium-high degree of processed products, especially in non-EU areas (Russia, India, China, Middle Eastern countries, some African countries and in South America).

As specific objectives:

- The development of external representation to support the business environment, in order to increase exports and attract foreign investment;
- Increase in budget allocation for promoting and supporting exports, including Romanian investments abroad.

The macroeconomic impact of these measures is reflected in: reducing the trade deficit, increasing foreign exchange earnings, improving the situation of current account balance, increasing the stability of the national currency. The social impact of these measures is reflected in benefits such as increasing employment and price stability.

The annual increase of budget allocation for promoting and supporting exports, including Romanian investments abroad, is a welcome measure.
In wheat, corn and sunflower crops, whose productions were the main export commodities in 2013, at EU-28 level, Romania was as follows:
• sunflower - no. 1, in both area cultivated and production;
• maize - cultivated area on 1st place and 2nd place in production;
• wheat - 4th place in surface and 6th in production.

Competitive advantage in the export of these commodities can be attributed to the total production obtained, the selling price and less to the production efficiency at which Romania has great potential for development.

It is estimated that in the next 8-10 years, through investments in processing capabilities, Romania will be able to export value-added processed products, such as poultry products, flour, corn flour, vegetable oil.

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*SUB-SECTION: THE IMPACT OF FOREIGN LANGUAGES ON THE BUSINESS ENVIRONMENT*

# THE USE OF ENGLISH-LOAN WORDS IN THE INFORMATION TECHNOLOGY DOMAIN

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**Abstract:** *This paper examines the phenomenon of linguistic borrowings in general and the use of anglicisms in particular, in the contexts of globalization and the progress made in different domains, especially in the Information Technology domain. Borrowing is the phenomenon which undertakes the word transmission process from one language into another among the connected communities. The language that lends is the donor or the borrower language, and the language that borrows is known as the receptor or the borrowing language. Anglicisms are the English-loan words that are present in many European languages. The phenomenon of globalisation is the main topic of several contradictory and polarization discussions and undoubtedly globalisation is necessary and it is a fact in today's world but the question is: what will be the long-term language consequences? There might be two situations: the consequences may be positive, such as ease of communication and perception, language economics and also negative: not understanding anglicisms resulting in disturbed communication, rejection of anglicisms, loss of semantic diversity of your own language, less and less possibilities of expressing yourself in your own language. We can mention that responsible for the impact of English is the prestige associated with this language. This language is generally held in highest regard by the younger generation of Romanians, who are easily influenced by the television, radio, movies, and other media that are supplied by British and American entertainment, which are considered to be trendy and cool. Each of those resources has influenced the Romanian population on numerous levels, creating new words and phrases in the Romanian language. In order to illustrate and discuss the pertinent or, on the contrary, the unjustified use of English-loan words in the field of Information Technology, the study will focus on a selection of articles published in the electronic Romanian issues of two computer and communications magazines – namely Chip Magazine and PC World. Different stances, adopted in relation to the phenomenon mentioned above, and the understanding of two groups of Romanian readers (students at the Faculty of Electrical Engineering and Information Technology, University of Oradea) will be presented.*

**Keywords:** anglicisms, professional discourse, the IT domain

**JEL classification:** Y90

## 1. Introduction: the role of English in the context of globalization

Nowadays, English is spoken by about 375 million people in the world as their first language; approximately 470 million to over a billion individuals use it as a second language (http://en.wikipedia.org/wiki/English_language). It thus comes third, after Mandarin Chinese and Spanish (CIA World Factbook, https://www.cia.gov/library/publications/the-world-factbook), in the classification of world

languages made in terms of number of speakers. Most people and specialists tend to agree that English has become the dominant language of the contemporary world (Crystal, 2003:1-3), mainly as a result of a long history of British and American influence in the economic, technologic, military, political and cultural fields. The progress made in the aforementioned domains has often placed specialists in the situation of having to express in words new, extra-linguistic realities; as there were no direct correspondents in their national languages people chose to reproduce or adapt denominations from English, thus enriching their vocabulary with new terms and expressions - the so-called *anglicisms*. The rapid advances in certain areas and disciplines also determined the formation of new constructs, originating in English, but influenced by the language and culture of different speakers (http://en.wikipedia.org/wiki/English_language), and the generation of many "forms" of English, dialects and regional varieties (Townson, 1995).

Another aspect that has stimulated the use of English at global scale is the open access of people to products and services from all around the world, as well as the widespread use of the Internet, which has somehow determined the adoption of English as an international medium of communication. As a result, a good knowledge of English has become a necessity in different fields of human activity, from economy and computing to medicine, art, education and diplomacy. Nowadays, different degrees of proficiency in English influence not only people's mobility across nations, but also their access to jobs and cultural products.

The reactions to such a state of affairs (i.e. the more or less official turning of English into a lingua franca) has grouped people in two main categories: on the one hand, there are the Anglophones, who argue that the use of English, or at least of English-loan words, is by no means a negative fact: on the contrary, they insist it may facilitate understanding and communication among people, in the context of the contemporary world, where activities in different domains are no longer restricted to national borders; on the other hand there are voices suggesting that the expansion of English represents a threat, having negative influence upon linguistic diversity, at the same time creating unequal power-relationships among languages and determining even the "globalization" of thinking.


## 2. The problem of English-loan words

The presence of English-loan words is not confined to a single language, this being a frequently encountered phenomenon. As pointed out in the previous section of this paper, linguistic borrowings, especially from the English language, are chiefly the result of the economic and technological progress constantly made in the West, which brings about permanent innovation in different fields of activity, alongside the introduction of new products and services, which are rapidly exported in many countries of the world. National languages do not immediately generate new words for these new, extra-linguistic realities. The process of language rejuvenation is rather slow, as compared to the economic or the technological progress, and only the widespread and prolonged use of a certain word determines its adoption into a certain language, and the generation of synonyms for it, in the respective national language. Therefore, for the sake or rigor mainly, when certain words do not have any equivalent in a specific language, or an element in reality may be described and referred to only by using a longer phrase, the tendency is to adopt the original word (an Anglicism, in the case of the English language). Linguists such as Sextil Puşcariu (Puşcariu, 1976) described such borrowings as *necessary* (this word, as well as others used for the further classification of the anglicisms present in Romanian, has been also borrowed by Adriana Stoichiţoiu-Ichim, Laura Maria Rus, while the phenomenon has been closely analyzed by Mioara Avram (Avram, 1997), Georgeta Ciobanu (Ciobanu, 1996) or Liana Silaghi (http://www.culturasicomunicare.com/v3/Silaghi%20%20Anglicismele%20in%20discursul%20jurnalistic.pdf). Examples of such words are chiefly encountered in the following fields:

- economy: *leader* (which, in different languages has been slightly modified, either by articulation or in order to reproduce the pronunciation of that particular language: for instance in Romanian: lider; in French: le leader), *broker* (Romanian: broker; French: un broker), *management*, *marketing, voucher* (document that may be used instead of money); the last three words given as an example here have been adopted as such in most languages.
- information technology and communication: *e-mail*, *hardware, software*, *mouse* (sometimes the spelling has been changed: for instance, in Romanian, one can sometimes come across the spelling *maus*; the same holds true for the word *clic* – from the English word *click*) etc.
- sports: *football* (Romanian: fotbal - the word is spelled in a way that reflects the way the pronunciation of the original word has been perceived; French: le football), *rugby, match* (Romanian: meci – again, as Romanina is a phonetic language, the word started to be spelled as it was pronounced);
- the technical domain: *airbag, screening* (medical examination using X-Rays), *scanning* (Romanian: scanare);
- education: *curriculum, grant, master*;
- gastronomy: *hamburger, sandwich, shake*.
As the examples above illustrate, anglicisms are adopted in the absence of adequate or sufficiently illustrative terms in different languages spoken throughout the world.
Researchers such as Laura Maria Rus (http://www.upm.ro/facultati_departamente/stiinte_litere/conferinte/situl_integrare_europeana/Lucrari/LauraRus.pdf), or Adriana Stoichiţoiu-Ichim (http://ebooks.unibuc.ro/filologie/dindelegan/24.pdf) further classify necessary borrowings into:
a. denotative, characteristic of certain domains and which facilitate the communication among specialists (for instance, in the IT domain, we can mention the word *hardware, joystick, on-line, pointer*); and
b. connotative, or stylistic, which develop the stylistic nuances of a word that already exists in a certain language: in the case of anglicisms, we can give the example of *happy end, weekend, party.*
In time, the widespread use of such loan-words has determined their adaptation to the graphic, phonetic, grammatical or even the semantic rules of the "host" language, which often results in words that are not encountered in the English language. These words are called "pseudo-anglicims" (http://en.wikipedia.org/wiki/Pseudo-anglicism#Romanian), as they are transformed in such a way that they become unrecognizable to a native English-speaker. The examples below may be considered indicative in this respect:
- in French: baby foot (for table football); baskets (in Romanian bascheţi) for the English word "trainers"; box (also in Italian), for the English „garrage"; footing (also in Italian and Spanish) for jogging;
- in Spanish: boxer, for the Enghish „boxer shorts"; peeling (present in other European language) used to refer to facial or body scrub; snow, as an abbreviation of snowboard; lifting (also in other European languages) for "facelift";
- in Ialian: autogrill, for „motorway shack bar"; bar for „cafe"; hostess, for female flight attendant, stewardess;
- in German: air-condition, as an abbreviation from „air-conditioning"; fotoshooting, for „photo session"; home trainer for "exercise bicycle"; logical, for puzzle or riddle to be solved by logical thinking;
- in Romanian: camping, for "campsite"; happy-end, for "happy ending"; playback, for lip-synch (in songs) (http://en.wikipedia.org/wiki/Pseudo-anglicism).
As indicated above, pseudo-anglicisms suffer different changes in order to be adapted to the rules of each host language in particular. The following transformations are the most frequently encountered ones:

- formal changes (graphic and phonetic adaptation):
     English: football player – Romanian: fotbalist;
     English: tennis player – Romanian: tenismen – French: le tennisman;
     English: interview - Romanian: interviu – French: interview;
     English: leader – Romanian: lider - French – le leader.
- the assignation of gender or number, or the articulation of words:
     English: fax – Romanian: faxul
     English: cinema stars  – Romanian: staruri de cinema
     English: design – Romanian: un design
     English: cocktai – Romanian: cocteiluri
- the derivation with prefixes, for instance the prefix "super", encountered in many European languages;
- semantic transformations, as English words are associated with new meanings: spot [English: mark, patch, dot, smear, stain, blotch, location (*Oxford Paperback Thesaurus*, 2001:817), etc.].; in Romanian one may encounter: spot publicitar, as an equivalent of the English word "commercial".
- The abbreviation of certain Engish words, generating new words in the host language: le pull (from the pullover), McDo (from McDonald's) (http://www.seikilos.com.ar/Anglicisms.pdf), le foot, short form of the French word "le football" (http://www.elle.fr/elle)

Besides the necessary borrowings, a language may adopt a series of redundant words, a situation that mainly results from the attempt of some social categories to be distinguished from others: this fashion is often associated with snobbery (http://www.upm.ro/facultati_departamente/stiinte_litere/conferinte/situl_integrare_europeana/Lucrari/LauraRus.pdf). As we are going to emphasize in the next section of this paper, contemporary written press, even magazines related to the field of IT, abounds in words derived from English.

While the "necessary" borrowings tend to be eventually accepted even by the most vehement supporters of language purity, it is the abusive, excessive use of anglicisms that is usually rejected and criticized.

In conclusion, the presence of anglicisms in a certain language should not be regarded as a purely negative aspect, or simply as a form of linguistic globalization, though it is recommendable to avoid exaggerations.


## 3. Anglicisms used in the IT domain

During the last decades, the language used by many specialists in the field of IT, and often by editors of computer magazines, has been enriched with a great number of English-loan words. Some of them are professional words, which are used by people working in this domain all around the world, while others reflect just the fashion of using English words and phrases, characterizing many young persons in our country.

This situation is mainly explained by the fact that most progress in the field of information technology has been done in the English-speaking world, and most books, studies and articles presenting the evolution in the domain have been published in English. Those preparing for a career or already working in the IT domain used such materials or took part to educational and training programs in the West, where the language of communication was, in most cases, English. Consequently, they have adopted and sometimes adapted to the rules of the Romanian language many English words.

As mentioned in the section above, the use of anglicisms related to the IT domain is justified in some cases: for instance, there are situations when the use of a single word in English may faithfully reflect some reality, which otherwise would have required the use of more than one word in Romanian. We can give here the example o the word *hardware*, which has no direct correspondent in Romanian and refers to the physical components of a

computer – namely the circuits, devices and equipments that make up a calculating system.

On the other hand, there are some words that are difficult to translate without producing semantic ambiguity. In order to illustrate this statement, we can give the example of the word *mouse*, which in computing refers to a pointing device, but in general the term refers to a small rodent. In Romanian it has been adopted as such, though lately its spelling appears adapted to the rules of our language (it appears written as *maus*, plural *maus-uri* (http://ro.wikipedia.org/wiki/Maus).

However, there are also many words of English origin that have penetrated the vocabulary of people activating in the field of IT, which have no objective justification to be used, as they can be easily translated in Romanian, or replaced by convenient equivalents. To give but a few examples, we can mention here the words such as *taskbar* (bara de start/meniu), *icon* (pictograma), *emoticon* (emotigrama), *device* (dispozitiv) which are generally adapted to the Romanian and often appear articulated (taskbar-ul, language bar-ul, emoticoane).

The ideas mentioned above can easily be illustrated while analyzing a selection of articles that have recently appeared in the online issues of two computer magazines, published in several countries of Europe and Asia, Romania included.

For instance, Razvan Stefanescu, editor PC World, in the article entitled "*Top 10 video playere in teste*", published in PC World Magazine online, 9 decembrie 2010, speaking about the video formats of different systems, says at one point: "aşteptare pe care o aveam de la un *player media* era să ruleze fişiere DivX", "ne-am gândit să facem un *roundup* la cele mai răspândite programe de *playback video*" (http://www.pcworld.ro/articole/18655/0/Top-10-video-playere-in-teste-) ("the expectations that we have from a *media player* is to rule DivX files", "we thought to make a *roundup* to the most widely used programs of *video playback*"). Thus, the plural noun-phrase "video players" (referring to a kind of media device used for playing back digital video data from media such as optical discs - for example, DVD, VCD-, as well as from files of appropriate formats) has been adapted to the Romanian orthography and has become pluralized as "video-playere", though a word-order that is specific to Romanian, rather than to English, has been preserved (player media, playback video), as in English a noun-modifier is usually placed before a noun. As it can be observed, some of these words have become pseudo-anglicisms. In the case of the word "roundup", probably the Romanian equivalent "trecere in revistă" would have been equally appropriate, which makes it a denotative anglicism.

In the same magazine, the presentation of a new model of PC tablet, namely HTC Flyer TM, abounds in English-loan words: tablet PC – tabletă PC (which, by articulation or assignation of case, takes the form tablet PC-ul, or Tablet PC-ului), touch – atingere - ("combină interacţiunea naturală de tip *touch* cu aceea prin HTC Flyer" – combines the touch-type natural interaction with that through HTC Flyer), mobile gaming, cloud-based ("primul serviciu de *gaming* mobil *cloud-based* disponibil pe un Tablet PC" – the first service of cloud-based mobile gaming available on a Tablet PC), smart-phone (becoming smartphone-urile, by articulation and assignation of plural, referring to very recent generations of mobile phones), gadget, hardware, widget (words that are commonly used as such in Romanian, as they either have no one-word equivalent and their explanation would have required more space in the body of the article, or have become so common that the use of another word instead would seem unusual, especially to a specialist in the IT domain); however, there are also anglicisms which could easily have been replaced by Romanian equivalents: on demand (la cerere), wireless (fără fir), download (descărcare), software (programe). Probably words such as "cloud-based" or gaming are more easily understood in their English form, even by Romanian readers (http://www.pcworld.ro/articole/18694/0/HTC-prezinta-HTC-Flyer-primul-Tablet-PC-cu-HTC-Sense).

Actually, in my opinion, the abundance of English-loan words is characteristic for the PC World magazine. This shouldn't probably be a mater for worry, as readers of such magazines are most probably familiar with the terminology of English origin. However, an article such as the one written by Carmen Ciulacu, entitled "Seria 6 de placi de baza Gigabyte: experienta 3D, conectivitate rapida", published on the 7th of January 2011, in the PC World online magazine, might cause problems of understanding to a person that is not very much acquainted with the field of IT. Perhaps it would be worth mentioning here that the selection of the following fragments from the above-mentioned article is meant just to illustrate a point, and not to criticize it, as publications in the field of IT can probably objectively justify the abundance of English-loan words in the corpus of their articles:

"… ne aşteptăm ca *socketul* LGA 1155 să fie pe piaţă pentru mulţi ani de acum înainte," a comentat Tim Handley, *Deputy Director* al Departamentului de Marketing pentru Plăci de Bază de la GIGABYTE. "Suntem încântaţi să încorporăm multe dintre caracteristicile *high-end* pe plăcile de bază *mainstream* şi *entry level*, cum ar fi designul Max CPU Power VRM care a fost introdus pentru prima dată pe modelul X58A-UD9, pentru a da astfel produselor noastre un avantaj competitiv serios pe piaţă.*"* (…) "Având mai multe *porturi* USB 3.0 (până la 10 pe P67A-UD7), seria 6 de plăci de bază de la GIGABYTE oferă conectivitate extrem de rapidă pentru *drive-urile de backup* portabile de tip *flash* sau externe (până la de 10x viteza unui USB 2.0). (…). Împreună cu SATA 6Gbps, tehnologia GIGABYTE XHD ofera o creştere a performanţelor de până la 4x (…) cu ajutorul unui utilitar simplu şi intuitiv, ce permite utilizatorilor să *boot-eze* sistemul şi să lanseze aplicaţiile mai rapid decât au crezut vreodată că este posibil." ([http://www.pcworld.ro/articole/18660/0/Seria-6-de-placi-de-baza-Gigabyte-experienta-3D-conectivitate-rapida](http://www.pcworld.ro/articole/18660/0/Seria-6-de-placi-de-baza-Gigabyte-experienta-3D-conectivitate-rapida)) ("we expect that the LGA 1155 socket would be present on the market many years from now on", said Tim Handley, Deputy Director at the Marketing department for motherboards at GIGABYTE. "We are glad to incorporate many of the high-end characteristics on the mainstream and entry level motherboards, for instance the Max CPU Power VRM design, which was first introduced on the X 58A-UD9 model, in order to ensure our products a serious competitive advantage on the market" (…). "As it has several 3.0 USB ports (up to 10 on P67A-UD7), the series of 6 motherboards from GIGABYTE ensure extremely rapid connectivity for either flash-type or external portable backup drivers (up to 10x times the speed of a 2.0 USB). (…) Alongside the SATA 6Gbps, the XHD GIGABYTE technology provides an increase of performance of up to 4x (…) with the help of a simple and intuitive tool that allows users to boot the system and launch applications more rapidly that they have ever thought it might be possible".)

In this article, words such as *driver de backup* or the pseudo-anglicism *să boot-eze* could have easily been replaced by their Romanian alternatives, respectively fişier/memorie de siguranţă, and să încarce, să pornască. Others, such as mainstream or entry level, port or flash, though not impossible to be replaced, probably make the context easier to understand.

In this case again one can observe that the author has used structures form the foreign language, adapting them to Romanian (socketul, drive-urile, porturi, să boot-eze), or borrowed words as they appear in the original language and simply placed them in a new context (mainstream, entry level, deputy director, backup).

A similar tendency of using anglicisms in the corpus of articles, addressed to Romanian readers, is a characteristic of the Chip Magazine Romania. However, in our opinion, the anglicisms are less frequent here than in the other computer magazine referred to in this paper. To give but two examples, we can quote some fragments from Cristina Costieanu's article entitled "Retuşarea foto profesională", who uses the following anglicisms: "editarea *high end*"", "modificările sunt aplicate asupra *layer-ului* de fundal", "chiar dacă suntem în era *layer-elor* de ajustare şi a *smart filter-urilor*", "cu ajutorul tehnicii Smart Objects puteţi utiliza orice filtru în acelaşi mod în care folosiţi *un layer* de ajustare. În principiu, există două moduri de a crea un *Smart Object*: în Photoshop CS3 daţi **clic** pe opţiunea Convert

for Smart Filters din meniul *Filter* şi numai după aceea aplicaţi filtrul dorit." ([http://www.chip.ro/revista](http://www.chip.ro/revista)), ("high end editing", "the changes that are applied to the background layer", "even though we are in the era of adjustment layers and smart filters", "with the help of Smart Objects technique one can use any filter in the same way one uses an adjustment layer. Basically there are two ways to create a Smart Object: in Photoshop CS3 click the option Convert for Smart Filters from the Filter menu, and only then apply the desired filter").

In our opinion, words such as *layer* or *smart-filter* might have been replaced by their Romanian alternatives (strat, filtru avasat/inteligent), while the words *Smart Objects* or *Convert for Small Filters*, as they refer to certain techniques or applications, are appropriately used in the original language.

Another example would be the article published on 25th of February2011, by Cătălin Constantin and entitled Windows 3 in 1,"De exemplu, în loc de plictisitoarele *taskbar-uri* ale Windows-ului, puteţi avea un Dock folositor cu *icon-uri* 3D şi funcţii bine implementate. Cu ajutorul unor shortcut-uri interesante puteţi obţine efecte spectaculoase la manipularea ferestrelor, dar şi activa o modalitate de previzualizare a documentelor. Şi asta nu e tot! Mac OS X are mult mai multe de oferit, cum ar fi de exemplu *Time Machine*, aplicaţie cu ajutorul căreia timpul poate fi dat înapoi în cazul unei întâmplări nefericite în care s-au pierdut date. Toate aceste elemente de funcţionalitate pot fi uşor adăugate *Windows-ului* şi chiar mai mult. Puteţi de exemplu să adăugaţi funcţii multitouch pe notebook sau să porniţi o sesiune de linie de comandă Linux (…) Instrumentele şi *tweak-urile* din acest articol funcţionează în mod independent." ([http://www.chip.ro/revista/chip/16355-windows-3-in-1](http://www.chip.ro/revista/chip/16355-windows-3-in-1)) ("For example, instead of the boring taskbars of Windows sites, you can have a useful Dock with 3D icons and well implemented functions. With the help of some interesting shortcuts you can get spectacular results in the handling of windows, and activate a way of previewing documents. And that's not all! Mac OS X has much more to offer, such as for example Time Machine, application by which time can be recovered in case of undesirable situations when data have been lost. All these functionality elements can be easily added to Windows – and even more. You can add multi-touch features on your notebook or start a Linux command line session (...) The tools and tweaks in this article function independently.")

Here, the words *taskbar* or *icon* could have been replaced by Romanian equivalents (*bară de start/meniu*, and *pictogramă*), while Windows and Time Machine are probably better used as such.

In order to check the understanding, by Romanian readers, of these fragments selected from computer magazines, we have asked a group of 40 students studying Computer Science at the Faculty of Electric Engineering and Information Technology, and 40 students of the same faculty, but intending to specialize in the Electrical Engineering domain, to say whether their understanding of the above-reproduced texts has hindered their understanding. In the case of the computer science students, the large majority (29 students) said that they had encountered no difficulty in understanding the texts. Even more, they wanted to point out that the choice of other words instead of the anglicisms or pseudo-anglicisms selected for analysis would have made the way of expression quite unnatural. The rest (11 students) were of the opinion that only few words caused them difficulties in understanding the texts, the most frequently mentioned ones being widget, tweak, boot.

On the other hand, from the group of students studying Electrical Engineering, only 9 said that that they could easily understand all the selected texts, the rest of 31 students mentioning different English-loan words, with which they were not familiar, though in some situations they could infer the meaning from the context.

## 4. Conclusions

As it comes out from the selection of fragments, published in two computer magazines in Romania, namely PC World and Chip Magazine, many authors choose to employ structures reproducing or imitating the ones used by specialists in the English-speaking world. Some of these have no linguistic justification, as they can easily be replaced by equivalents in Romanian, while others contribute to the conciseness and clarity of paragraphs.

It is true that people working in the IT domain or the readers computer magazines use these words as such and can easily decode information expressed by means of English-loan words. They would probably find weird exactly the use of Romanian equivalents, with which they are not so much accustomed.

As long as it does not produce linguistic ambiguity, the phenomenon may be considered perfectly acceptable. However, the suggestion of most linguists is to make use of Romanian words, which have already been introduced and used in specialized words, and avoid the unnecessary use of anglicisms.

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# POPULARITÄT DER ERASMUS-STIPENDIEN UNTER WIRTSCHAFTSSTUDENTEN. VERGLEICHENDE STUDIE GROßWARDEIN (RUMÄNIEN), DEBRECEN (UNGARN) UND PREŠOV (DIE SLOWAKEI)

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**Abstract:** *Present study is the extension of a former study upon Erasmus programmes and students' attitude towards opening perspectives at the University of Oradea, Romania (the author's institution of affiliation) and thus overtakes parts and results of it enriching them with findings and conclusions of an extended research. In a world of intensified cross-cultural relations it would be of great importance that young people – especially those in academic environments – gain some international experience, get to know during their college period other cultures and socio-economic systems than theirs. The Erasmus programmes of the European Committee could give them due to the financial support they suppose the opportunity to live the experience of studying or doing practice in a company abroad and thus to extend their personal and professional horizon. Romania takes part in Erasmus programmes since 1998 and in the last two and a half decades sent more than 38,000 students on Erasmus study or placement mobility. It is a nice number but still too little related to the overall number of Erasmus scholarships academic institutions could dispose of yearly. By conducting a comparative study upon the relation between offer and demand at corresponding faculties of three academic institutions, the above mentioned University of Oradea, University of Debrecen, Hungary and University of Prešov, Slovakia one may realize that the situation is quite similar in all the three academic environments: Erasmus programmes don't represent in general main attraction for students. The analysed study domains are: technique, economics, medicine/pharmacy/health care, history, political and communication sciences. The most interested in an international experience, in Romania and Hungary at least according to data of some academic years, prove to be medicine students who applied 2013-2014 in Oradea for about 44% and 2011-2012 in Debrecen for 80% of the scholarships offered. Slovakian students studying health care at the University of Prešov are leading in this respect, as the number of applications exceeded in the period 2011-2014 that of the places available.*
*Why economic students at all the three institutions show in general little or moderate interest for Erasmus programmes, we have tried to find out by means of a questionnaire pointing to the main causes for applying/not applying for an Erasmus scholarship. The answers given by the over 120 students questioned at each institution correspond partially with the author's initial suppositions and show main directions for counterbalancing and actions to be taken to increase visibility, feasibility and popularity of Erasmus programmes among students.*

## 1. Einleitung
1987 hat die Europäische Kommission die akademischen Austauschprogramme für Studenten Erasmus Study bzw. Placement Mobility und für Lehrkräfte Teaching Staff

Mobility zum Leben gerufen, die in den vergangenen gut 25 Jahren die Horizonterweiterung von und den Erfahrungsaustausch unter ungefähr 3 Millionen Studierenden ermöglicht haben. Rumänien beteiligt sich an diesem Programm seit 1998. Trotz der steigenden Teilnehmerzahl – seit den Anfängen des Programms hierzulande wurden über 38.000 Studenten an ausländische Institutionen vermittelt – ist eine relative Interesselosigkeit an Erasmus-Stipendien zu beobachten. Daran lassen Untersuchungen an sechs Fakultäten der Universität von Großwardein, Rumänien (der Fakultät für Elektronische Ingenieurwissenschaften und Informationstechnologie, der Fakultät für Energetische Ingenieurwissenschaften und Industriemanagement, der Fakultät für Wirtschafts-, Ingenieurwissenschaften und Technologie, der Fakultät für Geschichtswissenschaft, Internationale Beziehungen, Politik- und Kommunikationswissenschaften, der Medizinischen und Pharmakologischen Fakultät und der Wirtschaftswissenschaftlichen Fakultät) in der Zeitspanne 2011-2014 und Erkundungen an weiteren akademischen Institutionen des Landes schließen. Die Ergebnisse dieser Untersuchungen wurden in einer früheren Studie (Hamburg, 2014) teilweise schon präsentiert. Daraus ergibt sich, dass in einer Aufteilung auf Studienbereiche im technischen und wirtschaftlichen Bereich die wenigsten Erasmus-Stipendien beantragt werden und das höchste Interesse Medizinstudenten an der Möglichkeit zeigen, im Ausland zu studieren. Interessanter- und zugleich unbegreiflicherweise gibt es die meisten Angebote eben in den nicht besonders begehrten Bereichen, nämlich dem technischen und wirtschaftlichen. Für genauere Angaben siehe die früher erwähnte Studie. Die Lage ist in anderen Universitätszentren Rumäniens, wie Bukarest, Temeswar, Klausenburg, Jassy zwar besser, es werden aber nicht alle Plätze belegt und das Nachfragenniveau an Stipendien variiert je nach dem Zentrum, Bereich, und akademischen Jahr.

Während sich an der Fakultät für Wirtschaftswissenschaften und Geschäftsführung der „Al. I. Cuza" Universität, Jassy für das akademische Jahr 2013-2014 um die 104 Stipendien für eine Praktikantenstelle, bzw. die 117 Stipendien fürs Studium 104, bzw. 116 Studierende beworben haben, zeigten sie im nächsten Jahr für Erasmus+ Programme weniger Interesse (für die 272 Stipendien gab es insgesamt 102 Interessenten: 59 für eine SMS-Mobilität und 3 für eine SMP-Mobilität im ersten Semester, bzw. 40 Bewerber für eine SMS-Mobilität im zweiten Semester. An der Fakultät für Philosophie, Sozial- und Politikwissenschaften derselben Lehranstalt ist für die akademischen Jahre 2013-2014 und 2014-2015 ungefähr dasselbe Maß an Interesse für Erasmus-Programme zu registrieren. Für die 13 SMP- und 58 SMS-Mobilitäten gab es 2013 13, bzw. 32 Bewerbungen, während die 69 Erasmus+ Stipendien 2014 insgesamt 45 Studierende zu einer Bewerbung motiviert haben: im ersten Semester 26 für eine SMS-, 6 für eine SMP-Mobilität und für das zweite Semester 13 Kandidaten für eine SMS-Mobilität. Die Daten stammen von Erasmus-Koordinatorin Alina Mihaela Robu.

An den zwei entsprechenden Fakultäten der Universität von Bukarest lässt sich folgende Statistik aufstellen: die Fakultät für Verwaltung und Geschäftsführung bat für das akademische Jahr 2014-2015 insgesamt 65 Stipendien an, daran haben 23 Studenten Interesse gezeigt, während sich für die 199 Erasmus-Stipendien der Fakultät für Politikwissenschaften 52 Studenten beworben haben. Laut Erasmus-Koordinatorin Luciana Alexandra Ghica lassen sich diese Daten nicht auf Interesselosigkeit vonseiten der Studenten, sondern auf objektive Gründe zurückführen.

Die Fakultät für Business der Babeș-Bólyai Universität, Klausenburg zeigt ein tristes Bild, was die Studentenmotivation für eine Auslandserfahrung anbelangt. Die 140 Stipendien des Erasmus+ Programms haben nur 8 Bewerber angezogen. Als Fazit lässt sich ziehen, von Jahr zu Jahr registriert man große Schwankungen in der Bereitschaft der Studenten zur Bewerbung um ein Erasmus-Stipendium und interessanterweise sind die Studierenden im westlichen Teil des Landes weniger für eine Horizonterweiterung zu gewinnen.

An der Universität von Debrecen wurden ungefähr dieselben Fachrichtungen und Wissensbereiche untersucht wie in Rumänien. So wie es auch in der Studie „Erasmus-Stipendien zwischen Angebot und Interesselosigkeit. Der Hintergrund der fehlenden Studentenmotivation" (Hamburg, 2014) schon beleuchtet wurde, zeigen ungarische Studierende zwar größere Motivation für eine Auslandserfahrung als ihre rumänischen Kollegen, der Ausnutzungsgrad der Stipendienangebote bleibt aber in den meisten Bereichen einschließlich der wirtschaftlichen gering. Wenn Erasmus-Stipendien laut der im Frühjahr 2014 durchgeführten Studie sowohl in Großwardein als auch in Debrecen im medizinischen Bereich des größten Interesses freuten, ist das für andere rumänische Universitätszentren, wie Temeswar, Bukarest in gesteigertem Maße gültig. An der Medizinischen und Pharmakologischen Universität „Victor Babeș", Temeswar gab es für das akademische Jahr 2014-2015 33 Bewerbungen für die insgesamt 37 Erasmus-Stipendien (33 fürs Studium bzw. 4 fürs Praktikum), an der „Carol Davila" Universität, Bukarest (dieselbe Fachrichtung) bewarben sich für den Zeitraum 2013-2014 um die insgesamt 43 Stipendien 42 Studenten, während für das akademische Jahr 2014-2015 die Zahl der Bewerbungen (51) die der angebotenen Unterstützungen (42) sogar überschritt. Die Ergebnisse der ersten und zweiten, weitergeführten Untersuchung lassen sich für beide Länder für den wirtschaftswissenschaftlichen – da für den Autor dieser Studie wegen seiner Angehörigkeit von Interesse – , bzw. den medizinischen Bereich – da er die meisten bewerbungslustigen Studierenden aufzeigt – in folgender Tabelle synthetisieren.

**Tabelle 1:** Nachfrage und Angebot. Erasmus-Stipendien im Überblick (Großwardein und Debrecen)

| | Universität von Großwardein, Rumänien | | Universität von Debrecen, Ungarn | |
|---|---|---|---|---|
| | Zahl der Stipendien | Zahl der Bewerber | Zahl der Stipendien | Zahl der Bewerber |
| **Wirtschaftswiss. Fakultät** | 2013-2014 | | | |
| | 150 | 10 | 77 | 22 |
| Ausnutzungsgrad gemäß Bewerbungen | zirka 7% | | zirka 29% | |
| | 2012-2013 | | | |
| | 113 | 15 | 77 | 19 |
| Ausnutzungsgrad gemäß Bewerbungen | zirka 13% | | zirka 25% | |
| | 2011-2012 | | | |
| | SMS - 116 SMP - 78 | 11 2 | 77 | 16 |
| Ausnutzungsgrad gemäß Bewerbungen | insgesamt zirka 7% | | zirka 21% | |
| **Med. und Pharmak. Fakultät** | 2013-2014 | | 2011-2012 | |
| | SMS - 32 SMP - 7 | SMS - 17 | SMS + SMP 45 | 36 |
| Ausnutzungsgrad gemäß Bewerbungen | zirka 44% | | 80% | |
| | **Med. und Pharmak. Univ. „Victor Babeș", Temeswar, Rumänien** | | **Universität von Debrecen, Ungarn** | |
| | Zahl der Stipendien | Zahl der Bewerber | Zahl der Stipendien | Zahl der Bewerber |

| | | | | |
|---|---|---|---|---|
| | 2014-2015 | | | |
| | SMS – 33 SMP – 4 | SMS – 32 SMP – 1 | | |
| Ausnutzungsgrad gemäß Bewerbungen | zirka 89% | | keine Angaben zugänglich | |
| | **Med. und Pharmak. Univ. „Carol Davila" Bukarest, Rumänien** | | **Universität von Debrecen, Ungarn** | |
| | Zahl der Stipendien | Zahl der Bewerber | Zahl der Stipendien | Zahl der Bewerber |
| | 2013-2014 | | | |
| | 43 | 42 | | |
| Ausnutzungsgrad gemäß Bewerbungen | zirka 98% | | keine Angaben zugänglich | |
| | 2014-2015 | | | |
| | 42 | 51 | | |
| Ausnutzungsgrad gemäß Bewerbungen | über 100% | | keine Angaben zugänglich | |

Quelle: eigene Schöpfung, übernommen von: Erasmus-Stipendien zwischen Angebot und Interesselosigkeit. Der Hintergrund der fehlenden Studentenmotivation, in: Jahrbücher der Universität von Großwardein, Wirtschaftswissenschaften, Bd. 23, Großwardein: Universitätsverlag, 2014, S. 75-86. u. bearbeitet

Von der Universität von Prešov konnten im Zielsegment der Studie nur zwei Fakultäten, die für Management, bzw. die für Gesundheitspflege in die Untersuchung einbezogen werden, es gibt in Prešov keine hochschulische Lehranstalt in den anderen untersuchten Bereichen. Außerdem verfügen wir über Daten hinsichtlich Erasmus-Stipendien nur von der Fakultät für Gesundheitspflege, im wirtschaftlichen Bereich konnten wir leider Angaben weder von der Webseite der Fakultät noch von Erasmus-Koordinatoren ausfindig machen. Folgende Tabelle bietet einen Überblick über die uns zur Verfügung stehenden Daten.

**Tabelle 2:** Nachfrage und Angebot. Erasmus-Stipendien im Überblick (Prešov)

| | **Universität von Prešov** | | | |
|---|---|---|---|---|
| | **Zahl der Stipendien** | | **Zahl der Bewerber** | |
| | **2011-2012** | | | |
| | SMS - 3 | SMP - 27 | SMS - 4 | SMP - 28 |
| | Ausnutzungsgrad gemäß Bewerbungen: über 100% | | | |
| | **2012-2013** | | | |
| **Fakultät für Gesundheits-pflege** | SMS - 3 | SMP - 27 | SMS - 3 | SMP - 28 |
| | Ausnutzungsgrad gemäß Bewerbungen: über 100% | | | |
| | **2013-2014** | | | |
| | SMS - 5 | SMP - 26 | SMS - 5 | SMP - 27 |
| | Ausnutzungsgrad gemäß Bewerbungen: über 100% | | | |
| | **2014-2015** | | | |
| | SMS - 6 | SMP - noch unbekannt | SMS - 7 | SMP - noch unbekannt |
| | Ausnutzungsgrad gemäß Bewerbungen: über 100% | | | |

Quelle: eigene Schöpfung

Wie aus dieser Synthese ersichtlich, zeigen auch in Prešov Studierende vom Bereich des Gesundheitswesens das größte Interesse an der Horizonterweiterung, die Zahl der

Bewerbungen stimmt mit der der angebotenen Stipendien überein oder sogar überschreitet sie. Diese Studenten möchten für eine Zeitlang in Tschechien, Ungarn, Polen, bzw. Holland studieren, während ihre praktische Ausbildung in Tschechien und Deutschland erweitern.

## 2. Erörterung des Phänomens

Soweit die statistischen Daten. Im vorangehenden Abschnitt haben wir Einblick in die Lage um Erasmus-Stipendien bekommen, es bleibt aber zu sehen, warum Jugendliche aus Osteuropa im Zeitalter der Globalisierung und immer größer werdenden Mobilität von solchen Mobilitätsprogrammen eher fernbleiben als an ihnen teilnehmen. Es gibt schon manche Vermutungen hinsichtlich der Gründe für die mangelnde Studentenmotivation Stipendien gegenüber. Unter ihnen sind solche, wie: finanzielle Gründe, geringe Fremdsprachenkompetenz, allgemeine Interesselosigkeit angesichts des Studiums, Bequemlichkeit, u. a. aufzuzählen. Um die wirklichen Gründe zu ermitteln, scheint uns eine Meinungsumfrage unter den Studenten am geeignetsten. Zu diesem Zwecke wurde folgender Fragebogen auf rumänischer, ungarischer und englischer Sprache zusammengestellt und Studierenden im wirtschaftlichen Bereich – einer der Domänen, wo geringes Interesse für Erasmus-Stipendien registriert wurde – zum Ausfüllen gegeben. In die Meinungsumfrage wurden je über 120 Wirtschaftsstudenten der Universität von Großwardein, Rumänien, der von Debrecen, Ungarn und der von Prešov, der Slowakei, einbezogen.

Umfrage

1. Kennen Sie die Erasmus-Programme?
a) ja
b) nein

2. Wenn ja, woher haben Sie über sie erfahren?

3. Sind Sie der Meinung, dass für die berufliche Ausbildung der Studenten ein Studiumaufenthalt im Ausland absolut notwendig sei?
a) ja
b) nein
c) ich weiß nicht

4. Sind Sie der Meinung, dass für die berufliche Ausbildung der Studenten ein Studiumaufenthalt im Ausland nützlich sei?
a) ja
b) nein
c) ich weiß nicht

5. Würden Sie sich um ein Erasmus-Stipendium fürs Studium oder Praktikum im Ausland bewerben?
a) ja
b) nein
c) ich bin unentschieden

6. Wenn Sie die vorherige Frage bejaht haben, welches sind die Hauptgründe für diese Wahl (Sie können mehrere Varianten ankreuzen)?
a) ich möchte meinen Horizont erweitern
b) eine Erasmus-Mobilität sieht gut im Lebenslauf aus

c) ich möchte meine Fremdsprachenkenntnisse verbessern/eine neue Sprache erlernen
d) ich möchte andere Kulturen kennen lernen
e) Abenteuerlust
f) andere (bitte erörtern)

7. Wenn Sie sich um kein Erasmus-Stipendium im Ausland bewerben möchten, welches sind die Hauptgründe für diesen Entschluss (Sie können mehrere Varianten ankreuzen)?
a) Furcht vor dem Unbekannten
b) Furcht davor, dass man den Erwartungen nicht gewachsen ist
c) ungenügende Fremdsprachenkenntnisse
d) dieser Aufenthalt böte mir nichts Besonderes an
e) zu viel Stress mit den Prüfungen an der Gast- und Heimatinstitution
f) finanzielle Gründe
g) andere (bitte erörtern)

### 2.1. Resultat der Umfrage in Großwardein (Rumänien)

An der Wirtschaftswissenschaftlichen Fakultät der Universität von Großwardein haben uns 122 Studenten mit keiner vorherigen Erasmus-Erfahrung (106 Bachelor-Studenten: 34 im ersten und 72 im zweiten Jahrgang, bzw. 16 Magisterstudenten) ihre Meinung über das Programm mitgeteilt. Von den 34 befragten Erstjährlern hat ungefähr die Hälfte (16) von Erasmus-Programmen nicht einmal gehört. Der Prozentsatz der Nichtkenner ist im Falle der Studierenden im zweiten Jahrgang und der Magisterstudenten natürlich viel niedriger (19%).

Als hauptsächliche Informationsquelle über Erasmus-Stipendien haben mehr als die Hälfte der Befragten die Fakultät, ihre Webseite und Lehrkräfte und nur 8% Bekannte, Freunde, bzw. ungefähr 11% Kommilitonen angegeben. Fast alle der Antwortgebenden (an die 85%) halten eine Auslandserfahrung für ihre Ausbildung für nützlich, als absolut notwendig finden das aber nur 57%. Im Spiegel der tatsächlichen Bewerbungen der letzten Jahre – 2011 nur 11, 2012 15 Personen und 2013 nur knapp 10 Interessenten – wirken die Angaben, dass sich zirka 34% der Befragten um eine Erasmus-Mobilität bewerben würden und weitere 39% noch unentschieden diesbezüglich seien, ziemlich unrealistisch. Was die potenziellen Interessenten trotz der Möglichkeit der Horizonterweiterung, Verbesserung der Sprachkenntnisse – Gründe, die 47 Leute für eine Bewerbung bewegen könnten –, bzw. des Kennenlernens von anderen Kulturen – von 37 Studenten als anziehend empfunden – von der Bewerbung abhalten konnte, ist schwer zu sagen. Eine mögliche Erklärung wäre dafür, dass 24% der potenziellen Antragstellern auch ihren Fürchten – vor dem Scheitern, zu viel Stress, wegen finanzieller Schwierigkeiten oder mangelnder Sprachkenntnisse – Ausdruck gegeben haben.

So wie es in der ersten Studie schon festgestellt wurde, stimmen die von den Studenten als von der Bewerbung abschreckend angegebenen Faktoren mit unseren Vermutungen größtenteils überein, sind aber zahlen- und prozentmäßig nicht so entscheidend. Ungenügende Sprachkenntnisse haben für 27 Studenten, zu viel Arbeit ud Stress um die Prüfungen für 24 Studierende und die finanziellen Schwierigkeiten nur für 22 Jugendliche einen Grund für die Nichtbewerbung gebildet. Es gab auch Schwierigkeiten in der eindeutigen und richtigen Interpretierung der Fragebögen. 11% der Antwortgebenden vermerkten trotz einer eindeutigen Antwort auf Frage 5 weder Gründe für die Bewerbung noch für die Nichtbewerbung. Von der Kategorie der Unentschiedenen angesichts einer Bewerbung gaben 17 Personen nur Gründe fürs Fernbleiben vom Erasmus-Programm und 4 Studenten (zirka 8%) ausschließlich Argumente für die Teilnahme an.

### 2.2. Resultat der Umfrage in Debrecen (Ungarn)

An der Wirtschaftswissenschaftlichen Fakultät der Universität von Debrecen gab es 133 Antwortgebende, hauptsächlich von älteren Jahrgängen: mehr als die Hälfte (75

Studenten) studierten schon im dritten, 22 im zweiten und nur 3 im ersten Jahrgang. Dementsprechend haben fast alle schon vom Erasmus-Programm gehört, nur für knappe 13% war die Studentenmobilität kein Begriff. Es ist auch wahr, dass 21 Studierende keine Auskunft über ihr Studiumjahr gegeben haben, in ihrem Fall kann man nur zumuten, dass sie nicht dem ersten Jahrgang angehörten.

Die Studenten erfahren auch in Debrecen größtenteils im institutionellen Rahmen von Mobilitätsprogrammen (77 Antwortgebende haben darauf hingewiesen), es sind aber eher offizielle Quellen, wie Infoveranstaltungen, Webseite, Anzeigen und weniger die Lehrer der Fakultät, die sie darauf aufmerksam machen. Im Gegensatz zu ihren rumänischen Kollegen empfinden nur 21% der ungarischen Antwortgebenden eine Auslandserfahrung für ihre Karriere als unerlässlich. Ihrer Nützlichkeit sind aber fast alle (95%) bewusst. Die tatsächlichen Bewerbungen (22 für das akademische Jahr 2013-2014) stimmen auch hier mit der Zahl der theoretischen Jasager zu einer Erasmus-Erfahrung (56 Befragten) nicht überein.

Die Prozentsätze sind sowohl auf rumänischer als auch auf ungarischer Seite ähnlich. In Debrecen gaben sich auf den ersten Blick 42% der befragten Studenten als potenzielle Bewerber, während in Großwardein 34% als solche an. Den 32% unentschiedenen Studenten in Debrecen stehen auf rumänischer Seite 39% gegenüber. Ungefähr gleich ist darunter in beiden Institutionen auch die Zahl der eher zur Nichtbewerbung Neigenden, in Debrecen begründeten nämlich 21, in Großwardein 17 zwischen ja und nein schwankende Studenten nur, weshalb sie vom Mobilitätsprogramm fernblieben. Die Tatsache, dass drei der potenziellen Bewerber auch ihren Zweifeln hinsichtlich des Programms Ausdruck gegeben haben − sie haben nämlich auch für die Nichtbewerbung argumentiert − senkt den Prozentsatz dieser Kategorie auf ungarischer Seite auf knapp 40% und nähert ihn so dem Ergebnis in Großwardein noch mehr.

Attraktiv an Erasmus-Stipendien ist für ungarische Studenten hauptsächlich die Möglichkeit der Horizonterweiterung und der Verbesserung der Sprachkompetenz, interessanterweise ohne aber einschließlich des Interesses an der Kulturkomponente. Während diese zwei Gründe bei beiden Nationen übereinstimmen, werden ungarische Studierende zusätzlich auch von der Abenteuerlust bewegt.

Im Falle der Gründe für die Nichtbewerbung besteht nur eine teilweise Überlappung. Neben den ungenügenden Sprachkenntnissen, der Bequemlichkeit, auf die sich fast die Hälfte der Wirtschaftsstudenten in der Debrecener Zielgruppe bezieht und den finanziellen Schwierigkeiten hält die befragten ungarischen Studenten auch die Furcht vor dem Unbekannten davon ab, sich um ein Erasmus-Stipendium zu bewerben.

## 2.3. Resultat der Umfrage in Prešov (der Slowakei)

In Prešov haben 123 Studenten der Fakultät für Management auf dieselben Fragen geantwortet. Unter ihnen gab es 62 Studenten im ersten, 47 im zweiten Jahrgang und 14 Magisterstudenten, ihre Fachrichtungen waren Management, Tourismus und Management der Humanressourcen. Erasmus-Programme sind für den Großteil der Befragten (86%) bekannt, interessanterweise haben sogar Erstjährler Kenntnis davon (52 Antwortgeber im ersten Jahrgang haben schon über Erasmus-Programme gehört). Die hauptsächliche Informationsquelle hinsichtlich dieser Stipendien bildet auch in der Slowakei die Universität (ungefähr 54% haben über Erasmus-Programme im institutionellen Rahmen erfahren), es gibt aber auch viele (zirka 47%), die sich die Information vom Internet einholen. Natürlich gab es auch Überlappungen. Für die zukünftige Karriere findet eine Erasmus-Erfahrung nur ungefähr die Hälfte der Befragten als unerlässlich und die antwortgebenden Magisterstudenten gehören etwa verblüffenderweise nicht zu dieser Kategorie. Darin scheinen aber fast alle Befragten einig zu sein (zirka 98%), dass Studium/Praktikum im Ausland nützlich sei. In diesem Punkt zeigen slowakische Wirtschaftsstudenten die höchste Wertschätzung Erasmus-Stipendien gegenüber, sie überholen ihre ungarischen Kollegen mit zirka 3 und die rumänischen Studenten mit 13%. Die Tatsache, dass eine

Person Erasmus-Programme für die Berufsausbildung absolut notwendig, aber bei der nächsten Frage zugleich nutzlos hält, und weiter unten aufgeführte, schwer interpretierbare Äußerungen zeugen davon, dass solche Umfragen nur orientativen Charakter, keinesfalls absolute Gültigkeit haben können.

Auch vom Gesichtspunkt der theoretischen Bereitschaft an Erasmus-Programmen teilzunehmen sind die höchsten Werte bei den befragten slowakischen Studenten zu registrieren. Mit insgesamt 64 potenziellen Bewerbern sagen ungefähr 52% der Befragten Ja zu einer Auslandserfahrung und weitere 32% sind noch unentschieden. Interssanterweise stimmt der Prozentsatz der noch Unentschiedenen in allen drei Ländern größtenteils überein (je 32% in Ungarn und der Slowakei und 39% in Rumänien). Diese Angaben sind aber auch relativ, 15 potenzielle Bewerber haben nämlich auch Gründe für die Nichtbewerbung angegeben − so könnten sie eher zu den Unentschiedenen eingereiht werden −, 7 Studenten, die kein Interesse an einer Auslandserfahrung zeigten, führten auch Gründe für eine eventuelle Bewerbung auf, mehr noch, 3 von ihnen argumentierten nur für die Bewerbungsabsicht und 5 Studierende von der Gruppe der Unentschiedenen kreisten nur Argumente für die Nichtbewerbung ein. Diese Unstimmigkeiten erschweren die eindeutige Interpretierung der Antworten und erhöhen womöglich den Prozentsatz der zwischen ja und nein Schwankenden auf slowakischer Seite.

Die schwerwiegendsten Faktoren, die für die Teilnahme an einem Erasmus-Programm sprechen, sind auch für slowakische Studenten die Verbesserung der Sprachkompetenz (91 Stimmen) und die Horizonterweiterung (51 Stimmen). Das steht im Widerspruch zur Feststellung mancher slowakischen Kollegen (Fremdsprachenlehrer), der nach sich ihre Studenten wegen der sehr ähnlichen Sprache hauptsächlich nach Tschechien orientieren, wenn es um Bestimmungsländer im Erasmus-Programm geht. Daneben halten 50 Antwortgebende eine Erasmus-Erfahrung auch für einen Blickfang in ihrem Lebenslauf. Überlappungen gibt es hier auch.

Slowakische Studenten sagen wegen derselben Gründe nein zu einer Auslandserfahrung wie ihre rumänischen und ungarischen Kollegen und diese sind: mangelnde Fremdsprachenkenntnisse, Bequemlichkeit, finanzielle Gründe und hinzu kommt noch die Furcht vor dem Unbekannten, worauf sich die Befragten aus Debrecen noch bezogen haben.

Als für alle betroffenen Seiten gültiges Fazit lässt sich ziehen, dass die Zahl der Studenten, die sich theoretisch gegen die Bewerbung um ein Erasmus-Stipendium ausgesprochen haben, keinesfalls überwältigend ist, und dass im Hintergrund der schwachen Teilnahme an diesem Programm viel weniger Finanzierungsprobleme als von den Studierenden abhängige, interne Faktoren stehen.

**2.4. Fazit**

Diese Resultate sind für Lehrkräfte und Unterstützer einer Auslandserfahrung besonders informationsreich: einerseits zeigen sie, wo man bestimmte Vorurteile abbauen, was man bekämpfen soll und in welcher Richtung noch Arbeit zu leisten ist. Natürlich lässt sich gegen die Bequemlichkeit der Jugendlichen nicht vieles tun, ihre Befürchtungen wegen mangelnder finanzieller Mittel können aber dadurch behoben werden, dass man sie auf Bestimmungsländer mit niedrigeren Unterhaltskosten oder mit vielseitigen Möglichkeiten für Teilzeitbeschäftigung während des Studiums aufmerksam macht. Außerdem haben die für den Zeitraum 2014-2020 angebotenen Erasmus+ Programme teilweise schon eine Lösung für dieses Problem gefunden, indem sie durch höhere Stipendien eine bessere Finanzierung sichern.

Weiterhin verstärken die Chance eines Erasmus-Stipendiums und das Interesse an einem Auslandsaufenthalt schwankende Studentenmotivation zum Erlernen einer Fremdsprache, was mittel- und langfristig bessere Fremdsprachenkompetenz resultiert.

**3. Vorschläge für die Erhöhung des Interesses und der Teilnahmequote an Erasmus-Programmen**

In den vorangehenden Abschnitten wurde im internationalen Vergleich beleuchtet, welcher Bekanntheit sich Erasmus-Programme freuen, welches Interesse sie erwecken, bzw. welche Gründe hinter der fehlenden Studentenmotivation angesichts der Berwerbung um ein solches Stipendium stecken könnten. Daraus ergibt sich, dass man stellenweise einerseits Wege zur Erhöhung des Bekanntheitsgrades der Mobilitätsprogramme identifizieren und andererseits Argumente finden sollte, mit denen Befürchtungen der Studenten zu beseitigen und Vorurteile gegenüber Studienaufenthalte im Ausland zu bekämpfen sind.

Für die befragten slowakischen Studenten sind Erasmus-Programme schon im ersten Jahrgang ein Begriff; wie ungarische Studenten diesbezüglich stehen, ist uns unbekannt, da nur 3 Antwortgebende Erstjährler waren. Dass aber eine Großzahl der Großwardeiner Studierenden im zweiten Semester über Erasmus-Stipendien noch nicht gehört hat, zeigt, dass es in Rumänien an einer frühzeitigen Bewusstmachung dieser Studienmöglichkeit fehlt. Um diesen Mangel zu beheben, sollte man die „Neukömmlinge" schon bei der Eröffnungsfeier ihres ersten akademischen Jahres über die Existenz der Mobilitätsprogramme informieren, damit sie zur Zeit der Bewerbungsperiode um diese Stipendien von Online-Quellen und Berichten der ehemaligen Teilnehmer mit Erasmus-Programmen schon einigermaßen vertraut sind.

Anlässlich der jährlichen Schülerbesuche, an denen in Großwardein Gymnasiasten, potenzielle zukünftige Studenten mit der Universität, dem akademischen Milieu Bekanntschaft machen, könnte man diese Jugendlichen zu einem Vorstellungsgespräch zur Erwerbung eines Erasmus-Stipendiums einladen; damit wäre die erste Begegnung mit Erasmus-Programmen gemacht und der erste Eindruck schon hinterlassen.

Ehemalige Erasmus-Stipendiaten, Lehrkräfte, die an Mobilitätsprogrammen teilnehmen, könnten eine größere Rolle in der Popularisierung der Stipendien auf sich nehmen. Durch mündliche und schriftliche, möglichst objektive Erfahrungsberichte, die nach der Heimkehr von der Mobilität auf die Webseite der Fakultät hochgeladen wären, würden sie einen Beitrag zum besseren Kennenlernen der Programme mit all den Vor- und Nachteilen während des ganzen akademischen Jahres und nicht nur zur Zeit der Erasmus-Tage leisten.

Eine weitere Maßnahme wäre die Verpflichtung der Erasmus-Stipendiaten nach der Heimkehr zum Ausfüllen eines Evaluationsbogens angesichts ihres Auslandsaufenthaltes, das an der Webseite des Büros für Internationale Beziehungen der Universität von Großwardein vorhanden ist, und dessen Öffentlichmachen an der institutionellen Webseite. Dieser Fragebogen ist vorläufig fakultativ auszufüllen. Man könnte aber dessen Beantwortung zum Teil des ganzen Verfahrens und so zur Verpflichtung des jeweiligen Erasmus-Stipendiaten nach Beenden der Mobilität verwandeln. Diejenigen Stipendiaten, die zu dieser Bewertung auch ihren Namen geben, könnten in eine Datenbak der möglichen Kontaktpersonen zwecks Informierung über bestimmte Institutionen und Bestimmungsländer aufgenommen werden. Ihre direkten positiven oder ab und zu auch negativen Erfahrungen würden Interessenten bei der Beschlussfassung und der richtigen Wahl gewiss helfen. Viele von diesen Maßnahmen trügen auch in den anderen zwei untersuchten Institutionen zu einer größeren Popularität, oder wenigstens zu einer objektiven Betrachtung der Erasmus-Programme bei.


**4. Danksagung**

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# GLOBALIZATION, ANGLICISMS AND BUSINESS ENGLISH

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**Abstract:** *For a long time, people have felt the need for a common language in order to communicate faster and better and English has become the global language, spreading across the world. Nowadays, more and more people learn and speak English for different reasons. The effect of it is that English started influencing the native languages of the speakers who use a great variety of words and expressions from English while speaking their respective languages. The aim of this paper is to analyze the influence of Anglicisms on the Romanian vocabulary, especially on the business vocabulary. Our paper focuses on English for Business and Economics, as we have been teaching business English to students from the Department of International Business for several years. The research undertaken in this paper is a theoretical research, concentrating on the controversies that surrounded this highly debated subject by the linguists: should Anglicisms be used in Romanian or not? In this regard, there are two sides: on one hand those who are rather supportive of the trend and those (and here we mention highly reputed Romanian linguists like George Pruteanu or Eugen Simion) who were categorically against it. The paper provides the results of a survey conducted by "Special Eurobarometer 243" showing that English is the most widely spoken language in Europe with a score of 51%. The concept of "romgleza" tends to replace the Romanian language in large corporations and not only and this is a natural trend, considering the "invasion" of the English language. A conversation in "romgleza" combines Romanian and English elements, thus resulting a technical jargon, the English words being used especially in areas like IT, marketing, management. This is due to the fact that in these areas the daily exposure to English is higher because everything people in these fields do is connected to English. Romgleza appeared because in Romanian there are no words to express the same meaning as the English words and that is why the majority of people prefer to use the English word. Yet, the purpose of this paper is not to mourn the fate of the Romanian language. Anglicisms have not determined an "alteration" of the Romanian language, but, on the contrary, they have contributed to its permanent renewal and development, modernizing its vocabulary.*

**Keywords:** English, globalization, Anglicisms, romgleza, controversies.

**JEL classification:** Z19

## 1. Introduction

It is a common fact that English has been successfully promoted and adopted in the global linguistic marketplace. Tom Hutchinson and Alan Waters (1987) offer one of the reasons why English acquired so much importance at worldwide level: "The effect was to create a whole new mass of people wanting to learn English, not for the pleasure or prestige of knowing the language, but because English was the key to the international currencies of technology and commerce" (p.7). In fact, English has nowadays become the language of international communication. As Robert Phillipson (1992) points out, "English has a dominant position in science, technology, medicine, and computers; in research, books, periodicals, and software; in transnational business, trade, shipping, and aviation; in diplomacy and international organizations; in mass media entertainment, news agencies, and journalism; in youth culture and sport; in education system, as the most widely learnt foreign language" (p.6).

At the European level, English is used as a common language especially due to the appearance of international organizations like the UN, NATO, EU, or WTO. Together with these organizations new interest appeared in legislation, treaties, agreements where English is used as a common language. EU institutions use three main working languages:

English, French and German. Yet, the majority of the new Member States have preferred English.

According to a survey carried out by the "Special Eurobarometer 243" about the languages spoken by Europeans shows that German is the most widely spoken mother tongue with 18% of the speakers, while English is the most widely spoken language in the EU with 51%. This survey also shows that 100% of the Hungarians, 100% of the Portuguese, and 99% of the Greeks speak the state language as their mother tongue. 56% of citizens in the EU Member States are able to converse in one language apart from their mother tongue. 28% of the interviewed persons say that they speak two foreign languages well enough to hold a conversation. Yet, despite this, 44%, admit they do not know any other language than their mother tongue. 38% of EU citizens state that they have skills in English to have a conversation (apart from the citizens of the United Kingdom and the Republic of Ireland, and Malta), therefore English remains the most widely spoken foreign language throughout Europe. In 19 out of 29 countries surveyed, English is the most widely known language apart from the mother tongue: Sweden (89%), Malta (which is a former British colony) (88%) and the Netherlands (87%). 77% of EU citizens consider that children should learn English. English either as a mother tongue or as a second/foreign language is spoken by 51% of EU citizens, followed by German with 32% and French with 28% of those surveyed.

## 2. Loanwords/Anglicisms. Definition and Controversies

It is known that speakers use in different cultural spaces more than one language, and this is eloquent today if we consider globalization under the aegis of English language, occupying the supremacy among other international languages used in communication. Therefore, as a subset of neologism, "in the linguistics of languages in contact, in view of multilingualism, in the last two decades is considered Anglicism "every word borrowed from English designating a thing or a concept that belongs to British civilization; such a word should not be of English origin (provenience), but it must have been adapted and integrated into the vocabulary" (Ciobanu, 1997:4).

The aim of this paper is to analyze the influence of Anglicisms on the Romanian vocabulary, especially on the business vocabulary. Our paper focuses on English for Business and Economics, as we have been teaching business English to students from the Department of International Business for several years. The main source which we use during our Business English classes is *English for Business Students*, which is a multi-level business English course for business students. *English for Business Students* is designed for those who are involved in the world of Management, Marketing, Finance and Banking and Tourism. Students learn to talk figures, accounting basics, company finance, world economic issues, trade and money and banking and they become accustomed to using loanwords from English.

Loanwords are words that, adapted phonetically, were integrated into the phonological system of the receiving language and contain no foreign element. The loanwords that have started the process of adaptation and assimilation are called foreign-loans. The terms remaining misfits or unassimilated are called foreign-words (Ciobanu 2004: 33).

Denotative Anglicisms do not generally have an equivalent in Romanian, as denoting newly emerging realities in various areas of material and spiritual culture.

While Anglicisms are inappropriate or incomplete terms adapted to the language system, specialized studies revealed that, due to their frequent use, can be considered to be norms (phonetic, orthographic, morphological).

According to the motivation and the function of the loan in relation to the specific of a certain style or language register, Sextil Puşcariu (1976) classifies loans into *necessary loans* and *luxury loans*.

- *Necessary loans* (in our case, *necessary Anglicisms*) are words, phrases or phraseological units that have no counterpart in Romanian or have some advantages over the domestic term. In this respect, Anglicisms have the advantage of precision, conciseness and not least the international movement. They are motivated by the novelty of the referent and are also international words that have no Romanian synonyms and fall into the category of specialized terms: *audit, broker, brokerage, buy-back, cash&carry, clearing, credit, dealer, design, designer, dumping, duty-free, electronic banking, futures, grant, holding, hypermarket, leasing, management, marketing, non-profit, offshore, outlet, rating, retail banking, supermarket, trust, voucher, wireless*, etc. These words emerged from the necessity of a common, international, professional language between different Romanian economic, financial and commercial entities that have developed and maintained relationships with foreign partners.
- *Luxury loans* (in our case luxury *Anglicisms*) are useless loans, related to the subjective tendency of some social categories to individualize themselves linguistically in this way. Such terms only double Romanian words, without expressing additional information. Examples: *advertising, agreement, board, brand, businessman, businesswoman, chairman, discount, full-time job, marketing manager, part-time job, program officer, sales manager, sales person, salesman, showroom, staff, but also shop (frequently used in some Romanian shops' names), shopping, shopping centre, food, drink.*

Analysing the adaptability of English origin words in Romanian according to linguistic norms, it can be noticed that the general trend of contemporary literary language is to keep loans from English in a form as close as possible to that of the source language. At the same time, at the morphological level, a consequence of the massive use of English words might be the "undermining" of the inflectional character of the Romanian language by increasing the number of invariable adjectives and hardening the distinction of different parts of speech. And according to lexical-semantic standard, defining the meaning of loans is generally done with a synonym or an equivalent Romanian expression. Anglicisms can be inserted into the text by its Romanian equivalent or, in a journalistic manner, by alternating synonymous terms in titles and subtitles.

Adriana Stoichiţoiu-Ichim - in "Aspecte ale influenţei engleze în româna actuală" ("Aspects of British influence in Current Romanian" t.n.) - makes the differentiation between English assimilated loans (which are adapted from the phonetic-orthographic, morphological and semantic point of view and also behaves like Romanian lexemes, with extensive circulation among different social groups) and are often commonly used in speech (*stress, hit, star, top, fan, job, sort, match*, etc.) (Stoichiţoiu-Ichim, 2001:89).

Therefore, the lexemes which have been adapted into Romanian from spelling and phonetic-semantic and morphological point of view of fall into the category of so-called *românisme*. These words imposed in an idiom through a typical Romanian pronunciation, a sign that a derogation was made from the principle of etymology, in favor of phonetics. Such lexemes are widely used in communication and plural formation in Romanian follows the model of masculine Romanian nouns (desinence–i for plural) or neutral Romanian nouns (desinence-uri). For example: *fani*, *stresuri, hituri, şorturi, staruri, topuri, joburi, meciuri* (Stoichiţoiu-Ichim, 2001:90)

## 3. **Globalization of Romanian Language. The "Romgleza"**

The term globalization has been defined many times, by many researchers in terms of economic and political issues. In popular terms, the term *globalization* is associated with: *free market, economic liberalization, Americanization* or *global integration*. (http://plato.stanford.edu/)

According to Held et al (1999), globalization refers "to processes of change which underpin a transformation in the organization of human affairs by linking together and expanding

human activity across regions and continents" (Held, 1999: 15). Waters (2001) defines globalization as "a social process in which the constraints of geography on economic, political, social and cultural arrangements recede, in which people become increasingly aware that they are receding and in which people act accordingly". (p.5) All these suggest that globalization is a complex phenomenon which covers not only the economic field, but it has effects upon our social and cultural lives. Yet, why should approach globalization with a focus on language? This is due to the fact that language is an area of contemporary globalization, in which changes are quickly visible.

Sim (2007) considers that "[N]owadays the English influence over Romanian is so powerful and obvious that it determines different attitudes among common users, speakers and among specialists, linguists as well. It is a unidirectional influence, has a deliberate character and mainly consists of cultivated, savant borrowings as compared to the bi-directional, popular, spontaneous, and conditioned by the community coexistence that spoke different languages or by the natural bilingual characteristics of regional contacts."

(http://steconomiceuoradea.ro/anale/volume/2007/v2-the-impact-of-foreign-languages-on-the-development-of-the-business-environment/11.pdf)

For example, a statement by the Romanian Minister of Communications and Information Technology at a National Conference on "outsourcing" sounds like this:

*"Outsourcing is an area of success for Romanian Information and Communications Technology. Competition in this market has become intense, with Romania having to compete in the global village not only with European countries in the Far East and Latin America. Only a marketing and branding strategy which is well structured and envisaged for the medium term will help us to situate ourselves in a leading position in this global competition"* (Fairclough, 2006:1).

The italicized words are very usual in a business discourse in the Western world, yet in Romania they have begun to appear only over the past few years.

"*Outsourcingul* este un domeniu de success al *IT&C-ului* românesc. *Competiţia* pe această piaţă a devenit una foarte strânsă, România fiind nevoită să concureze în *satul global* nu doar cu ţările europene, ci şi cu cele din Orientul Îndepărtat sau America Latină. Doar o *strategie* de *marketing* şi de *branding* bine structurată şi gândită pe termen mediu ne va ajuta să ne situăm pe un loc fruntaş în această *competiţie globală*."

The italicized words are direct borrowings from English (*outsourcing, marketing, branding*) while some other words (*success, competitive, global, strategic*) previously existed in Romanian (with differences in spelling, pronunciation and morphology due to the differences between languages), but are used in this discourse in the ways and with the meanings of contemporary Business English. This shows the extent to which the Romanian language has been affected by globalization. According to this, the new business discourse in Romania is expressed in a Romanian language which is strongly influenced by the English language.

English is developing as a means of international communication. English has spread across the world fast due to the British and especially American economy and the fast-growing developments in technology. For instance, in the today's world approximately eighty percent of the data stored in the world's computers is in English. The entertainment industry has contributed to it, too. .

Among the Romanian professors, linguists and researchers, there are two main trends regarding the English influence on the Romanian language.

The first category is that of the supporters of the purity of Romanian, trying to find ways to suppress any English influence. One of the most known defenders of the Romanian language is Eugen Simion, member of the Romanian Academy or the late professor George Pruteanu, who have used recurrently the term *romgleză* to refer to the current mixture of Romanian and English used in the public sphere. George Pruteanu considers that the use of Angicisms by the Romaninas has  also a psychological explanation: "the English name seems for some more "valuable", more "modern" than the one Romanian –

as if, uh !, Romanian language were obsolete, outdated, embarrassing. Some, more radical, will say that it is related to the broader phenomenon of globalization. Then, I will strain myself and I will answer them that it is the snobbery of servility, the coanachiriţism. This anglicized flirtation seems a kind of provincialism at-the-level-of-country, a form of inferiority complex. As for Madame Chiritza seemed more "chic" (Cooler it would be said today) to say *furculition* instead of *fork*, so it seems to some that the Shopping Center's is more "hell", more "in Europe" than *Centru comercial*"[11] (http://www.pruteanu.ro/4doaro-TOT.htm).

The second category belongs to those who tend to tolerate the occurrences of English borrowings in present-day Romanian, and are more interested in finding ways to normalise and standardise new words. One of them is Mioara Avram (1997) who states that: "The influence of the English language is not a negative phenomenon in itself and is no more dangerous than other foreign influences that have had an impact on our language ... Considering the great hospitality of Romanian, doubled by its ability to assimilate and integrate borrowings even at the level of allophones, it is logical to assume that Romanian will be able to get over

Anglicisation... as it has got over Slavonification, Hellenisation, Russification, Italianisation or Frenchification, to only mention a few of the linguistic influences that have affected Romanian over time." (p.9)

There have been many researches in the field to determine whether the English borrowings in Romanian are necessary or they are simply fashionable. The spheres which have proved to be more open to such borrowings are economics, advertising, fashion and politics.

Stoichițoiu-Ichim (2006) analyses whether the use of *romgleză* is determined by personal choices or whether it is a direct effect of globalisation. According to the author, globalisation is a fertile field which offers the perfect environment for the assimilation of various English words and structures in Romanian, while allowing individual speakers or groups to choose whether they are ready to adopt new lexical items or not. Stoichițoiu-Ichim considers that the members of some groups (such as experts in a particular scientific field – economists, for example) use English borrowings as a means to emphasise their belonging to a group. It is argued that such users make no distinction between "really necessary vs. gratuitous loan words. For them, anything goes as long as the language community understands the message." (apud Niculescu-Gorpin, 2014:93)    Niculescu-Gorpin argues that "there may be no escape and the influence will continue. […] I claim that this influence has its benefits in that it will enrich the Romanian vocabulary, while trendy loan words will disappear if not sanctioned by use. (Niculescu-Gorpin, 2014:93)

In the world of business, where linguistic and cultural knowledge are very important nowadays when doing business in an international environment, English is preferred by the majority of investors, although these investors come from non-Eglish speaking countries.

In the study ''Linguistic globalization and English addiction'', Cristina Călăraşu presents the concepts which appeared in the linguistics of the latest decades of the 20th century. The author states that ''the English addiction represents the current tendency of different languages to allow the English influence, especially in vocabulary. Therefore, this influence acts as an over stratum element. The phenomenon becomes even more interesting when it takes place between languages that are not genealogically kindred. Taking into

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[11] „Denumirea pe englezeşte pare unora mai „valoroasă", mai „modernă" decît cea pe româneşte – ca şi cum, hm!, limba română ar fi demodată, desuetă, jenantă. Unii, mai radicali, vor spune că asta ţine de fenomenul larg al globalizării. Atunci, mă voi încorda şi eu şi le voi răspunde că ţine de snobism, de servilism, de coanachiriţism. Această fandoseală anglicizantă mi se pare un fel de provincialism-la-nivel-de-ţară, o formă de complex de inferioritate. Aşa cum Coanei Chiriţa i se părea mai „şic" (!mai cool, s-ar spune azi) să zică furculition în loc de furculiţă, aşa li se pare unora că Shopping Center e mai „al dracului", mai „în Europa" decît Centru comercial."

consideration that nowadays it includes a great number of languages, it has the tendency of becoming international, pointing out a new dimension of the contact between languages". On the other hand, the author points out that ''in linguistics, the globalization idea turned up as a direct sequel of the economic situation, so it mirrors a certain aspect of the connection between the society's dynamics and the communication needs (...) the concept of linguistic globalization must be understood as a deliberate acceptance of common / unique means of communications in the international economic ties (...) From clear conjunctural reasons in the technical, scientific, social and economic development process, the English language was the only accepted language, as the language of globalization (...) it is obvious that the soaring development of the information technology, as well as of the financial, banking field was firstly registered in U.S.A., therefore registered in an English - speaking territory" (Călăraşu, 2003:323-337).

*Romgleza* is used in corporations in research and in communication with other colleagues. As research and communication with foreign partners nowadays are prevalent in any corporation, when you express yourself and read in Eglish for more than 50% of the entire communication process, it is natural to lend even in current conversation certain words that belong to technical jargon or, simply, these words express more precisely or more rapidly certain meanings. Yet, these borrowings should be made consciously and the limit should be the denaturation of certain meanings that the words borrowed have in Romanian. For example, *face sense/make sense* is one of the worst calques in "romgleză". In Romanian there is the right expression for it, *a avea sens*, which means exactly the same thing as *make sense* in English. The word by word translation is nothing but the expression of the speakers' laziness, of the elementary lack of respect regarding the language. In the same way, *suportarea clienţilor/client support* leads to ridiculous situations. It is not about *standing* the clients, but helping them, assisting them. Any entrepreneur, businessman or professional knows that *suportarea clienţilor* is an attitude at least damaging. Another example is that of *adresarea problemei/addressing the problem*, yet a problem cannot be *addressed*, only a letter or an application can be addressed. The meaning the romgleza speakers have in mind when using this expression is that of *solving* or *attempt to solve*, yet this word, used with this meaning is a barbarism. Other words are *forecast*, *end-user, top, damage* and *exit*, which can be translated, with *prognoză, utilizator final, de vârf, pericol* and *ieşire*. As long as these words are used only as professional jargon, between the members of a community, they are not as disturbing used in English because they might not exist in Romanian, with the same meanings. *Pipeline* is another word which cannot be expressed in Romanian unless using a whole structure: it means "*conduct/pipe*", yet in business it is still used with the meaning *a fi pe agenda de lucru, a fi în proiect*. Somewhat more natural as borrowing might be *customizare, share, headquarter* and *focus*. These words are not yet in DEX, but their use can be somewhat justify by the fact that the meanings they express are non-existing in the Romanian equivalents: *personalizare* is not really *adaptation for the client*, *share* is not the same with *partajare* or *împărtăşire* and *headquarter* can be translated with *cartier general* (but who would use such an obsolete expression nowadays?) There is another translation for it, *sediu central*, but it does not cover the meaning in English. In what the last word is concerned, "*focus*", its adoption should happen quickly, because *focalizare* seems inappropriate and *concentrare* contains a significant semantic difference.

### 3.1. Some Business Anglicisms. Translations and Definitions

There are many loanwords which entered the Romanian language through French, Italian and even Latin ways.

### 3.1.1. British origin Aglicisms and their definitions

**Business**= afacere- legal activity in the agricultural, industrial, financial, trade, fields etc. carried on for profit; occupation; work;

**Brand**= trademark,marcă înregistrată, marcă (de produs), marcă de fabrică.

**Board**= the English name for the Board of Directors of a company or organization; managing board: consiliu de administraţie;

**Broker**= agent de bursă; someone who mediates the conclusion of contracts between the seller and buyer or services;

**Dealer**= there is no translation for this word into Romanian. A possible synonym might be "intermediary"; person (natural or legal) authorised to act as an intermediary in trade and exchange operations, buying and selling values;

**Know-how**= no translation into Romanian; set of information, experience and practical knowledge required for proper use of methods, machines or devices;

**Skill**= abilitate, capacitate;

**Jumbo-pack**= no translation into Romanian; special / giant package format used in selling consumer products such as detergents.

### 3.1.2. French origin Anglicisms and their definitions

**Barter**= it comes from the French word *barater*; system to do business without money; products and services are exchanged on the principle of value for value; formerly practiced between individuals, but now this system is increasingly applied in organizational and international transactions.

**Issue**= it comes from the French word *eissue*; an aspect on which a decision has not been reached, which is still under discussion and on which there are conflicting points; problem that prevents the project unfolding;

**Task**= it comes from the French word *tasche*; îndatorire, sarcină, obligaţie, secvenţă de instrucţiuni.

**Target**= it comes from the French word *targette;* normă, plan, obiectiv; project developed with anticipation, comprising an ordered series of operations aimed at achieving a goal;

**Trainer**= it comes from the French *trahiner*; qualified person dealing with preparation / training of employees of a company;

**Summit**= it comes from the French word *somet*; diplomatic conference at the highest level.

### 3.1.3. Italian origin Anglicisms and their definitions

**Manager**= it comes from the Italian word *maneggiare*; specialist în management; person who has the knowledge and skills necessary to profitably exploit the human, financial and material resources of a company, organization etc.

**Cash**= it comes from the Italian word *casa* - casă de bani; bani gheaţă, în numerar.

### 3.1.4. Latin origin Anglicisms and their definitions

**Office**= it comes from the Latin word *officium*; cameră, sală; room in which there is one or more desks, where the employees of a company work;

**Project**= it comes from the Latin word *proiecere*; plan; intention to do something, to organize, to do one thing: first draft of a plan (economic, social, financial, etc.), to be discussed and approved to receive an official character and to be implemented.

A word often used in the Romanians' daily vocabulary of is "job", but the language of origin is unknown.

### The terms franchise/ franciză, franchising, franchise

The term *franchise / franciză* in known in French as *franchise*, and in English as *franchising* or *franchise*.

The term *franchising*, used in English and in general in the common-law system, designates both the franchise operation and the contract afferent to it.

The term *franchise*, frequently used in the continental law system, rather designates the actual franchise operation, that of using a business concept in a pre-established format.

## 4. In conclusion

The question that is still unanswered is: how necessary are these borrowings and what is their contribution to the Romanian language?

Anglicisms represent a reality, a living proof of the constant evolution of language. The speakers and specialists' attitude towards Anglicisms must be a rational one, for we must consider both the advantages and disadvantages. The purpose of this paper was not to deplore the fate of the Romanian language. Anglicisms have not determined an "alteration" of the Romanian language, but, on the contrary, they have contributed to its permanent renewal and development, modernizing its vocabulary. We consider that the influence of the English language should not be viewed as a negative phenomenon and it is not in the least more dangerous than other foreign influences on the Romanian language, as long as their use is not exaggerated. Also, borrowing English terms to describe various cultural realities, such as some of those mentioned above, is considered a sign of internationalization of the Romanian vocabulary, while rejecting them is a manifestation of self isolation. The borrowings can be divided into necessary and unnecessary loans, but still the phenomenon of borrowing cannot be neglected, in spite of the fact that there are many speakers using incorrectly the terms.

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# SECTION: ECONOMICS, BUSINESS ADMINISTRATION, TOURISM AND ECONOMIC STATISTICS

## *SUB-SECTION: ECONOMICS*

# SIZE OF LIVESTOCK AGRICULTURAL OPERATIONS

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**Abstract**  The main goal of the paper is to map the performance of Romanian farms from the perspective of livestock agricultural operations using principal component analysis technique (PCA) and similarities between Romania and other countries from UE.
The empirical results reveal that animal breedings farms are grouped into two categories :small and middle sized farms ; and the fact that Romania , one of Europe's major forces in the field of livestock husbandry, has come to be one of the biggest importers of food products, although, by tradition, it is one of the continent's countries with ideal conditions for breeding all species of animals.
When clustering the countries we observ  that in countries such as Greece, Italy, Portugal, Spain, cow farms, for example, do not exceed 10-16 heads and in Holland, England, Denmark, Belgium and France, the average farm size reaches 30-70 heads of milk cows.
The cluster analysis revealed that in livestock operations, animal stock is the one that generates production, while the animal number indicates the size of the livestock unit.

**Keywords**: livestock production, , principal component analysis, cluster analysis , commercial operations, livestock agricultural operation

**JEL Classification**:Q10, R11, O13, C38

## 1. Introduction

In the European Union, animal breeding farms are grouped into two categories, small- and middle sized farms. In countries such as Greece, Italy, Portugal, Spain, cow farms, for example, do not exceed 10-16 heads. In Holland, England, Denmark, Belgium and France, the average farm size reaches 30-70 heads of milk cows.
Pig farms can reach annual stocks of 300-500 heads in countries such as England, Holland, Denmark and Belgium and 20-80 heads in Italy, Greece, Portugal and Spain. The average stock of cattle and porcine in European Union countries (except for Romania) is 40, respectively 80 heads per farm.
As regards the distribution of livestock farms according to size, only one thing is clear when it comes to West-European livestock husbandry, namely that the dominant feature of livestock operations is the middle sized animal stock. Western farmers have learned from their own experience that the multiple production structure is not efficient or economic. For Romania, this experience is matched only in hill and mountain areas.
In West-European countries, with efficient livestock husbandry, of the total of approximately 7 million farms, only 0.9 million are mixed (cereal + livestock), meaning 12.8%.

## 2. Existence of food resources

Romania, one of Europe's major forces in the field of livestock husbandry, has come to be one of the biggest importers of food products, although, by tradition, it is one of the continent's countries with ideal conditions for breeding all species of animals. It has more than 4.8 million hectares of meadows, which, through the right measures to improve such and with normal operation, can provide food for at least 8 million cattle and more than 20

million sheep, while plain areas can produce concentrated feed for 16-18 million porcine. As regards poultry, there is no limit for sizing food resources.

That is why any strategy which intends to re-launch the Romanian livestock husbandry must start from the reality that compared to European Union countries Romania has undeniable advantages, materialized in the possession of feeds which can be used in the livestock husbandry without affecting the available quantities of vegetal products necessary for feeding the population.

## 3. Commercial operations and family operations

Thus, from this point of view, it is imperative to determine the optimal sizes of livestock farms and to support this initiative, ensuring the transition from the livestock production in household, family farms, for own final consumption, to efficient livestock operations.

However, the existence of such operations must not exclude the existence of family livestock farms, as a solution for increasing animal stocks, respectively enhancing, with maximum efficiency, meat and milk quantities and for providing important income to those living in the rural area. The extended experience of animal breeders in several countries with developed livestock husbandry in Europe and America shows that such farms are efficient.

For example, a family livestock farm in Denmark has, in average, 60-70 bulls, 500 porcine in total, 5,000 egg-laying hens, 10,000 meat chickens, etc. However, the concentration phenomenon has evolved here as well: 50-60 years ago, in this country, the stock number in a livestock farm was of 3-4 heads, meaning the level of today's Romania. Following this pattern, Romania also has several family farms with 40-50 bovine.

In West European countries, family farms have single animal species, which allows the owners to provide shelters and breeding technologies with reduced investments. In such a family livestock farm, the farmer, maybe with his/her family members, handle the entire animal or poultry stock, as well as the related land surface area. Labor is hired only when feeds are being harvested and stored. If the farm is bigger, it can employ 1-2 people, but only for jobs involving low level of technical skills, which require high work volume, as well as for managing the feed volume or transporting the manure to the field.

## 4. Efficient management

The farmer has complete knowledge of the breeding technology for the animals or poultry he/she owns, as the case may be, and also of management and marketing, knowledge which he/she is permanently refreshing in order to conduct competitive activities, which lead to more income. The farmer must be a member of a specialized professional association and is part of one or several cooperatives, by which he/she procures the animals or poultry, the necessary technological installations and agricultural machinery, as well as capitalizes the production for competitive prices. All the relations with the suppliers of installations, breeding animals, services, as well as with the beneficiaries of animal products obtained by the farmer are included in solid agreements, which the parties are obligated to follow, otherwise risking the rigors of the law.

In countries such as Holland, Denmark, family livestock farms were established by the state and leased to those who wanted to handle animal breeding. Each family livestock farm, mandatorily established outside the limits of the localities, also has 12, 24, 36 or 48 de hectares of agricultural land, according to the farm's animal stock. However, even today, 45-50 years since such farms were established, nearly half of the family livestock operations are still owned by the Dutch state.

Those who want to access European funding to establish a bovine farm, when choosing the location, must take into consideration that:

- At least 75% of the animal stock targeted by the project must be in the category with average and/or high potential;

- For the projects regarding ecological production, the granted score is higher. Animal breeding in ecological farms is extensive, with mandatorily access to pasture, unenclosed maintenance. The farm size depends on the feed resources, but no loading of more than 2 UVM/ha (Note: 500 kg cow = 1 UVM) can be accepted.

## 5. Optimal size

The optimal size of livestock units must be adapted to the biological particularities of various animal species and categories, to the volume of activities necessary for breeding and handling such, to the possibility of automating the works, to the practiced production systems.

In livestock operations, animal stock is the one that generates production, while the animal number indicates the size of the livestock unit.

In Romania, most individual farms are characterized by reduced economic power and are mainly oriented towards own final consumption. Their market openness is relatively reduced, as regards both the necessary inputs and the outputs. These farms are characterized by a very diverse production structure, determined by the household's needs, as well as by reduced and inappropriate technical endowment, which does not allow the increase of productivity and obtaining product surplus for sale.

Also, given the context of current development decrease, difficult economic conditions and limited access to capital identified in the SWOT, as well as the fact that the Partnership Agreement endorses the national agricultural strategy for supporting and emancipating small sized farms also by encouraging innovation and technological transfer, specific support is necessary in order to develop market oriented small sized farms.

The farm's capacity (size) is one of the factors influencing the operation's economic performance. For this reason, upon determining the optimal sizes of bull operations the following elements must be considered: m the existence of demand for the farm's products; m the stage of (technical-scientific) knowledge in field of bull breeding; m investment value per animal and expense recovery duration with total investment (10-15 years); m long term possibilities of providing the necessary feeds; m labor provision possibilities in the bull farm's area; m possibilities of rational management of manure and waste water.

However, the livestock husbandry's development, its integration in the food economy entails the existence of operations breeding more animals than most current operations, so that the appropriate technologies can be applied to all their components, including for obtaining the products, as regards their quality and hygiene. The animal stock bred by an operation is influenced by a series of factors: the unit's resources, the accommodation capacity, the capital owned, the existing labor force, the mechanization level of work processes, the feeding possibilities and, not last, the market demand for one product or the other. With these elements secured, there are, of course, the economic aspects: the costs for obtaining the products, their marketing possibilities, etc. Researches have shown that, beyond a certain stock, variable expenses increase more rapidly that the relatively constant ones are reduced, which leads to the increase of the production cost. Furthermore, in case of a significant surplus of animal products there are certain limitations of production and implicitly of stocks.

In our country, during the precedent period, the increase of technical endowment and the use of industrial technologies have determined an increase of stocks per units, obtaining certain advantages: higher level of specialization, larger and more homogenous product quantities; unitary coordination of work and production processes, etc. However, the contrary action of certain factors also occurred: high energy consumption for using the technologies, expense level for feed transportation, for preventing and fighting epizooties, etc.

In the options regarding animal stock which will be bred in an operation, the negative influences of such factors must be quantified. Furthermore, it is estimated that the increase of stocks, which is accompanied by the use of intensive technologies, can determine: the decrease of production results, the reduction of average yields and the diminution of fecundity, birth rates and prolificacy.

## 6. In Conclusion

Most Romanian farmers, especially the managers of small sized (semi-) subsistence operations, suffer from the lack of clearly defined professional statute, with negative or ambiguous fiscal, social insurance and health insurance implications. This also reflects in the fact that most of those involved in agriculture, in Romania, do not have the competency set any other profession usually has. Thus, most Romanian farmers rely solely on their practical expertise, as only 7% of their total number benefit from elementary or complete agricultural training.

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# ANALYZING THE SAVING AND TWIN DEFICITS CORRELATION: EVIDENCE FROM ROMANIA

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**Abstract:** *The importance of saving, specifically in the particular case of Romania, is relieved by the fact that supplies the necessary financial resources for a "healthy" economic recovery and growth. Accordingly, saving finance the investment from domestic sources and do not expose the national economy to the risks and disturbances which come when the economy is financed mainly with resources from financial foreign markets. The last financial crisis, which in many south European countries still an ongoing one, demonstrated again how "toxic" can be the economic dependence of the foreign capital inflows, the positive influence of the national saving being more than relevant in this case. The purpose of this article is to determine if there is a connection between saving and so called twin deficits, public deficit and current account deficit, as main macroeconomic indicators, in the economy of Romania during the 2003 – 2013 years. Particular attention is also given to the national investment situation and to the household saving behavior before and after the financial crises has started. The research methods is based on a qualitative approach and includes mainly methods of observation, value comparison and critical analyze of theories and data collected. First part of the research comprises a qualitative analyze of the theoretical relation and implications of the variables analyzed, so that in the second part to have an empirical data research which includes tables and figures with the evolution of these three economic indicators in Romania. The conclusions of this article lead to a correlation which is conditioned by the economic cycles and its influences over the economy. The findings of this research work would help economic policy makers to improve their macroeconomic decisions.*

**Key words:** saving; public deficit; current account deficit; investment; household behavior

**JEL Classification :** E21, E22, F41

## 1. Introduction

The importance of having a high level of national savings is revealed by the strong connection between saving and investment on one side, and on the other, side the country economic growth, the foreign capital can play just a substitute limited role of the domestic saving in financing the national investment ( Dumitru , Mircea and Jianu 2011) .

Deleverage is one of the major risk for an economy financed mainly from abroad. In the Romania's economy, after the financial crises has started, the deleverage effects are more than visible, during the 2008 -2014 the foreign banks withdrew from the Romanian economy 9.1 billion EURO, accordingly to data issued by Romanian National Bank – BNR and still hold in October 2014 just 13 billion EURO from the external credit lines opened to their parent bank, up against 22.1 billion EURO held in December 2008. This situation has had a significant impact in the Romanian economy and decreased the national investment level by each year following the start of the financial crises.

A high level of domestic saving stock would have reduced the negative action of the foreign banks deleveraging process and would have allowed that a significant financial resources demand, from private or public destination, to be covered by domestic capital,

avoiding the major exposing risk to CDS cost (credit default swap – consider to be the insurance cost for  non-payment and which do not reflects only the situation, performance or the economic and political stability, but also the external markets conditions, in  many times with negative influence and, of course, outside any domestic control).

An adequate savings stock need a developed domestic capital market in order to ensure alternative channels for financing public sector, but most important, private capital demand. Therefore, the dependence of the foreign capital and classical finances sources can be significantly diminished.

Low levels of national saving in the long run cause low levels of national investments, this situation affects in a negative way not only the economic development potential of any national economy but also has serious implication about  the population living standard.

Therefore, in a short term a low or decreasing saving level can be, at least in part, replaced by the foreign financial capital inflows, in this case without having a significant impact on the investment level in the national economy.

But on a long term this theory is not sustainable, practice demonstrated us that a  long and persistent decrease in the level of savings stock  imply a decreasing  investment activity, with all the negative effects which comes from this situation ( decreasing the general economic activity  and the population welfare).

Feldstein (1992) mentioned this idea of existing a significant difference between the decreasing of national saving influence over the investments process in the short run and, respectively, in the long run. If in the short term the financial flows coming from abroad compensate the decrease in the national saving, in the long run the situation is dramatically changed, a decrease in the domestic saving process will determine a decrease in the level of domestic investment.


## 2. Saving, public deficit and current account deficit – theoretical approach and correlation

The concept of saving represents, either has a public or a private destination, the income part remained after it has been diminished with consumption expenses, by the case, public or private.

In other words, saving can be defined as that part of the income which is not consumed. It is important to have here a clear distinction between the concept of saving as an ongoing process and savings as a stock. The process of saving is analyzed for a period of time, a process in evolution, in conclusion considered to be a flow variable. By the opposite, savings, as a result of a saving process represent a total value ( stock) of funds ( incomes) accumulated by the end of the time period, in this respect considered to be a stock variable.

National saving (S) ca be simply expressed through the following mathematical identities (Ball and Mankiw 1995 ) :

Starting from the gross domestic product equation in a closed economy we have $Y = C + I + G$, where C is private consumption, I represents investment and G is public spending.

As in a closed economy saving equals investment, replacing I with S in the above mentioned identity we will have the following expression of national saving:

 $S = Y-C-G$, this central identity results from the subsequently presented saving mathematical identities.

National saving is consider to be the sum of the two major components, public (Sg) and private saving (Sp - private saving consists form household and company saving).

Private saving (Sp) can be expressed as follows:  $Sp= Y – T –C$, as private income part remained after consumption expenses and taxes (T) has been paid .

If we refer only to public saving (Sg) we can have the following identity: $Sg= T- G$,which means that public saving (Sg) is the difference between public income ( in this case T as taxes collected to the government budget ) and public expenses. When public income

exceed the public spending, we have a public surplus or it ca be formulated as a positive public saving. It is also used the concept of negative public saving, in this case the government budget is in a situation of a public deficit ( public expenses exceed the revenues).

National saving (S) as an amount of public saving ( Sg) and private saving (Sp) equals the follows identities: S = Sg + Sp = (Y-T-G) + (T-G) = Y –C –G, which means that national saving is the part of the gross domestic product  which is not spend on private or public consumption.

A first notice of the dependence relation between public deficit and national saving, through the public positive or negative saving, can be simply observed from the above presented mathematical identities.

Current account reflects the relations of a national economy with abroad, the goods and services inputs and outputs, revenues and current capital transfers considered during a specific period of time. It also can be stated as a difference between saving and investment, the existence of a current account deficit reflects a domestic imbalance between saving and investment. It means that the demanded level of investment cannot be supported from the national savings stock, therefore the economy is forced to import savings from other world economies, generating a current account deficit.

When a current account deficit condition occurs, the economy does not generate internally through saving sufficient funds to be able to cover totally the capital demand needed for investment. If the capital funds generated by the saving process would be sufficiently or even exceed the demand for investment, the savings surplus will be exported abroad to meet foreign demand for investment.

As Feldstein (1992) noticed, an increasing current account deficit is primarily reflected in a decreased national investment rate, in a long run, national saving is a predetermined variable of the investment process.

From an accounting prespective, considering current acount (CA) as net exports ( inclusive net income from abroad ), current account is equivalent with the  difference between  saving and investment, as the next identity shows:

$CA_t = S_t – I_t$ (Olivei P.G. 2000). Which means that the current account deficit represents the difference between national saving and national level of investment during the period of time $t$.

Accordigly to this identity a positive value of $CA_t$, as an existence of a current account surplus, reflects a higher level of savings comparing with the demand level for investment. A negative $CA_t$, as an expresion of an current account deficit, results from the situation when the funds invested in the economy exceed the actual savings stock level. In other words, a current account deficit reflects ultimately the disparity between savings and investment.

If we focus again on saving, from the last identity of current account we can extract the following saving mahematical expression:

S = I + CA, which mainly indicates that the national saving has two uses: first, to increase the permanent capital stock throw investment and secondly, to increase the national capital stock of foreign assets by lending domestic savings to foreigners or by foreign assets aquisitions, as an equivalent of the balance current account (Abel, Bernanke and Croushore 2011).


## 3. The causality relation between saving and twin deficits

How public deficit influence national saving results from the following main equation: S = Y – C – G .

As the magnitude of the public deficit ( G) is determined by an increase in public expenses, but also by a decrease in the revenues collected to the public budget as a result of a tax cutting, the level of  national saving can be influenced as follows:

-an increase in the public deficit G as a result of a of higher level of public expenses, ceteris paribus, will decrease the national saving S;

-if the increase in public deficit is the result of a cutting taxes process, the decline of the national saving will not have the same proportion with the public deficit increase, due the fact that a certain part of the tax reduction will be reflected in the households or companies income increase;

- in the situation of a public deficit reduction with all other variables being constant, the national level of saving will increase.

Believers of the Ricardian equivalence are against the idea that a decrease in taxes will be followed by a decrease in saving and furthermore by an increase of current account deficit. The Ricardian equivalence theory consider that a public deficit generated by a tax cutting, will create an increasing demands of capital resources for financing the government budget. The credit instruments ( loan, bonds ) used to cover the financing demand and the corresponding interest costs will be followed inevitably by an increase in taxes (Abel, Bernanke and Croushore 2010).

The entire theory is actually based on the assumption that the population will anticipate this increasing future public demand for financial resources and will react against by changing their saving behavior in order to avoid a decrease in their future income. Consequently, they will supplementary increase their savings which will not increase thereby the private consumption.

Therefore, according to this theory, an increase in the public deficit, as a result of a tax cutting, it will have a neutral effect over the national saving, the impact of a decrease in the public saving will be balanced out by an increase in household savings.

But in practice we can notice that a tax cutting has an immediate effect over the household income, generating also an increase in their consumption (even though we can accept that a part, but a much smaller one, will also increase the savings, if we follow the Keynesian theory of saving and consumption). An increase in private consumption will decrease the national saving and will increase the current account deficit.

Equally, consumers in general, population in particular, in their vast majority, they do not hold the appropriate knowledge for a thorough understanding of the macroeconomics processes. This is one of the reasons why they are not able to anticipate that a higher public deficit now, will involve an increase in taxes later and a future decrease in their personal income.

Public deficit may generate various effects over an economy, but they all derive from a single initial effect: public deficit reduces national saving ( national saving as the sum of public and private saving, a government deficit, which means a negative public saving, will result a smaller value of national saving than private saving ) (Ball and Mankiw 2002).

Economists consider that the public deficit is the main cause of current account deficit and the causality connection between these two deficits rely on the following statement: an increase in the public deficit will increase the current account deficit, if only, the increase in public deficit will reduce national saving (Abel, Bernanke and Croushore 2010).

Current account deficit is consequently influenced by the extent in which public deficit reduce national savings. The interrelation between these two deficits and national saving can be also explained as follows: an increase in public deficit, followed by a decrease in the domestic savings stock, will reduce the financial flow intended for abroad investments and it will focused more on financing the domestic increasing public demand, therefore having a direct influence over the current account balance.


## 4. Saving and twin deficits in the Romanian economy

With the main purpose of observing and analyzing the correlation between twin deficits and saving in the Romanian economy, an empirical research was made based on the data found during the 2003-2013 period.

As can be noticed in Table 1, starting with the 2007 year but more pronounced during 2008 -2010, public saving in Romania had a strong negative influence over the gross national saving, period which consists in a high level of public expenses and from the last part of 2008 in a sudden decrease in the government budget income. Thereby , public deficit or the public negative saving, recorded in 2009 year, when the financial crisis exacerbated in Romania, the negative value of 9.03 % of GDP, continuing to record high values in the next two years of - 6.7 % for 2010 and -5.6 for 2011 percentage of GDP.

Public deficit decreased in the second part of 2010 as a results of governmental anti-crisis firm measures of increasing taxes (the VAT value increased from 19 to 24 % and a progressive taxation of the real estate properties), cutting the public sector employees wages with 25 %, eliminated of the 13th wage from the same public sector and additional retirement pensions taxation. The  anti-crisis measures has generated expected effects, as we can see in Table 1, only on the income side, public expenditures still increased in 2010 as compared with 2009 year.

From Table 2 data and considering gross national saving components ( public saving, private household and private companies saving ), we can notice that between 2003-2008 household saving had also a negative influence, the only component which positively supported the gross national saving was private companies saving. An increasing trend in household saving had started in 2007 and recorded a strong switch from a negative to a positive contribution as from 2009. This situation influenced national saving which followed the same increasing trend ( in 2009 reached the value of 21.22), offsetting the sharp negative influence of public saving ( -9.03 % in the same year).

Even though in Romania public deficit increased sharply starting with 2009, the national saving increased as well. In this situation we are tempted to consider that there is no compliance with the theory of the correlation influence between public deficit and national saving.  On a closer analyze we can notice that the increase in national saving was strongly influenced by a speed-up in the household saving process, which due to a precautionary motives generated by the financial crises, changed their saving behavior. Therefore they drastically reduce consumption and increased saving.

We can observe here that at the beginning of recession, the Romanian household consumption-saving behavior comply with a "Minsky moment" as a part of a "Minsky cycle" (Minsky H., 1986). When economy had registered strong economic growth the household enthusiastic and optimistic behavior increased their consumption, even exceeding their disposable income. Encouraged by a stimulating and accessible credit bank policy, they rapidly run in an over debt situation which led household saving into a negative territory.

Even though the start of the financial crises had a negative reflection in the household income (accompanied by the government anti-crises measure which furthermore decreased their revenue), they changed their consumption – saving behavior and increased saving. As a result, household gross saving, as a percentage of the Romania GDP, jumped from a value of -1.7 in 2008 to 7.6 in 2009 as we can see in Table 2.

This increase in saving, due to the change in household behavior, is also a part of "Minsky cycle". The changed behavior can be now defined as a pessimistic and risk averse, with a precautionary attitude which reduce the part of the income primarily intended for consumption, consequently, leaving more room for saving. This moment marked also the beginning of a deleveraging household debt process, which is currently underway.

From the information revealed in Table 1 an 2 and with a better representativeness in Figure 1, we may conclude that between 2008 and 2011,  the correlation theory of the three variables analyzed ( public deficit will increase the current account deficit if only national saving decrease), it is not sustainable in and this situation favors the believers of the Ricardian equivalence.

As data showed, in spite of some large public deficits between 2008 and 2011, current account deficit decreased by each year starting with 2009 (see Table 1 and 2). But this is

a particular situation and was caused by the strong manifestation of the financial crises in the Romanian economy in the analyzed period, which generated specific behavioral occurrences for the cyclicality of the economic processes. In the Romanian economy of those years, the foreign investment dropped in 2009 (see Table 3 and Figure 2) and the household saving significantly increased, both actions actually canceled the effects of the large public deficit and  led  to an increase in the current account deficit to a more sustainable levels .

Consequently as we can see in Table 2, for the last years of the time frame, the current account deficit continually and consistently decreased from the value of 13.426 at the 2008 end to 4.24 in the year of 2013. Besides the influence already mentioned of the foreign investment and household saving,  a decreased level of current account deficit is also the result of  an important change in the Romania's balance of trade. The trade deficit was reduced by a decrease in the imports value ( due to a pronounced decrease in domestic consumption but also a reduction in the foreign acquisitions of knowhow associated with foreign investments) but also to significant increase in the exports value, which in 2014 reached a record value for the Romanian economy, over 50 billion Euro .

## 5. Conclusions

If we link the negative public saving data for all the period analyzed, as seen in Table 1, with the data from Table 2, we conclude that between 2003-2008 household saving has also a negative influence over the gross national saving, companies private saving remained to be the only possible component which brought the national saving into a positive territory. But as we can see in Figure 1, surely the increase in national saving has had a positive correlated influence in reducing the current account deficit.

In the Romania's 2003-2013 economy,  the correlation of these three indicators – saving, current account and public deficit – follow more the economic theory in the first and last part of the time frame and less,  in the middle , between 2008 and 2011. This is due to the different economic conditions of the time frame chosen: prosperity period, which economy had registered until the first half of 2008, immediately followed by a strong manifestation of the financial, economic and debt crises, as at the end (2012-2013) to see the glimpses of a hesitant start toward a period of economic recovery.

The correlation analyze of the twin deficits and saving presented in this research work discloses that the different occurrence of the financial-economic processes through boom and recession periods is equally followed. The degree of correlation or non-correlation is strongly influenced by the economic cycle and its features.  Thereby we can observe that the economic subjects behavior does not differ only between countries or regions, but it is also considerable different in time, depending on the economic situation (for instance the household saving behavior differs in time for periods of economic growth or recession, being in a direct correlation with the cyclical occurrence of economic processes, in this way supporting or not the theories of economics).

A profound knowledge of the importance of saving and the correlation effects with public deficit and current account deficit,  may help public decision makers to issue more appropriate policies designated to alleviate the economic cycles impact and finally, to increase the population standard of living .

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# THE MIGRATING NATURE OF FOREIGN DIRECT INVESTMENTS AND THEIR IMPACT ON ECONOMIC GROWTH

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**Abstract.** *The global economic crisis of 2008-2009 has reignited the debate concerning the pertinence of financial integration, both in industrially advanced and emergent economies as well. Thus, the crisis provides a new chance to revise the analysis comparing the international capital flows and economic growth. The foreign direct investments of the past few years have become increasingly important for the global economic activity, and the professional literature has developed a numerous number of hypotheses concerning the relationship between FDI and economic growth. The idea that the increased FDI inflows result in stronger economic growth is currently very topical in several debates. Some of the previously conducted research argue that FDIs can have both positive and negative effects on the GDP. The careful analysis of the effects that FDIs may have on economic growth in various economic sectors of the recipient country has resulted in various findings. FDIs can have negative effects on the economic growth prospects of the recipient countries when they lead to substantial reversed flows in the form of revenues from dividends or when multinationals obtain substantial privileges or other advantages in the recipient country. There are numerous research papers in professional literature that approach the relationship between foreign direct investments and economic growth. The research in the field has intensified in the past decade, due to the increasingly important weight of FDI in the total capital flows. The present research will analyse the relation between economic growth and the amount of international capital flows in order to identify to what extend foreign direct investments help increase the level of economic growth. The analysis we are suggesting encompasses the group of developed countries, developing countries, as well as those countries identified as transitioning during 1970-2013. The main objective of the present research is to identify and analyse systematic models in the relationship between FDIs and economic growth throughout a period that can be best described as accommodating a high level of financial integration.*

**Keywords:** foreign direct investments, financial flows, economic growth

**JEL classification: F43, O16,**

## 1. Theoretical background of the relationship between foreign direct investments and economic growth

The empirical research of the effects of foreign direct investment flows (hereon known as FDI) on economic development have reached mixed results, contrasting the predictions of the "new growth theory" that suggested the fact that the emergence of new types of inflows, new technologies, new management and organisational models, as well as the probable growth of human capital accumulation rate as a consequence of FDIs should have a positive influence on economic growth (Marino, 2000; Romer, 1986, 1990; Grossman and Helpman, 1991). (Serhan, 2003)

Borensztein, De Gregorio, and Lee (1998) have found that the positive effects of foreign direct investments on economic growth depend on the development level of the financial market, of the infrastructure and of the human capital of the host country. They have tested the effect of FDIs on economic growth by using a regression model, based on the data concerning FDIs from industrialised countries to 69 developing countries during 1970 -

1989. Their findings have confirmed that FDIs favour technological transfer, which significantly contributes to the increase of internal investments. Moreover, their findings show that there is a higher efficiency of FDIs if recipient countries meet a minimum level of human capital. Thus, according to this theory, FDIs lead to economic growth only when the recipient country has a high absorption capacity of advanced technologies.

Alfaro, Chanda, Kalemi-Ozean and Sayec (2004) have conducted an empirical analysis that allowed them to argue that the countries that have recorded a significant level of economic growth as a consequence of foreign direct investments were the ones that have well-developed financial markets.

Liu and Li (2005) have identified both the presence of a direct effect of FDIs on economic growth and an indirect effect that was a consequence of the interactions occurring in various sectors.

Other researchers have highlighted the fact that the positive effects are quite significant, depending on a variety of factors, such as "the development level of the recipient country", "the training level of the human capital", "the economic openness degree" or the specific sector that has attracted foreign direct investments (Alfaro, 2003; Borensztein et.al., 1998; Soysa and Oneal, 1999).

Foreign direct investments are generally seen as having a major impact mainly on the economic development of emerging markets. On the other hand, foreign direct investments are also very important for multinationals. Thus, both developed (initiating FDIs) and emerging economies have a common interest in encouraging FDIs, even though their objectives are different (Resmini 2000 Estrin and Meyer 2004). The positive effects of FDIs are important for recipient economies, while corporate growth and revenues are a typical objective for multinationals.

Professional literature presents conflicting evidence related to the question: how and to what extent do FDIs affect economic growth. FDIs can directly affect economic growth, as they contribute to capital build-up as well as to the transfer of new technologies in the recipient country. Moreover, FDIs stimulate economic growth indirectly, when the direct technological transfer increases the know-how reserve of the recipient country by training the workforce and by transferring new information, new management practices and new organisational structures. (Muawya, 2009)

The empirical evidence identified by Alfaro, Chanda, Ozcan and Sayek (2002) suggests that foreign direct investments play an important role in ensuring economic growth. Nevertheless, the development level of the domestic financial markets is essential for these positive effects to be felt.

The size of the GDP is one of the variables that also includes the effect of foreign direct investments in the recipient country. At the same time, a GDP increase per capita also increases the demand on the domestic market. Dornbusch and Fisher (1994) relate the demand of consumers to the available monetary supply for expenses, as the remittances sent by workers abroad to their country of origin are an important source of funds.

Bengoa and Sanchez-Robles (2003) argue that, in order to benefit from long term capital flows, the recipient country must make evidence of adequate human capital, sufficient infrastructure, economic stability and free markets. The idea that FDIs favour economic growth in recipient countries, provided that the latter is able to take advantage of its contagions is also supported by the empirical findings of De Mello (1999) and Obwona (2001). Borensztein and collab., (1998), go even further and suggest that FDIs are an important instrument for technological transfer, playing an important role in encouraging internal investments. They use an endogenous growth model, where the technological progress rate is the main factor that favours the long term revenue growth rate.

Alfaro, L.(2003) shows that the benefits of foreign direct investments are highly variable for each economic sector. After conducting an empirical research for the period during 1981-1999, the author suggests that the total amount of FDIs exerts an ambiguous effect on economic growth. Foreign direct investments in the primary sector tend to have a negative

effect on economic growth, while those made in the secondary sector have a positive effect. As far as the tertiary sector is concerned, the relationship FDI-economic growth is unnoticeable.


## 2. Analysis of the relationship between foreign direct investments and economic growth

Foreign direct investments are taken into account when identifying one of the most important indices used worldwide, i.e. the Global Competitiveness Index (GCI). This index has been calculated since 2001 by the World Economic Forum based on 12 pillars of competitiveness, namely: institutions, infrastructure, macro-economic environment, health and primary education, higher education and training, goods market efficiency, labour market efficiency, financial market development, technological readiness, market size, business sophistication, research, development and innovation. The pillars are grouped into three categories: basic requirements, efficiency enhancers, innovation and sophistication factors, and are subsequently divided into 111 sub-indexes.

According to the Global Competitiveness Report 2014-2015, the economic growth recorded in the past few years can be attributed to the outstanding and bold monetary policies applied in countries such as the United States, Japan and the United Kingdom. As the economy improves in these countries, the normalization of the monetary policy with tightening of financial conditions could have an impact on both advanced and emerging economies. Thus, they estimate that emerging economies will undergo a more modest economic growth than before. The economic performance of these countries may be affected by a changing environment with significant difficulties in accessing capital, as well as lower prices for goods that have favoured the growth trend which is in turn likely to affect many developing countries.

The financial market development is an important pillar used in assessing the global competitiveness index. The occurrence of the financial and economic crisis has outlined the increased importance of stable financial markets for the development of business activities. A properly functioning financial market ensures the increased productivity of the financial resources on the domestic market, as well as of those fuelled by foreign markets.

**Figure nr.1** presents the evolution of the scores reached by the group of emerging and developing countries in Asia and Europe, as well as the group of advanced industrialised countries for the pillar *"Financial market development",* for the period 2006-2015.

According to the classification drawn by the International Monetary Fund (World Economic Outlook, April 2014), we can refer to the group of countries with an advanced economy, the group of emerging countries and developing countries in Asia and Europe. (IMF, 2014)
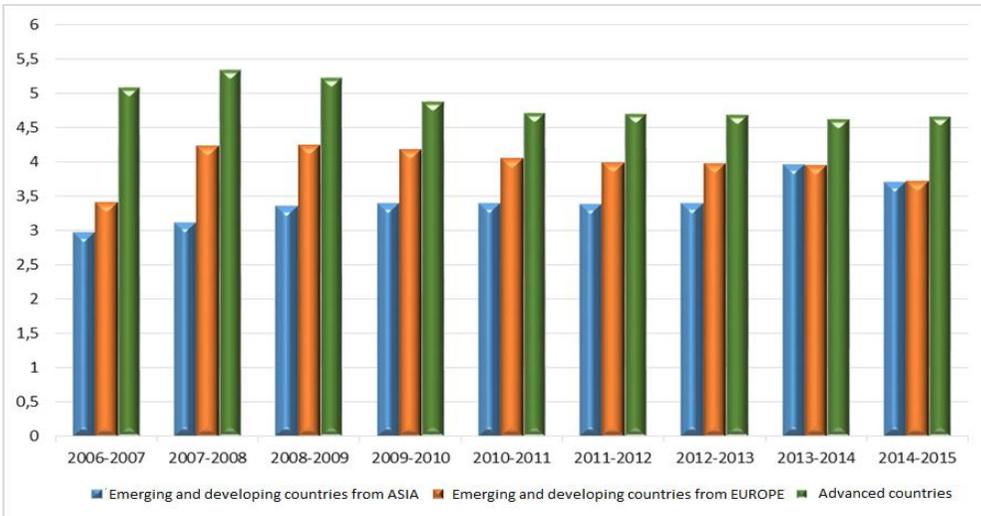
**Figure 1:** Evolution of the scores reached for the pillar *Financial market development*, per group of countries during 2006-2015
Source: author's own, processed based on the data from *The Global Competitiveness Report, 2014-2015*

The analysis of the evolution of the scores reached per group of countries during 2006-2015, both for the "Financial market development" (Figure no. 1) and for the sub index "Foreign direct investments and technology transfer" (Figure no. 2), highlights the tendency of emerging and developing countries in Asia and Europe of catching up with advanced industrialised countries in terms of the performance of the "financial market development" pillar.
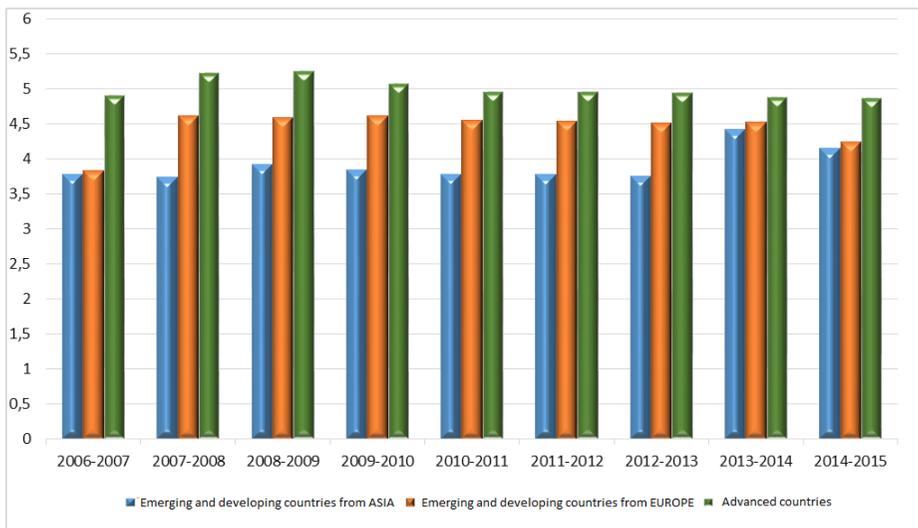


**Figure 2:** Evolution of the scores reached per groups of countries during 2006-2015, for the pillar "FDIs and technology transfer"
Source: author's own, processed based on the data from *The Global Competitiveness Report, 2014-2015*
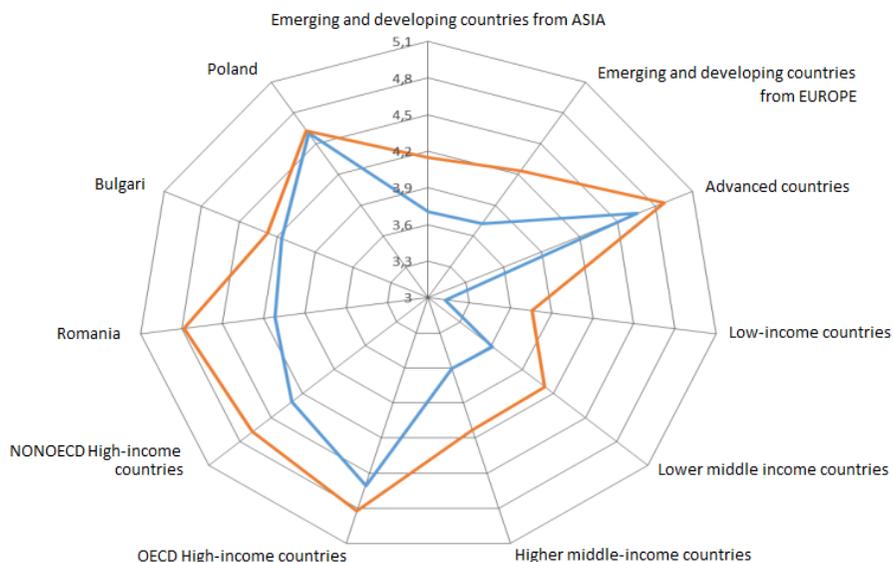
**Figure 3:** Scores reached for the pillar *Financial market development* and for the pillar *FDIs and technology transfer* in 2014

Source: processed based on the data from: *The Global Competitiveness Report 2014 - 2015*

An analysis of Figure no.3 reveals that Poland sets itself apart from the group of emerging and developing countries in Europe, due to its economic growth based on well-developed financial markets, reaching the highest score for "financial market development" after 2009 (4,7). As far as Romania is concerned, note that, even though the score reached for foreign direct investments is even higher that Poland's, reaching a value of 4,8, the financial market development score is rather low (score of 4,0).

The evolution of the GDP (Gross Domestic Product) per capita, during 1970-2013 per group of countries according to development level, as measures by UNCTAD, is presented in Figure no. 4.
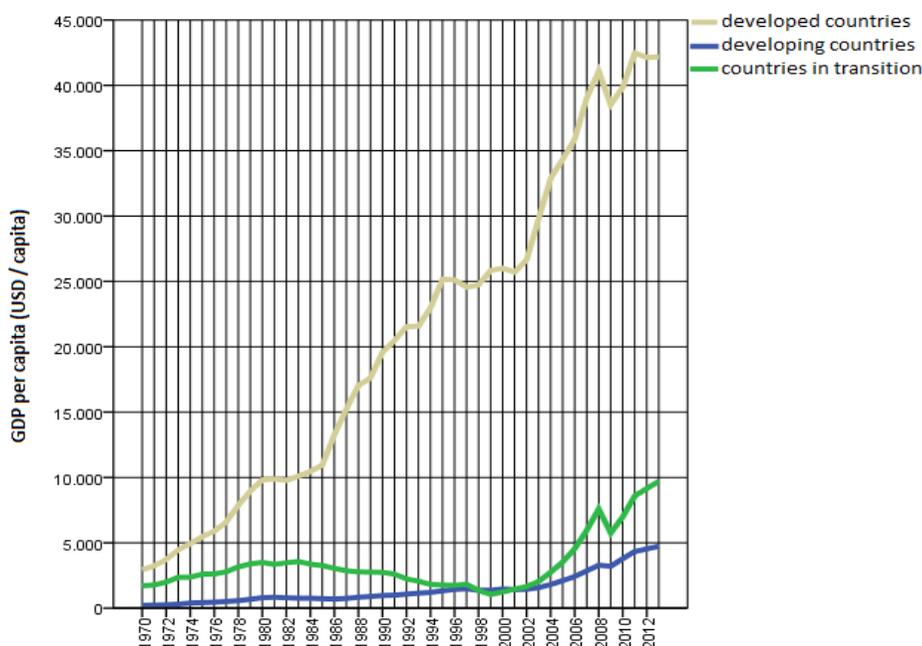
**Figure 4:** Evolution of the GDP per capita, for each group of countries, during 1970-2013
Source: author's own, processed based on the data from UNCTAD, Database

The analysis of the GDP per each main group of countries reveals the presence of a massive delay between the economic growth recorded in developed countries and that recorded in developing countries, even though the latter have undergone significant progress during the period analysed according to the data presented in Figure no.4. Foreign direct investments are one of the factors influencing economic growth, and the effects are more visible in developing countries.

Even though a global growth of 3,5% is estimated for the period 2015-2016 (according to the data presented in Table n.1), declining by 0,2% as compared to the figure estimated in 2014, this forecast also takes into account the reassessment of the prospects in China, Russia, the Eurozone and Japan, as well as the decreasing economic activity in the oil exporting countries, as a consequence of the declining oil prices.(IMF, 2015)

**Table 1:** Evolution of economic growth on a global scale

|  | *2013* | *2014* | *2015 e* | *2016e* |
|---|---|---|---|---|
| **Global growth** | **3,3** | **3,3** | **3,5** | **3,7** |
| **Advanced economies** | **1,3** | **1,8** | **2,4** | **2,4** |
| United States | 2,2 | 2,4 | 3,6 | 3,3 |
| Eurozone | -0,5 | 0,8 | 1,2 | 1,4 |
|     Germany | 0,2 | 1,5 | 1,3 | 1,5 |
|     France | 0,3 | 0,4 | 0,9 | 1,3 |
|     Italy | -1,9 | -0,4 | 0,4 | 0,8 |
| Spain | -1,2 | 1,4 | 2,0 | 1,8 |
| Japan | 1,6 | 0,1 | 0,6 | 0,8 |
| Great Britain | 1,7 | 2,6 | 2,7 | 2,4 |
| Canada | 2,0 | 2,4 | 2,3 | 2,1 |
| Other advanced economies | 2,2 | 2,8 | 3,0 | 3,2 |

| Emerging markets and developing countries | 4,7 | 4,4 | 4,3 | 4,7 |
|---|---|---|---|---|
| Commonwealth of Independent States | 2,2 | 0,9 | -1,4 | 0,8 |
| Russia | 1,3 | 0,6 | -3,0 | 3,2 |
| Outside Russia | 4,3 | 1,5 | 2,4 | 4,4 |
| Emerging and developing countries in Asia | 6,6 | 6,5 | 6,4 | 6,2 |
| China | 7,8 | 7,4 | 6,8 | 6,3 |
| India | 5 | 5,8 | 6,3 | 6,5 |
| ASEAN | 5,2 | 4,5 | 5,2 | 5,3 |
| Emerging and developing countries in Europe | 2,8 | 2,7 | 2,9 | 3,1 |
| Latin America and the Caribbean | 2,8 | 1,2 | 1,3 | 2,3 |
| Brazil | 2,5 | 0,1 | 0,3 | 1,5 |
| Mexico | 1,4 | 2,1 | 3,2 | 3,5 |
| Middle East, North Africa, Afghanistan and Pakistan | 2,2 | 2,8 | 3,3 | 3,9 |
| Saudi Arabia | 2,7 | 3,6 | 2,8 | 2,7 |
| Sub-Saharan Africa | 5,2 | 4,8 | 4,9 | 5,2 |
| Nigeria | 5,4 | 6,1 | 4,8 | 5,2 |
| South Africa | 2,2 | 1,4 | 2,1 | 2,5 |

Source: author's own, processed based on the data from World Economic Outlook, January, 2015

According to the International Monetary Fund (WEO, 2015), the risks of the global economy are mainly related to the changes in perception and to the volatility manifested on global financial markets, particularly on emerging markets, where the lowered prices for oil have led to the occurrence of certain external vulnerabilities. At the moment, both stagnation and the low inflation are important concerns in the Eurozone and Japan.
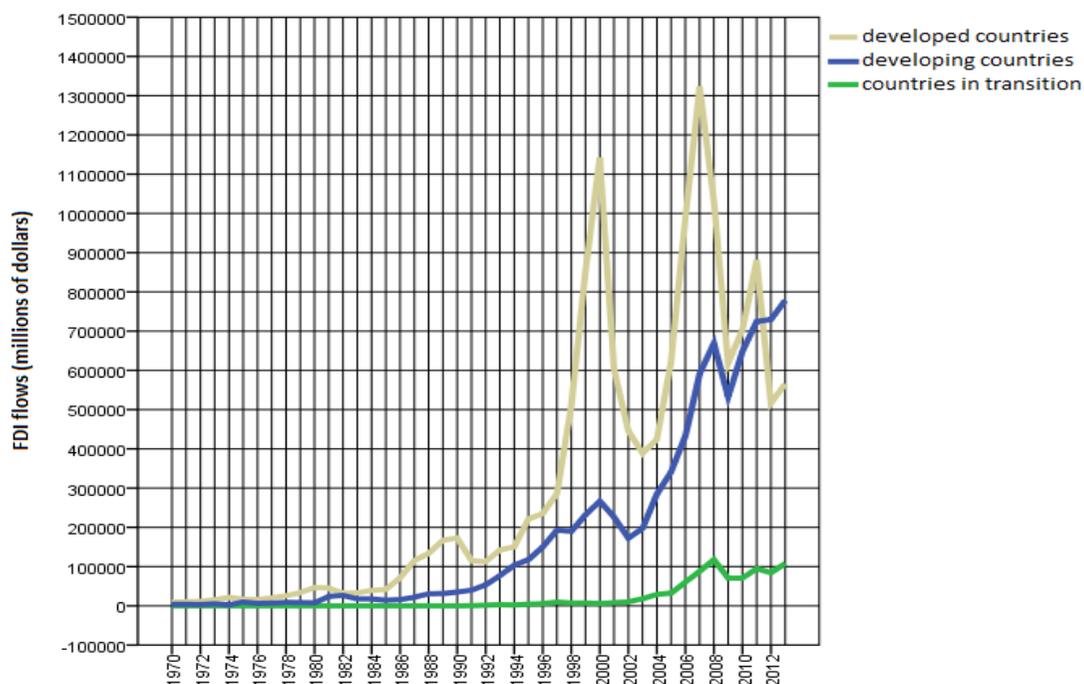


**Figure 5.** Evolution of the inward FDI flows, per groups of countries, during 1970-2013
Source: author's own, processed based on the data from UNCTAD, Database

As concerns the evolution of inward FDI inflows per groups of countries, during 1970-2013, developing countries have globally overtaken developed countries starting with 2010.

In developing and transition economies, the growth was mainly triggered by the acquisitions made in Central America and the Caribbean, as well as by the inflows recorded in the Russian Federation. The FDI inflows have increased globally by about 9% in 2013, this increase being recorded in all groups of countries – developed, developing and transition economies.
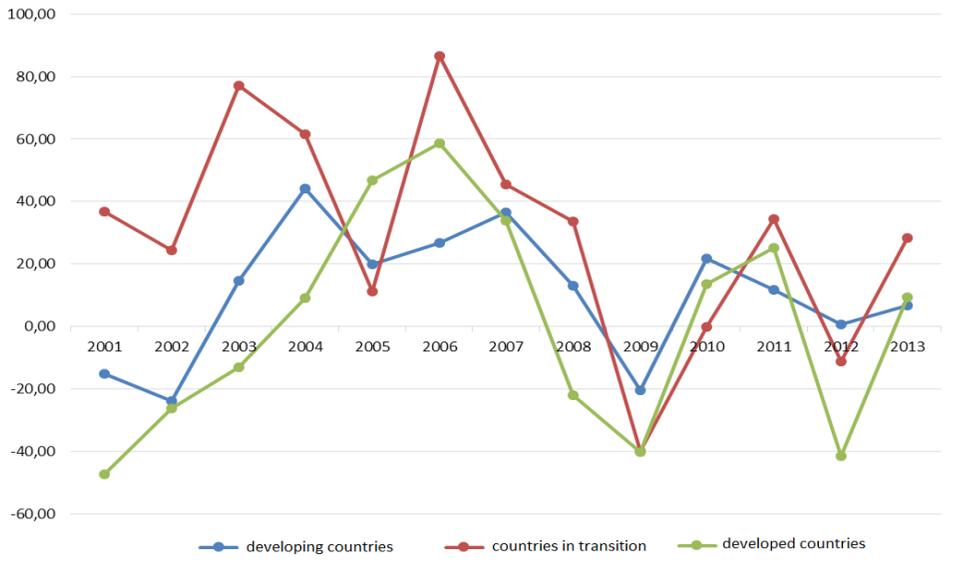


**Figure 6:** The growth rates of the inward FDI flows, per groups of countries, during 2001-2013, as compared to the previous year
Source: author's own, processed based on the data form UNCTAD, Database

An analysis of the graph presented in Figure no.6 reveals that FDI flows to developed economies have increased as compared to 2012, ranking at only 43% of the maximum level reached in 2007. Even if the growth rate of FDI flows to developed countries has been higher, as compared to developing countries in 2013, it still wasn't enough to reinstate their position as main recipients of inward FDI flows. The ratio of developed countries to the total foreign investments amounts to just 39% in 2013, as compared to the weight of developing countries, that has reached a ratio of 53% of the total inward FDI flows on a global scale, according to the data presented in Figure no.7.
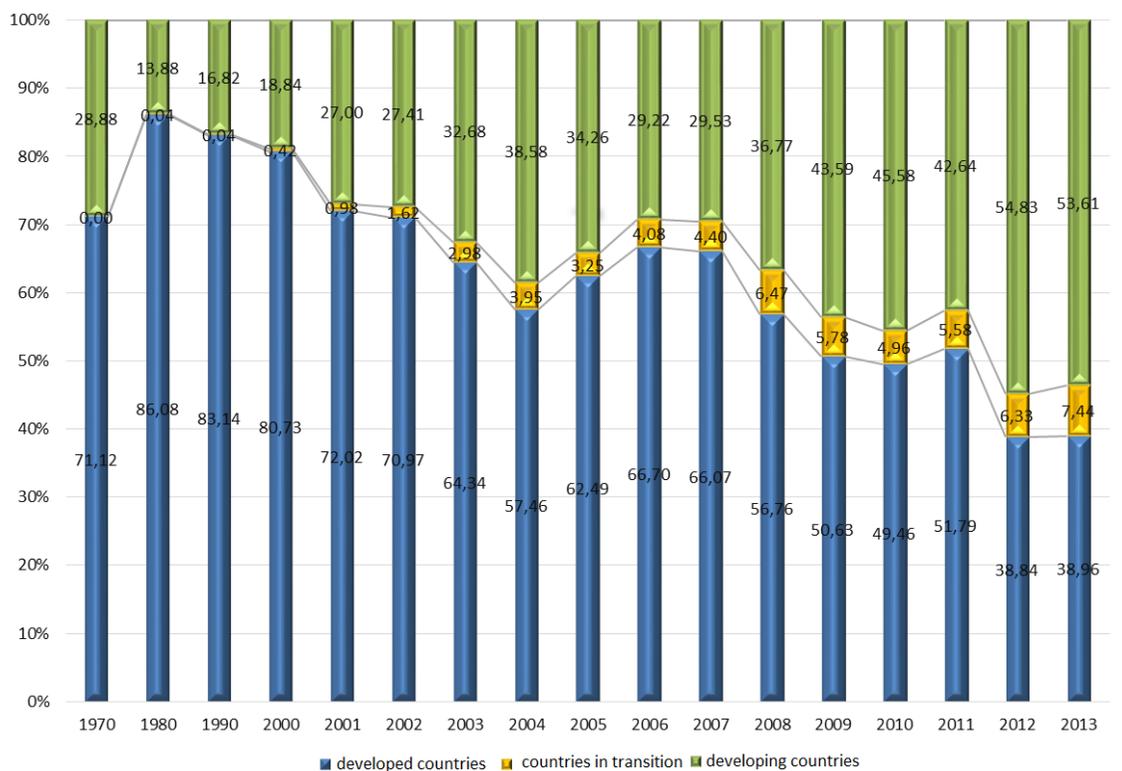
**Figure 7:** Structure of the global inward FDI flows during 1970-2013, per groups of countries

Source: author's own, processed based on the data form UNCTAD, Database

The analysis of the above presented graph reveals the increasing weight held by transition economies (from 0,04% in 2000 to approximately 7,5% in 2013) , as well as the ratio held by developing countries (from 19% in 2000, to about 54% in 2013), in the global inward FDI flows. Thus, in 2013, developing countries accounted for more than half of the inward FDI flows on a global scale (54%), as compared to the ratio held by developed countries (39%) according to the graph outlined in Figure no.7.

## 3. Conclusions and future research prospects

The analysis of the evolution of economic growth for each main group of countries has revealed the presence of a substantial disparity between developed and developing countries, even though the latter have recorded important boosts in their economic growth level throughout the period under analysis.

The FDI have increased globally by about 9% in 2013, and this accretion has been recorded in all groups of countries: developed, developing and transition economies.

Foreign direct investments towards developed countries increased as compared to the previous year, but have amounted to 43% of the level they had reached in 2007. Even if the growth rate of FDIs to developed economies has been more accelerated as compared to inward flows to developing economies in 2013, this hasn't been enough to reinstate their position as main recipients of FDI inflows. (The weight of developed economies to the total foreign direct investments accounted for only 39% in 2013). Thus, we have identified an increased ratio of transition and developing economies to the total global inward FDI flows. (In 2013, developing countries held more than half of the amount of inward FDI flows).

The considerable uncertainty threatening the global economic environment as concerns the future evolution of the oil price, as well as other factors that lead to falling prices, have brought about a new type of risk for the economic growth perspectives worldwide. In our future research, we will focus on the correlation between FDIs and economic growth for each group of countries, by employing the graphical method, as well as the regression and correlation method.

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# SOCIAL ENTERPRISES – FROM POTENTIAL TO IMPACT

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**Abstract:** *Social economy is seen by many as the magical solution to the social and economic problems which came over time with each economic crisis. An important problem when dealing with social problems is however the need to find solutions which would work at large scale. As Lisbeth Schorr stated "We have learned to create the small exceptions that can change the lives of hundreds. But we have not learned how to make the exceptions the rule to change the lives of millions". This not only rises the importance of social enterprises but also the necessity of a more strategic and systematic approach to the problem of spreading social innovation. The potential of a social enterprise, connected with the further assessment of its impact is an important correlation which needs further studies. It is one thing for social enterprises to exhibit a great potential, but it is another for that potential to be realized and to produce significant benefits for its target group. Even if the potential of social enterprises is generally known, and this is the reason for which social enterprises benefit from a lot of attention and support, within the literature existing on the social enterprises, the issue of its' potential is not dealt sufficiently. On the other hand, impact assessment has been studied largely within the literature. This is maybe also because evaluation of social impact is a challenging endeavour for any person analysing a social enterprise, assessing subtle changes which are difficult to be measured, evaluated and traced back to specific events. The impact assessment, made through critical and interpretative accounting theories (which are contextual, seek for engagement, are concerned with micro and macro levels and are interdisciplinary), indicates that the evaluation of the social enterprises' socio-economic impact can have a base on the positivist, critical and interpretative accounting approaches. However, despite the enthusiasm shown for assessments and metrics, which has been proved by the development of hundreds of different methods used for the calculation of social value, few people use the results in the decision making process. The present paper comes with the proposal to continue further studies on the potential of social enterprises, based on the fact that the correlation between the potential and the impact gives important information for the social enterprise's general assessment.*

**Keywords:** social economy, social enterprise, impact assessment, potential of social enterprise

**JEL classification:** D01; L31

## 1. Introduction

Social economy, when analysing the literature written in this field, is sometimes called the "third sector", "non-profit sector" or "civil society sector", and is defined as the interval joining the private sector economy, which generates revenue and the public sector, where economic activities are performed for social purposes. A part of the academics consider that a number of social economy actors are represented by social enterprises. Looking at the literature, it may be understood that social enterprises are generally viewed as organizations (businesses or non-profit organizations) that have income-generating activities, but they use their profits to support their objectives strictly on social, cultural and

environmental issues and which may be also the purpose of the organization.

An important problem when dealing with social problems is however the need to find solutions which would work at large scale. As Lisbeth Schorr stated (in Dees and Anderson, 2004) "We have learned to create the small exceptions that can change the lives of hundreds. But we have not learned how to make the exceptions the rule to change the lives of millions". This is the bases on which Dees and Andersons (2004), after many years of interviews of social entrepreneurs, foundation officers and other experts in the social sector, concluded that a more strategic and systematic approach to the problem of spreading social innovation has to be taken by policy makers, practitioners and other stakeholders. This strategic approach should take into consideration all the potential social enterprises can have for the community as a hole, beyond the problems of how the social innovation can be scaled up.

However, it is one thing for social enterprises to exhibit a great potential, but it is another for that potential to be realized and to produce significant benefits for its target group.

## 2. The potential of a social enterprise

Social enterprises, being a societal response to the austerity measures which always lead to cuts in the public funding, are given a more prominent role as innovative and community based solutions. Based on this, social enterprises could prove to be a response to social problems, with a potential for innovation and sustainability. Furthermore, all social enterprises can in different ways, impact different factors from income, goods, services, unequal distribution of power and many more (Roy et al., 2014).

Even if the potential of social enterprises is generally known, and this is the reason for which social enterprises benefit from a lot of attention and support, within the literature existing on the social enterprises, the issue of its' potential is not dealt sufficiently. One institution that has shown interest to the potential of social enterprises is the European Union. It did so by including social enterprises in public policy on businesses, stimulating social investment, modernization of public funding, launching development programs for businesses and social organizations raising awareness and creating a spirit of trust in business social organizations (Rodert, 2011). The European Commission has included the social economy programs and strategies in its core, provided funding for the development of the field and created various support structures of the social economy.

## 3. The impact of a social enterprise and its' assessment

From the moment of their birth to beyond scaling-up, social enterprises target the increase of their social impact. For this process, there are involved different stakeholders like funders, citizens and clients, administration, which are being preoccupied of the transparency of how founds are being gathered and used by organizations, but also on the achievements of their activity. Not least, the founders especially are driven by a wish to know if their funds are bringing an impact or they should redirect their help to other causes (Ebrahim and Rangan, 2010).

The evaluation of social impact is a challenging endeavour for any person analysing a social enterprise (Ebrahim and Rangan, 2010), because it deals with assessing subtle changes which are difficult to be measured, evaluated and traced back to specific events. How can the increase of the self-esteem of a person with disabilities be measured? How can one connect that increase to a specific event (a series of counselling sessions, a training course, meeting a role model)?

This challenging process of measurement of social impact becomes even more difficult when entrepreneurs are pressured to mobilize support from external stakeholders like funders, partners, local or national governments (André´ and Pache, 2014) In this context, they may need to produce scientific evaluations like experimental randomized protocols or

social return on investment (Mulgan, 2010). In sum, entrepreneurs may be tempted to shift their focus from their goal, and spend more time to demonstrate the evidence of their social performance and to produce estimations if not even real results of their social outcome. More than that, being pressured to provide evidence of their impact in change for the received support, representatives of social enterprises may be under the risk to overemphasize the outcome at the expense of process evaluation and to focus more on number and creating reports rather on the people the social enterprise addresses.

This brings in front the importance of impact assessment, which is an issue for any entrepreneur engaged in a development process. The assessment of social impact has been addressed in the literature and it has been stated that it is a prerequisite for scale (Bradach, 2003) but also an important tool for the process of monitoring the scale-up (Dees and Anderson, 2004). When taking into consideration the prerequisite for scale, the impact evaluation gives essential information regarding whether going to scale is pertinent or not: only when the initial program demonstrates that it has the capacity to produce positive social change it may be worth to engage in a process of scaling. On the other hand, once the scale-up process has already begun, it is important to evaluate the impact since this is a good performance tool for entrepreneurs to assess the achievement of their goals (Andre´ and Pache, 2014).

The impact evaluation from socio-economic point of view, which is also a reporting activity, can have different significance depending on the approach chosen (Palmer and Vinten, 1998):

- Positivist, which is characterized by a fair description of the situation (Whittington, 1986);
- Critical, where the accounting which carries out a fundamental function of internal control becomes a powerful operating mechanism from an organizational point of view (Power and Laughlin, 1996);
- Interpretative, where a fundamental tool for dialogue between social enterprises and their stakeholders, which has as purpose the stimulation of social change, is the accounting and reporting (Gambling et al., 1993).

When translating these to social enterprises, we can see that social enterprises use reporting systems, from a positivist point of view, for representing rationally management performance and to improve the overall performance and the levels of process efficiency and effectiveness. This leads to the fact that when the used tools do not describe truly and with a fair view the situation, the behaviour might become wrong and counterproductive (Manetti, 2014).

From the critical point of view, any changes in the type and methods of using resources can lead to the increase of demand for tools of impact evaluation. This is, for example, the case of lenders for social enterprises who expect detailed financial reports which show the way the resources are used and also the impact made by the activities financed by the offered resources (Manetti, 2014). However, because social enterprises are expected to have a large volume of commercial activities, there can be seen a greater demand for social and economic tools of assessment. This means that there can be used also corporate models for measurements (Nicholls, 2009), in combination with social impact methods, in order to get a full perspective on the social enterprise's activity.

And finally, from the interpretative point of view, the dissemination of the assessment's results strengthens the relations between the social organizations and their stakeholders through "social-constructivism" over the impact and social influence they create (Dart, 2004). So, this social practice of management accounting and control is a socially constructed one rather than a natural phenomenon (Covaleski et al., 1996).

The impact assessment, made through critical and interpretative accounting theories, have several important characteristics (Laughlin, 1999) which indicate that the evaluation

of the social enterprises' socio-economic impact can have a base on the positivist, critical and interpretative accounting approaches (Nicholls, 2009):

- These theories are contextual, because they recognize the consequences of accounting on social, political and economic aspects;
- They seek for engagement, being undertaken for the improvement of accounting practices;
- They are concerned with micro and macro levels – from individuals or organizations to societal and processional levels;
- They are interdisciplinary because they use other disciplines in analysis.

Despite the enthusiasm shown for assessments and metrics, which has been proved by the development of hundreds of different methods used for the calculation of social value, few people use the results in the decision making process (Mulgan, 2010).

## 4. Discussion
In this article, we have tried to show the importance of thinking about the potential and the impact which social enterprises have on the community they act in. Even if the potential of social enterprises is considered to be generally known, this being also the reason for which institutions and other stakeholders try to promote and sustain this activity, there cannot be found any studies regarding this. On the other hand, the assessment of social enterprises' impact is largely studied, benefitting from interpretations and proposals from practitioners and academics. Sociologists and economists all together have started to address the social and economic impact of these promising organizations, taking into consideration their importance for different stakeholders: from the social entrepreneurs to clients and financing institutions.

Our proposal, which is not without limitations, is to continue further studies on the potential of social enterprises, based on the fact that the correlation between the potential and the impact gives important information for the social enterprise's general assessment.

## 5. Acknowledgements

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# A SHORT ANALISIS OF THE ECONOMICAL PERFORMANCE IN ROMANIAN TV SECTOR

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**Abstract**: Preparing for the future, it is essential to understand the flux of the bytes. In the digital world, mass-media market will be different: the receivers will be able to access not only 50 TV channels but 5.000 or maybe even 50.000! The audience rate will be known for each TV show as well as the hosts rating and what other offers there are for the same product segment in the other part of the world. The divergences about the audience survey determined by the advertisement price list will be gone because in the digital system we will be aware every moment of the audience rate. Mass-media consumers will be able to make their own program schedule, chosen from an almost unlimited number of possible offers and available choices. In July 2015, Romania will change the analogic TV emission system with the digital one. We are trying to analyze in this paper work if the economic actors that operate the TV sector in Romanian media market, are ready for this change. Apparently this change is not simple and without risks. Even though it may be expensive, it can be the only surviving solution for all the companies part of this sector.

## 1. Introduction

In July 2015, Romania will abandon the analogic TV transmission system for the digital one. In this paper work we are trying to evaluate if and how are the mass-media businesses ready for this transition.

*Methodologically,* we begin by observing the current situation in mass-media industry and economy and we propose to make an analysis of content. We will talk about aspects that aim the challenges and opportunities in media industry in the digital context, analyzing the opinions of other researchers about these subjects. We are trying to present the concepts we sustain in the light of other important paper works and to exemplify them with realities from the Romanian mass-media economy. In the first part we will present the development of the TV market in Romania and the current trend marked by the change of the analog operational system with the digital one. In the second part we will try to track the economical performances of the main actors that exploit TV licenses, measured in audience numbers. In the last part of the paper work we will focus on the economical results of the main private operators that exploit TV licenses and the results quantified in financial incomes. We will try to see if and how the audience performances are seen in the financial results.

## 2. The analogic and digital market of the TV sector in Romania

Quality and performance are goals of the market economy, and all the more of the media industry focused on competition, competitiveness and creativity. In the television domain,

we can talk about a market with multiple offers in our country only after year 1992. With the help of the Audiovisual Law established in 1992, it was settled that in Romania juridical persons in the television field may be public or private, and the private ones may have Romanian or foreign capital, integral or partial. These legal articles opened the possibility to develop and to open in Romania private businesses in television. After the entrepreneurship appeared on the TV segment on media market the offer of TV stations grew. This way, the consumers had the possibility to choose from a much bigger package of options. But in the same time it was created a competition market, each tv channel trying to draw as many viewers as possible, as much publicity as possible at the best prices. The experts in the TV field, people that had communicational qualities and that were ready to learn the art of audiovisual, had many attractive offers in the labor market. The need for specialized people in media industry prepared the way for educational institutions in mass-media field to develop.

The quality improvement in Romanian television industry is due to the technological development, as well as in all the other civilized countries. The changes of production and distribution technologies of the TV programs generated new receiving ways. This way, in less than 20 year most households in Romania are connected with cable networks, satellite or IPTV technology.

| | Rețele de cablu | Rețele de satelit DTH | Tehnologie IPTV |
|---|---|---|---|
| 31.12.2011 | 3.6 | 2.1 | 0.028 |
| 31.12.2012 | 3.8 | 2.3 | 0.037 |
| 31.12.2013 | 4.1 | 2.2 | 0.056 |
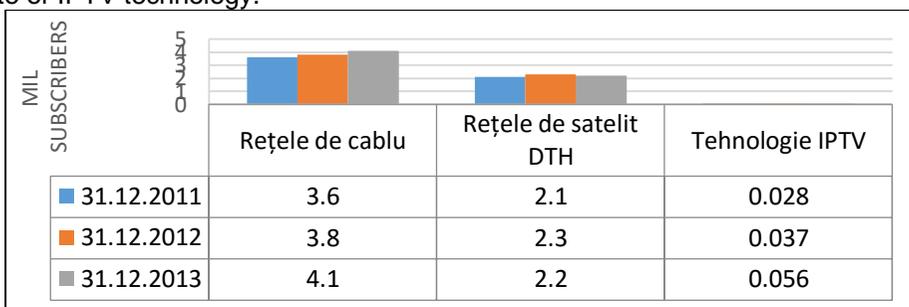
Figure no.1 Evolution of subscribers at the audiovisual retransmission services, depending on the utilized support in the period 2011-2013

Source: Realized by the author based on the ANCOM date available on site https://statistica.ancom.org.ro:8000/sscpds/public/files/81 , accessed in 30th of September 2014.

Before 1992 in Romania there were only few parabolic antenna used for receiving TV programs from the outside of the country. By the end of 2013 in Romania there were 6,4 million households that purchased subscribed television services. Among these, 2,2 million receive TV services through parabolic antenna, 4,1 million are cable connected and 56.000 have internet connection on smart TV. The graphics show modifications from one year to another, but in our opinion we can talk in this period about the formation of the market rather than the change of it. Nevertheless, it seems to appear new tendencies. Connecting to TV services through IPTV technology brought an important increase rate: 49% in 2013. It is important to mention that the numbers of subscribers to smart services does not overcome in this moment 1% from the total of TV subscribers. On the other hand, we observe that on the IPTV and DHT segment we have almost totally digital services which can be seen in the next table:

Table no.1 Structure of the subscriber number for the retransmission services of the audiovisual programs received in digital and analog format depending on the utilized support, on the 31th December 2013.

| receiving TV | total | digital | analog |
|---|---|---|---|
| cable | 4.100.000 | 1.480.000 | 2.520.000 |
| DTH | 2.200.000 | 2.189.000 | 11.000 |

| | | | | |
|---|---|---|---|---|
| IPTV | | 56.000 | 56.000 | 0 |

Having in mind that starting from 2015 July in Romania there will be no more emission of TV programs in analog system, in the next period we will witness important purchases of digital televisions or many of the current TV services users will not have access to it anymore.

Regarding the distribution of TV services in Romania according to the place where the consumers live, 3,9 million live in urban environment and 2,5 million live rural environment. As we can see in the data we showed, starting from 1992 till today the television market has known an important growth. Technical and publishing quality has improved very much in this period, and many clients of the TV services entered in the digital world. In the next section we propose to analyze the competition on the main TV channels market in Romania between 2011 and 2014.

3. Elements of performance quantified in TV audience numbers

The aspect that dominated TV market in the last years was the competition that started to be more and more dynamic between the programs diffusers. Because of the increasing number of societies that exploits TV licenses, the channels offer of which the consumers may choose from is much bigger. As we have seen in the previous section, the biggest part of the TV services consumers are cable, DTH or IPTV connected; this means that each of them has available a package of 30, 50, 100 or more TV channels

The generous packages of options available oblige the emission producers to have in mind the expectations of the potentials viewers.

On other hand, for the commercial societies that exploits TV licenses, the audience volume determine on an important level the incomes, because the sums collected out of publicity depend on the number of viewers in the moment when commercials are diffused. Having this in mind, the logic of the system in built on the quality importance of the programs, which brings market success through the growth of audience volume, which means bigger income. "Gaining a bigger audience insures not only the prestige of the company but also the growth of the incomes that come from the diffused commercials." (Stanciu, 2001:237) This competitive system between societies and the way these have understood to approach the problems and opportunities in an organizational way, have determined the quality and the performance of each of them and of the whole TV market in Romania.

In 2001 was founded the Romanian Association for Audience Measurement (ARMA), an organization that "has three membership categories: television stations, publicity clients and publicity agents". (ARMA, General presentation, available on site: http://www.arma.org.ro/ro) In 2015, members in ARMA are 60 television stations, 29 publicity agencies and 12 publicity clients. "In ARMA it is organized The National TV Audience Measurement Service (SNMATV), which represents the barometer of the TV consuming behavior in Romania. In the period 2012-2015, The National TV Audience Measurement Service is supplied by Kantar Media." (ARMA, General presentation, available on site: http://www.arma.org.ro/ro ) The measurement of audience is made with the help of PeopleMeter system, which means that all televisions in the households that are part of the researched group have installed a device that records in every second the programs you visualize. The collected data are transmitted to the research center where these are worked and presented to the companies that benefit, the members of the organization.

In our research, based on the data ARMA provided, we have tracked in the period 2012-2014 the volume and the fluctuation of the TV audience, and we have tried to build up an

annual classification according to the number of the consumers that chose to access the services of the different TV channels.

Table no. 2 The situation of the medium audience of the first ten TV stations in Romania in 2012.

| | Rtg | | Rtg% | | Share | |
|---|---|---|---|---|---|---|
| Post TV | National | Urban | National | Urban | National | Urban |
| Pro TV | 422.000 | 227.000 | 2.2 | 2.2 | 11.9 | 11.4 |
| Antena 1 | 347.000 | 193.000 | 1.8 | 1.8 | 9.8 | 9.7 |
| Antena 3 | 286.000 | 206.000 | 1.5 | 2 | 8 | 10.3 |
| Kanal D | 198.000 | 99.000 | 1 | 0.9 | 5.6 | 4.9 |
| TVR 1 | 183.000 | 82.000 | 1 | 0.8 | 5.2 | 4.1 |
| Realitatea TV | 138.000 | 70.000 | 0.7 | 0.7 | 3.9 | 3.5 |
| Prima TV | 115.000 | 59.000 | 0.6 | 0.6 | 3.3 | 3 |
| Acasa | 113.000 | 69.000 | 0.6 | 0.7 | 3.2 | 3.4 |
| B1TV | 113.000 | 74.000 | 0.6 | 0.7 | 3.2 | 3.7 |
| National TV | 113.000 | 56.000 | 0.6 | 0.5 | 3.2 | 2.8 |

Source: Realized by the author based on the data The Romanian Association for the Measurement of the Audience (ARMA) provided, available on site: http://www.arma.org.ro/ro/news/indicii-anuali-de-audienta-1 accessed on the 10th of January 2015.

Pro TV occupied again the first position with a rating of 2,2%, a market share of 11,9% and had an average for the whole day of 422.000 viewers per minute. Antena 1 kept the second position, with a rating of 1.8% and a market share of 9.8%, having a total of 347.000 viewers per minute. The third place was occupied by Antena 3, with a rating of 1,5% and a market share of 8%, having 286.000 viewers on average each minute of the day. TVR 1 was ranked on the fifth place with a rating of 1%, a market share of 5,6% and an average of 183.000 viewers each minute of the day. On the tenth place was ranked National TV with a rating of 0.6%, a market share of 3,2% and an average per day of 113.00 viewers each minute.

We can see that Pro TV has kept the first position in the ranking; Antena 1 had a huge growth with almost 100.000 viewers each minute of the day, reaching to an average on year 2012 of 347.000 viewers each minute of the day. An important growth recorded as well Antena 3 that occupied the same position that Realitatea TV occupied in 2011. In exchange, Realitatea TV reached very low, losing the average values from 2011, almost 60.000 viewers per minute each day. In the top of the first ten televisions selected by the audience performances we have three news televisions, two thematic film televisions and five generalist televisions.

In 2013, the ranking has changed again, the economical agents taking steps to obtain bigger shares of the TV market in Romania. We present in the next chart the situation of the average audience of the first ten TV stations ordered by the market share:
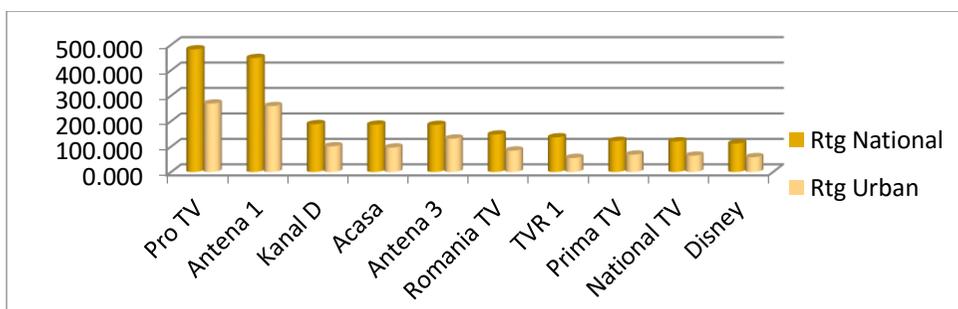
Figure no. 2   The ranking of the first ten TV channels from Romania according to the audience in year 2013

Source: Realized by the author based on the data offered by The Romanian Association for the Audience Measurement (ARMA) available on site: http://www.arma.org.ro/ro/news/indicii-anuali-de-audienta-1 accessed on 10th of January 2015

Pro TV has occupied the first position with a rating of 2,5%, a market share of 13,1% and had an average of 482.000 viewers for each minute of the whole day.

Antena 1 was ranked on the second position with a rating of 2.4 % and a market share of 12.2%, with a total in average of 448.000 viewers per minute. The third place was occupied by Kanal D, with a rating of 0.9% and a market share of 5.1%, with a total of 188.000 viewers in average for each minute of the day. TVR 1 was ranked on the seventh place, with a rating of 0.7%, a market share of 3.7% and an average for the whole day of 136.000 viewers each minute. On the tenth place was ranked Disney, with a rating of 0,5%, a market share of 3% and an average of 112.000 viewers each minute of the day.

The channels that had the biggest growth in 2013 were Pro TV and Antena 1, each of these two televisions having more than 400.000 viewers in average every minute of the day. It is obvious that these two generalist televisions are leading without big competition, having most of the clients. TVR 1, the public TV station, lost 25% of the viewers in 2013. Apparently the generalist TV stations satisfy better the needs of the active consumers on TV market. The niche TV stations have less audience, but it is mentioned that by audience standard two of these are ranked between the first ten TV channels in Romania.

This classification suffered changes also in 2014, the competition on the Romanian TV market reaching different performances, depending on the capacity of each TV channel to adapt at the consumers demands and to have power to fight back the attacks of the competition. In the next chart we present the situation of the average audiences of the first ten TV stations ordered by market share:

Table no. 3  The situation of average audience of the first ten TV stations in Romania, in 2014

| | Rtg | | Rtg% | | Share | |
|---|---|---|---|---|---|---|
| Post TV | National | Urban | National | Urban | National | Urban |
| Pro TV | 488.000 | 283.000 | 2.64 | 2.8 | 13.21 | 13.32 |
| Antena 1 | 459.000 | 275.000 | 2.48 | 2.72 | 12.42 | 12.97 |
| Antena 3 | 266.000 | 189.000 | 1.44 | 1.87 | 7.19 | 8.91 |
| Kanal D | 267.000 | 137.000 | 1.44 | 1.36 | 7.21 | 6.47 |
| TVR 1 | 180.000 | 96.000 | 0.98 | 0.95 | 4.88 | 4.51 |
| Romania TV | 168.000 | 90.000 | 0.91 | 0.89 | 4.55 | 4.23 |
| National TV | 104.000 | 57.000 | 0.56 | 0.56 | 2.81 | 2.69 |
| Disney | 101.000 | 47.000 | 0.55 | 0.46 | 2.74 | 2.2 |

| | | | | | | |
|---|---|---|---|---|---|---|
| B1TV | 98.000 | 57.000 | 0.53 | 0.57 | 2.65 | 2.69 |
| Prima TV | 90.000 | 51.000 | 0.49 | 0.5 | 2.45 | 2.39 |

Source: Realized by the author based on the data offered by the Romania Association for the Audience Measurement (ARMA), available on site: http://www.arma.org.ro/ro/news/indicii-anuali-de-audienta-1 accessed on the 10th of January 2015.

Pro TV occupied the first position having a rating of 2, 6%, a market share of 13,2% and an average of 488.000 viewers every minute of the day.

Antena 1 comes the second, having a rating of 2.5% and a market share of 12.4% the total average being 459.000 viewers per minute. The third place was occupied by Antena 3, with a rating of 1,4% and a market share of 7,2% having in total 266.000 viewers in average every minute of the day. TVR 1 was ranked on the fifth place, with a rating of 1%, a market share of 4,8%, having an average for the whole day of 180.000 viewers per minute. On tenth place was ranked Prima TV, with a rating of 0.5%, a market share of 2,%% and an average for the whole day of 90.000 viewers every minute.

The first two positions remained the same in the period we are analyzing, 2011-2014. Pro TV was is this period the station that had the most clients, fallowed at a short difference by Antena 1, a TV channel that in this period managed to double it's performance on the Romanian TV market. Important to mention is that year 2014 was an electoral year which contributed to the growth of audience for the niche channels specialized in news programs. This is how Antena 3, Romania TV, B1TV and Realitatea TV grew a lot in this period. We consider that this performance does not reflect the quality growth of the offered products, being a conjuncture growth based on the interest for the presidential elections.

In the next section we will try to track the financial results, if and how these follow the audience results.

**4.** The economic performance elements of the TV sector quantized in financial results

The way markets function determine actions that aim the economic efficiency, because the organizations that operate on these markets must be competitive. "The success of the organizations is based on the capacity to improve what they already do." (Goffee, Gareth, 2011:188) *How can we get better?* – is the question the leading teams of the modern organizations have in mind. Because the financing model of media businesses based on the publicity incomes proved to be vulnerable, the management of economic agents in television tried in the last years to diversify the sources of the incomes. They tried to realize value chains by packing and placing the products on different markets. This way, televisions maximized the possibility to view the programs through the communication ways offered by the internet. Almost all televisions have sites on the internet and pages on the social networks. The economic operators that have business in television diversified the services they offer.

We tried to understand the economic situation of the main operators on the Romanian TV market, and in order to do that we tracked the data presented by the Public Finances Ministry on the site www.mfinanţe.ro, where we find a short balance sheet of the economic agents in Romania. In order to have an overview, we tracked the turnover evolution and the profit and loss account between 2011 and 2013 of the main TV channels in Romania. In the next figure we present the situation in 2011:

| | Pro TV | Antena 1 | Kanal D | Antena 3 | Prima TV | B1 TV | Taraf TV |
|---|---|---|---|---|---|---|---|
| ■ turnover 2011 (euro) | 117369737 | 52628179 | 9658679 | 12994034 | 21430140 | 5644064 | 923325 |
| □ Profit/loss 2011 (euro) | -7556391 | 1477222 | -9980105 | -993339 | -3580604 | -1066913 | -61658 |
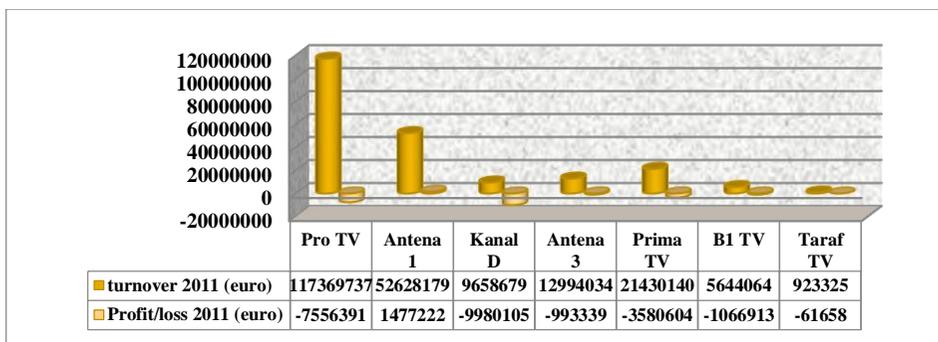
Figure no. 3  The economic situation base on the turnover and the profit/loss account of the main commercial TV channels in Romania, in 2011
Source: Realized by the author based on the data presented by the Public Financial Ministry, available on site: http://www.mfinante.ro/pjuridice.html?pagina=domenii, accessed on 30th of September 2014.

Based on the incomes TV stations obtained in 2011, it seems that it reflects on a high level the audience classification. Pro TV, which was on the first place regarding the audience, had the most incomes: 117 million euros; Antena 1 that was ranked on the second place had incomes of 52 million euros. With all these substantial cash in we can see that in 2011, from all seven stations we analyzed six closed the financial exercise with loses. The biggest loss was recorded by Kanal D, almost 10 million euros and Prima TV – 3,5 million euros. The only society that had positive results was Antena 1 with a profit of 1,5 million euros.
Seeing the financial results for 2011, we can say that mass-media businesses on the TV segment had important incomes but the costs were very high as well. So, in 2011, for the most societies we analyzed the situation seems to be worrying seen from the economic balance aspect.
In the next figure we present the financial data for 2012:



| | Pro TV | Antena 1 | Kanal D | Antena 3 | Prima TV | B1 TV | Taraf TV | Roman ia TV |
|---|---|---|---|---|---|---|---|---|
| ■ turnover 2012 (euro) | 107140012 | 48159233 | 12230901 | 15302205 | 16693599 | 5846915 | 520425 | 2506 |
| □ Profit/loss 2012 (euro) | -25670756 | -1311191 | -8227004 | 190573 | -3437518 | -579607 | -199575 | -2146185 |
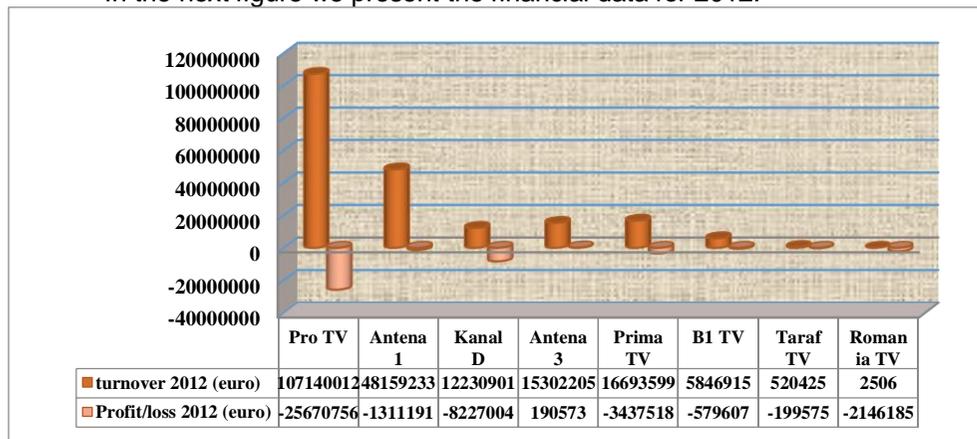
Figure no. 4 The economic situation bas on the turnover and the profit/loss account of the first commercial TV channels in Romania, in 2012
Source: Realized by the author based on the data presented by the Public Financial Ministry, available on site: http://www.mfinante.ro/pjuridice.html?pagina=domenii, accessed on the 30th of September 2014.

The reported data at the end of 2012 reflect an even more negative situation than in 2011.

Pro TV had the most incomes among the societies that work on TV market, but comparative to the incomes from 2011, the incomes in 2012 were less with 10 million euros and the losses were bigger with 18 million – reaching in 2012 to 25 million euros losses. Antena 1 had a drop of the incomes with 4,5 million euros and recorded losses of 1,3 million euros. Kanal D cashed more with 2,6 million euros but also had losses of 8 million euros. The recorded losses for Kanal D were less with 1,7 million euros comparative to year 2011. Romania TV, a society that was implemented in 2012, had incomes of 2.500 euros and losses of 3,5 million euros. The only society from our analysis that had positive results in 2012 was Antena 3, which recorded a profit of 190.573 euros.

The societies that operate on the Romanian TV market with high audiences (the ones that dominate the TV market: Pro TV and Antena 1) have to confront with negative economic issues, generated by the drop of the incomes and the growth of the losses. It seems that the phenomena is generalized, by this being suggested that the businesses in this domain need a new vision, need a creative economic approach, a modification of the work system and measurements to stop the losses and to have a durable economic growth. It is not enough to have performance regarding the audience and this performance cannot be kept on a medium and long term; having this in mind, in our opinion measurements to reduce the deficiencies are required; even though it is unpleasant it can't be avoided. In the next figure we present the financial date for year 2013:



| | Pro TV | Antena 1 | Kanal D | Antena 3 | Prima TV | B1 TV | Taraf TV | Roman ia TV |
|---|---|---|---|---|---|---|---|---|
| ■ turnover 2013 (euro) | 112553001 | 56706987 | 16696098 | 16117290 | 15641118 | 5461944 | 346949 | 180528 |
| □ Profit/loss 2013 | -19359958 | 2090606 | -4739833 | 166971 | -9592170 | 30532 | -168309 | -2408228 |
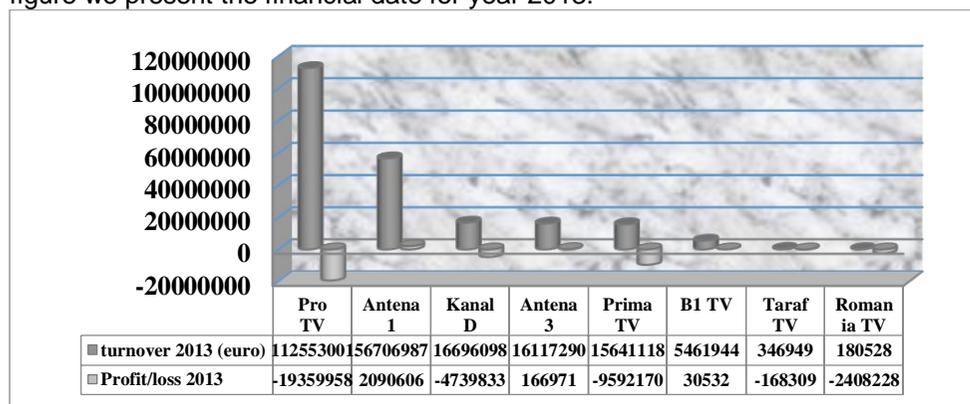
Figure no. 5  The economic situation according to the turnover and the profit/loss account of the main commercial TV channels in Romania, in year 2012

Source: Realized by the author based on the data presented by the Public Financial Ministry, available on site: http://www.mfinante.ro/pjuridice.html?pagina=domenii , accessed on 30 September 2014

It seems that a part of the companies that own TV channels have reduced the losses recorded in the previous years; so we have three channels with positive results: Antena 1, with a profit of 2 million euros; Antena 3, with a profit of 166.00 euros; B1TV, with a profit of 30.553 euros. With less loss are Pro TV and Kanal D, each of them reducing the losses with almost 5 million euros. Prima TV, even though it had high audience and high incomes (15 million euros) recorded losses of 9,5 million euros. Romania TV had high audience and reduced incomes (180.000 euros) and accentuated losses: 2,4 million euros.

In the analyzed period (2011-2013), the first two companies that cashed the biggest incomes are Pro TV and Antena 1, TV channels that also had the highest audience. For all that, the general economic state is not favorable except for Antena 1. Looking at all seven companies with private capital that we have analyzed in the period 2011-2013, it seems that this kind of business has brought almost none financial benefits to the shareholders.

## 5. Conclusions

After making this research we can notice a growth of the consumer interest for generalist programs and less interest for the niche thematic offers. In our opinion, this aspect is the result of the high quality this type of programs offer and the satisfaction of the expectation in the specialized market. Taking into account the digitalization and the extension of the mass-media offer and consumption in online format, our expectation was that the TV audience will drop on every minute of the day in this period, 2012-2014. But this expectation was quashed. We believe this situation is explained by the consumption of simultaneous media channels. This means less attention and focus and a passive consumption. Economically, this fact will lead to a less efficiency of the advertisement on TV, online or Facebook. It is possible that the trust in advertisement companies will drop as well as the interest for buying this kind of services. In the light of these things, we can assume that the advertisement budgets will drop in the next period or the budgets will remain the same. From our research we can take out the idea that from the economic-financial point of view, the performances of all TV operators from the group we analyzed are dropping.

Nevertheless, "media companies are based on a business way of thinking and survive as long as they produce money that is spent wisely." (Radu, Preoteasa, 2012:180) Whether we refer to the companies with private capital or the ones own by the state that exploits TV audiovisual licenses; in the actual context of global expansion of the media market, of the many offers we can find on this market, the global competition, in the economic administration is required maximum caution. Changing to the digital system, the operators must demonstrate professionalism, competition, anticipation and precision in the actions they take.

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# THE ECONOMIC APPROACH OF ECOSYSTEM SERVICES PROVIDED BY PROTECTED AREAS

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**Abstract:** *As practice shows us, at the present time ecosystem services are recognized by humanity, but unfortunately are undervalued compared to their full potential. Most of planet's ecosystems are degradated by anthropic activity of humankind. It is almost impossible to say that there are no areas affected by human activity, however, the Protected Areas are a good opportunity, so the assessing of ecosystem services in Protected Areas can be a solution to the problem of economic growth. At present, there are few consistent informations on economic value of ecosystem services in Romania, on the basis of which can be adopted some sustainable financing policies of activities in Protected Areas. The premise from which we start is that a proper management of natural capital will allow biodiversity conservation and human well-being if it find appropriate economic instruments. For this reason, studies of economic research on the contribution of those ecosystem services to the communities welfare may constitute credible means for decision-makers, demonstrating the Protected Areas importance. This paper, based on the study of international and national literature, examines the state of knowledge on the economic and environmental valences of ecosystem services. The growing interest of researchers regarding the economic valuation of ecosystem services related to Protected Areas is visible through the many studies carried out at international level. Although national scientific research relating to ecosystem services is at the beginning, concerns researchers economists and ecologists have been directed toward this recess, of ecosystem services. The reason for we should assign an economic value to ecosystem services is to ensure that their value is included actively in decision-making and is not ignored because "is still available". Briefly, the paper start with an overview of the main definition of ecosystem services. From the point of economic value view, the paper include a theory of value review, and after this was elucidated aspects as Total Economic Value, direct use value, indirect use value, non-use value, bequest and exchange value. The value theory is presented in terms of labor, utility or entropy. In conclusion was carried out a briefly overview of reason to research ecosystem services within Protected Areas.*

**Keywords:** ecosystem services, Protected Areas, economic value, Total Economic Value

**JEL classification:** Q57

## Introduction

According to the IUCN definition (2008) protected area is "a clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values." When you include a protected area in a certain category, first must to correspond to primary objective, i.e. definition, and then to some specific objectives, which for most Protected Areas are different. These specific objectives of management may be:

- Scientific research
- Wilderness protection

- Preservation of species and genetic diversity
- Maintenance of environmental services, such as water supplies
- Protection of specific natural and cultural features
- Tourism and recreation
- Education
- Sustainable use of natural resources
- Maintenance of cultural and traditional sites, including sacred areas

Around the world there are many names of Protected Areas, such as National Parks, Natural Reserves, Forest Parks, Marine Sanctuaries, but these names may have different meanings in certain countries. In order not to be confused, International Union for Conservation of Nature (IUCN) has defined six main categories of protected according to the main objectives of management.

National Parks are included into category II of IUCN protected area, and they have as main management objectives the biodiversity conservation, visitors and public educations and informations, visitors recreation and scientific research. To achieve these objectives management often need more than the funds which is allocated. Therefore, the economic assessment of the benefits of biodiversity conservation and ecosystem services provided by national parks is important to demonstrate the value of these parks to an adequate funding.

At present, there are few consistent informations on economic value of ecosystem services in Romania, on the basis of which can be adopted some sustainable financing policies of activities in Protected Areas. The premise from which we start is that a proper management of natural capital will allow biodiversity conservation and human well-being if it find appropriate economic instruments. For this reason, studies of economic research on the contribution of those ecosystem services to the communities welfare may constitute credible means for decision-makers, demonstrating the Protected Areas importance.

This paper, based on the study of international and national literature, examines the state of knowledge on the economic and environmental valences of ecosystem services. The growing interest of researchers regarding the economic valuation of ecosystem services related to Protected Areas is visible through the many studies carried out at international level. Although national scientific research relating to ecosystem services is at the beginning, concerns researchers economists and ecologists have been directed toward this recess, of ecosystem services.

Although "ecosystem services" enjoys a rich literature, its meaning is still intensely discussed and put in different interpretations. Thus, in the following we will give a brief overview of the history of the concept and some definitions that have been mentioned so far.

The concept of "service ecosistemic" has its origin in the late 1970, when he was identified as "public services of global eco" (Ehrlich et al., 1977), as well as "services of nature" ((Westman, 1977), and as "services ecosistemice" (Ehrlich and Ehrlich, 1981), and more recently as "eco-services" (Bulte et al., 2005). Then the concept continues to be thorough in 1970s and 1980s, highlighting the social and economic dependence of natural assets. Natural assets or natural capital are represented by natural and environmental resources with non-renewable (mineral deposits) or renewable (forests, schools of fish) character (Zaman and Gherasim, 2010). Natural capital is defined by International Institute for Sustainable Development (IISD) - with a large degree generallity - as representing the earth, the air, the water, the living organisms and all biosphere formations which provides us, imperatively, goods and services of ecosystems for survival and prosperity. Westman (1977) and de Groot (1987) have shown in their papers the benefits of ecosystem functions, in order to increase public interest in terms of biodiversity conservation.

In the 1990s start to be introduced more and more ecosystem service concept in the literature. Costanza and Daily (1992) define natural capital and state that ecosystem is a renewable natural capital. During this time the term has had a remarkable rise, on the one

hand through Daily's book, Nature's services: societal dependence on natural ecosystems (Daily, 1997b), but also through the works of other authors (Costanza et al., 1998). Since 2001 until 2005 Millennium Assessment (MA) had over 1360 experts who were involved in the development of reports regarding natural capital/ecosystems and human well-being (MEA, 2005). After re-launching MA (Millennium Assessment), the number of scientific papers has grown exponentially, most of the authors trying to define, to classify, to quantify, to evaluate and to establish payment schemes for ecosystem services (Fisher et al., 2009; MEA, 2003; MEA, 2005; Fisher et al., 2008; de Groot et al., 2002; Faber et al., 2002; Wallace, 2007; de Groot et al. 2010). A more systematic and detailed approach of ecosystem services concept history is carried out by Gómez-Baggethun et al. (2010) and Fisher et al (2009).

Whereas the definition enjoys a variety of approaches, it will give a brief overview of the most intensively used definitions of ecosystem services. With a widespread use in the literature is MEA definition, by which ecosystem services are seen as benefits that people obtain from ecosystems (MEA, 2003). These include supply services, regulation services, cultural services and support services (MEA, 2005; Daily, 1997).

Costanza et al. (1998) defines ecosystem services as the benefits that people obtain, directly or indirectly, from ecosystem functions.

Based on the definition of MEA, TEEB project defines ecosystem services as a direct or indirect contributions of ecosystems to human well-being (TEEB, 2010).

Definitions of ecosystem services vary from author to author, so Boyd and Banzhaf (2007) distinguish between ecosystem functions (biological, chemical and physical conditions of ecosystems) and ecosystem services (components of ecosystems that are valued by people and used passively or actively to produce human well-being). Also the same authors argue that ecosystem services are only the ,,final product" of benefit for human well-being (eg. surface water).

Ecosystem services include the organization of ecosystems (structure), the operation (process) and the outputs, if they are consumed by the population directly or indirectly. At the same time, the distinction between direct and indirect consumption of ecosystem services will be useful for natural capital systems accounting (Boyd, 2007) or for economic evaluation. Thus it can be said that it represent the conditions and processes through which natural ecosystems, and the species that are part of them, support and fulfill human life.

For example, if the provision with food is a final service, and the pollination is intermediate, then the benefit is food for consumption. Summary, ecosystem services are ecological phenomena and the benefit is that thing which has a direct impact on human well-being (Fisher et al., 2008).

Into another approach ecosystem services are flows of materials, energy and information from natural capital that ,,in combination with" forms of human capital and manufactured produce human well-being (hydropower use water regulation services, but also needs and civil engineers and raw materials, such as cement; recreational service is conditional on the existence of transport infrastructure and accommodation) (Fisher et al., 2008).

Fisher et al. (2009) proposed another definition by which,, ecosystem services are aspects of ecosystems used (passively or actively) to produce human well-being. It also states that these ecosystem services including organization or structure, and processes and/or functions are services only when there is someone to take advantage of him, and that without a human beneficiary, they may not be called services.

If we are referring to the classification of these services, the most important is the Millennium Ecosystem Assessment classification (2005), which includes four categories of services: provision, regulating, cultural and supporting. Whereas are widely used in international research literature and also in this paper  will make use of this classification system.

**The economic value of ecosystem services**

Economics has enjoyed a number of theories on value, which have elucidated value concept in terms of labor, utility or entropy. Labor-based value theory had as advocates on Adam Smith, David Ricardo and Karl Marx and according to this theory a single production factor, namely labor, creates the economic value in certain areas of activity, the source of national wealth. Utility-based value theory had it as parent on Greek philosopher Xenofon, and then has been developed by economistsn as William Stanley Jevons, Menger, Leon Walras, John Maynard Keynes. This underlines the role a good utility in determining its value. The general model of entropy-based value theory developed by Paul Bran takes into account the formation of physical, social and financial forms of value, as well as the contribution of the four general factors involved in the mechanism for obtaining the value, Natural Environment, Society and enterprise system in the state of production (The Manufacturer) and in the state of consumption (The Consumer) (Bran and Costica, 2003).

Labor value theory of Marx has two functions: to explain the equilibrium price (or exchange value) of goods, around which the actual price fluctuates all the time, and to provide aggregators or aggregate structure in terms of which a large number of industries (or sectors primitive) are aggregated within a smaller "departments". Most followers and antagonists of Marx aimed the first part of the labor theory of value. Marx used the the value as aggregator because he believes that it is more essential that the price and the amount can be determined only by technologies and therefore is not affected by market price and wage changes. This is valid only if chosen production methods are not changed. Marx defined the value as the total amount of labor performed (in hours) to produce a unit of good (or materialized in a unit of good) (Morishima, 1973).

As tell Smith, the labor is the actual measure of value, in a monetary economy money itself is the common way to represent value, although nominal prices themselves are adjusted on basis of labor weight both for the production of money and the other goods. He argues that labor is the only accurate measure of value, or the only standard by which we can compare the value of different commodities, in any place and at any time (Henry, 2000).

When discussing about value it is necessary to remind the water-diamonds paradox which explains the difference between use value and exchange value. Water has infinite value and unlimited, being essential for life, but its exchange value is low, while diamonds that are not essential, have high exchange value. In according to Adam Smith there are two forms of value: use value, expressed using the utility and exchange value, determined by the purchasing power of other goods (Levy, 1982).

According to utility-based value theory, the exchange value was based on both utility and scarcity. Menger proposed there were different categories of wants or desires, for examples food, shelter, and clothing, that could be ordered in terms of their subjective importance. His principle is that to one additional units the intensity of desire decrease with successive units of the good. If we replace the term ''desire for one additional unit'' with the term ''marginal utility,'' we thus have the economic principle of diminishing marginal utility (Constanza, 2004)

To be able to assess ecosystem services in a relevant manner as possible and to see the connection between them and human well-being, it is important to elucidate the significance of ecosystem services value that can be viewed from three perspectives: ecological, economic and social. The ,,value" term has different meanings within the three disciplines (natural sciences, economics, socio-cultural sciences). Thus, in the following it is presented the concept of ecosystem services value, addressing the "value" according to the three disciplines.

The term "value" is used to explain the contribution of an action or object to the fulfillment of a goal, objective or condition specified by the user (Costanza, 2000). In our context, the value of an action or object is measured by its contribution to maintaining the health and

integrity of an ecosystem or species, as such, regardless of human satisfaction (Faber et al., 2002).

The reason for we should assign an economic value to ecosystem services is to ensure that their value is included actively in decision-making and is not ignored because "is still available".

Seeing cumulative benefits provided by ecosystems are assigned values, was introduced the concept of Total Economic Value, which estimates the direct use value both the non-use value. Hein et al. (2006) provides a framework scheme in which makes a correlation between the components of total economic value and the main groups of ecosystem services (Figure 3).

The general unit of measure used by economists to express the benefits of ecosystem services is represented by money (Hermann, 2011). Ecosystem services are valued according to the association or not with a market price. Tradable services can easily be evaluated based on the market price, but non-tradable services are most often assessed using compensation techniques "willingness to pay" or "willingness to accept" (de Groot et al., 2002).
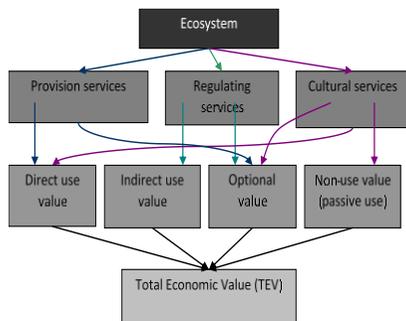


**Figure 1: Total Economic Value of Eosystem Services**
Source: adapted from MEA, 2005 and by Hein et al., 2006

*Direct use value,* in the present case of a protected area, is the value derived from direct use of protected area activities such as tourism, recreation, harvesting natural resources, access to genetic resources, hunting, education and research. These values can be commercial, equal to the price when it is not distorted by market(harvesting resources, tourism and research) or non-commercial, which means that there is no formal or permanent market where they are traded (collecting firewood or abusive grazing). The process of obtaining a market price value corresponding to the commercial use value will generally be a simple process. However, even if the prices are set administratively, they do not always reflect the true value of the product. Instead, the assessment of non-commercial activities is more complex and heavy, and involves a whole range of techniques for fixing the prices. Goods or services with direct use value are used without being consumed,, "itself".

*The indirect use value* of Protected Areas is the value derived from indirect use of the protected area. The indirect use is most often consists of ecological functions of protected area, such as watershed protection, providing breeding habitat for migratory species, climate stabilization and carbon sequestration or providing habitat for insects that pollinate crops or raptor species, which regulate the natural populations of rodents. In most cases these functions are dispersed so that the value of indirect use will most often not evaluated.

*Optional value* of an Protected Areas is given by the alternative of using the protected area sometime in the future, referring to the utility that can have a good in the future. For example, knowledge of information about vegetable biodiversity concerning some

unknown genes plants in our day, may be particularly important in the future because they can provide inputs for pharmaceuticals or cosmetics.

*Non-use values* are values that humans are maintaining for a protected area and which have no relation to the actual use of the protected area. Two common examples of non-use value is the bequest value and existence value. Bequest value is representing by the benefit/satisfaction of knowing that someone else benefit or will benefit from the protected area. Existence value reflects the benefit of knowing that the protected area exists, even if it is not accessed or used in a certain way. These values are very difficult to measure in general. Natural monuments, rare geological formations, threatened or endangered rare species have low utility value, but a large value of existence. The value of existence is the only component of VET that is not based on the interests of society - non-anthropogenic.

*Total Economic Value (TEV)* of an protected area consists of use and non-use values. Use value components are direct value, indirect and option value, and for non-use value we have bequest value and existence value. In determining the economic value of a good or service ecosystem we must  to distinguish between economic assessment and financial analysis. Economic evaluation based on economic value, measures the market values and non-market that humans consider a protected area. Financial analysis is only a subset of economic evaluation and measures only cash flow of a protected area. Although financial analysis is a very useful tool, it may not be suitable to any situation (Phillips, 1998). The value related to a good or service is not equal to the price, these being two different concepts. Prices are only events which appears when we have free trade market, therefore are objective. In contrast, the value is subjective, is closely related to human perception. (Drăgoi, 2008).

TEV is measured by the preferences of individuals. For example when goods and services are provided in actual markets, then individuals show their preferences through their purchasing behaviour. Thus, the price that they are paying in the market is at least a lower-bound indicator of how much they are willing to pay for the benefits they received from consuming that good or service. But for ecosystem services which are not traded in actual markets, market price data are missing. In such cases, we must to apply the methods of economic valuation that will estimate these 'non-market' or 'external' benefits. These techniques express economic value in units of money.

In the anthropocentric conception the nature, the ecosystems have "value" and  are necessary to human,  being assessed only for the purposes of human interests. Appreciation of nature and contact with nature just for utilitarian reasons, may, however, be recognized by the aesthetic and contemplative values of these, without leaving anthropocentric side (passive use nature, enjoying it without using it in technological sense).

Socio-cultural values are represented by the benefits which the natural landscapes provides us (historical, ethical, religious, spiritual, etc.). Cultural services play an important role in improving human well-being (Hermann et al., 2011).

Natural ecosystems provide opportunities almost unlimited for spiritual enrichment and leisure. Also, they are a vital source of inspiration for science, art and culture and provides opportunities for education and research. Information functions of ecosystems include: aesthetics, recreation, cultural and artistic information, spiritual and historical, educational and scientifical information (de Groot et al., 2002).

Aesthetic information can have a significant economic contribution, for example it influence on house prices: the houses near national parks or with a view to the ocean are usually more expensive than similar houses located in less-favored areas (Costanza et al, 1998).

Natural ecosystems represents a place to rest and recreate that offers possibilities for different activities such as walk, hiking, fishing, swimming or study in kind. As regards cultural and artistic inspiration, nature is important for folklore and culture, being a reason and a source of inspiration for books, films, paintings, sculptures, music and dance, fashion, advertising, etc. Ecosystems are considered as "field laboratories" for scientific

research, and can be reference zone for monitoring environmental changes (Groot et al., 2002).

**In conclusion - The need for ecosystem services research**

As practice shows us, at the present time ecosystem services are recognized by humanity, but unfortunately are undervalued compared to their full potential. Most of planet's ecosystems are degradated by anthropic activity of humankind. The increase of population and of living standard sometimes do impossible autoregulation of these ecosystems, and this incapacity to recovery on short and medium time has consequences on the production of natural resources and on regulation of processes in atmosphere, the hydrosphere and the biosphere. So, the assessment of potential for one area from the point of view of ensuring a maximum flow of ecosystem services, is possible only by analyzing the areas which are not affected by human activity. Since it is almost impossible to say that there are no areas affected by human activity, however, the Protected Areas are a good opportunity, the assessing of ecosystem services in Protected Areas can be a solution to the problem of economic growth.

Protected Areas provide numerous and valuable benefits among which the most important are: protect biological diversity and maintain ecosystem services, represent means to prevent and reduce poverty through providing food and drinking water to residents of less-favored areas, provide medicinal plants to pharmaceutical sector, ensure clean drinking water both rural and urban areas, maintain air quality by reducing carbon dioxide, thus contributing to resilience to climate change, mitigate the effects of natural disasters, acting as a barrier to storms, floods and drought prevention, generates significant economic benefits to the tourism sector, offering spaces of leisure to people, as well as physical and spiritual relaxation. To maintain and increase these benefits, the managing of Protected Areas should be included in economic strategies of sustainable development, and more, to be recognized for their value.

Most of Protected Areas contain values which, if are properly managed, can realize directly or indirectly benefits of which would enjoy local communities, but also humanity in general. Maintaining Protected Areas in a suitable state, but also an appropriate use can generate income or most of the times are obtained very large advantages, that could be seriously diminished if we neglect the protected area through negative actions. Economic benefits could be generated both from capitalizing intrinsic values and those extrinsic. In the case of natural resources the economic value can be easily determined (for example the value of a cubic meter of wood, in the case where the objectives of management of area allow), but when it comes to environmental services (water treatment, air quality regulation, ensuring community health, recreational and spiritual value) economic evaluation is more difficult and requires thorough assessment studies. In the case of Protected Areas is important to assess the goods and services in order to ensure a benefits for local community, but also to substantiate sustainable financing schemes of Protected Areas.

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# SKILLS MISMATCH OF THE YOUNG PEOPLE AT THE EUROPEAN LEVEL

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**Abstract:** *Transition from school to work is a main issue with many fields of study. Studies on transition from school to work, have highlight the importance of two categories of factors at the level of the individual formal proceedings which may affect how easy it is to graduate to integrate into the labor market: 1) so far as the educational systems are transmitting specific competences as compared with those general and 2) so far as there are direct links between employers and the education system. In this way, are reduced the costs of selection and allocation for employers. A poor articulation between educational institutions and the labor market produce a high level of unmatched competences of assimilated by formal education and competencies required of the labor market (skill mismatch) (Parodi et al., 2012). The surveys with European employers reflect particular difficulties that they are experiencing in employment vacancies. Investigation on the European companies in the spring of 2013 found that 40% of the firms in the EU have difficulty in finding employees with suitable qualification (CEDEFOP-European Center for the Development of the Vocational Training, 2014). Skills mismatch is a generic term that refers to various types of imbalances between skills and competences offered and those required in the labor market. Concept has become one intensely discussed and submitted to measurement in international research on the background concerns the under-utilization human resource. Numerous opinion polls with employers come to the same unexpected conclusion - that despite high unemployment many posts can't find occupants satisfactorily prepared and identify the causes: most of them criticized the lack of skills of the candidates or the absence of skills specific to the workplace. Based on the latest studies on international databases have built a set of questions that, through secondary analysis, we tried to find answers. Questions that we try to give answer are: What are the main types of skills mismatch? What are the main ways to measure skills mismatch? What are the indicators of skills mismatch?  What is the level of over-education and under-education in European countries? How to calculate skills mismatch between demand and supply of labor at European level? What factors explain the different labor market chances of young people compared to adults? What are the predictors at the macro level and individual level of skills mismatch?*

**Keywords:** labour market, skills mismatch, employment.

**JEL classification:** J40, J41, J50.

## Introduction

Recession started in 2008-2009 has produced an increase of unemployment in EU countries. (Bell, Blanchflower, 2011). However, the surveys with European employers reflect particular difficulties that they are experiencing in employment vacancies. Investigation on the European companies in the spring of 2013 found that 40% of the firms in the EU have difficulty in finding employees with suitable qualification (CEDEFOP, 2014). Numerous opinion polls with employers come to the same unexpected conclusion - that despite high unemployment many posts can't find occupants satisfactorily prepared and identify the causes: most of them criticized the lack of skills of the candidates or the absence of skills specific to the workplace (workplace skills) (CEDEFOP, 2014).

## 1. Educational Signals

Studies on transition from school to work, have stressed the importance of two categories of factors at the level of the individual formal proceedings which may affect how easy it is to graduate to integrate into the labor market: 1) so far as the educational systems are transmitting specific competences as compared with those general and 2) so far as there are direct links between employers and the education system. In this way, are reduced the costs of selection and allocation for employers. School-work transition is different from country to country, depending on the link between education and the labor market, the degree of standardization of national education system, whether the educational system provides options in choosing career path during their studies, is widely recognized that the so-called dual model. In this model, education and practice occur simultaneously, allowing the student to become insider in labor market even before graduation and standardized education system is more layered and has very close links with business organizations ties resulting from continuously offer internships, jobs for graduates, etc., is the successful insertion of young people in to the labor market (Ehlert, H. Cordier, H., 2002; Müller, W., Gangl, H., eds. 2004, Noelke, C., M. Gebel, et al. ,2012, Sloane, P. J. , Battu, H., Seaman, P. T. ,1999, Mŭller and Shavit 1998). A similar advantage can be registered and from the perspective of young enrolled in routes in vocational training, in particular in apprenticeship: they are with a "foot on the threshold" of employment at the time of studies. In other words, a poor articulation between educational institutions and the labor market produce a high level of unmatched competences of assimilated by formal education and competencies required of the labor market (*skill mismatch*) (Parodi et al., 2012). Obviously this determination can be applied to understand transition from school to working life both at the individual level but also for collectively, when we compare different levels between countries of unemployment rates among young people. As can be observed, the second feature - a mentioned between education and the labor market - is a variable which sets from the point of view of human resource creation varieties of capitalism as it is also one of important criteria for distinguishing between education systems (Cummings, etc.). The two characteristics are strongly correlated (Breen, 2005), since it is highly likely that system with strong ties between schools and employers to transmit much more specific than some with general competences. His study (Breen, 2005), in the same way as many others, certifies that countries with education systems professional powerful as Germany for example, manage to maintain unemployment rate among young people at levels significantly low, on equal terms.

## 2. Skills mismatch

Skills mismatch is a generic term that refers to various types of imbalances between skills and competences offered and those required in the labor market. Concept has become one intensely discussed and submitted to measurements in international research on the background concerns about under-utilization of human resource ("Skills mismatch in Europe," 2014).
The main types of skills mismatch to which they refer in literature and policy documents at work and training are the following:
- Skills scarcity or abundance – when the offer (or request) for a given skill exceed the request (or offer);
- Skills disability - skills type and level are different from those required in the workplace;
- Vertical skill mismatch - the level of training or of qualification is less than or higher than the requested;
- Horizontal skill mismatch - type/scope of training or the skills are inappropriate for the workplace;

- Over-qualification/Under-qualification - employees having qualifications high/low than job requirements;
- Aging skills - skills used to employment are no longer necessary or skills have deteriorated over time.

Because skills and competences are seldom measured as such, by indicators straightforward, measurement of skills mismatch are carried out, usually by indirect indicators (proxy) each of them with its advantages and disadvantages. For example, the measurement between the supply and demand on the labor market on the basis of a comparison of educational achievements structure of those employed and of those unemployed can clearly indicates what level of education is in deficit without indicating which areas/specializations are in deficit ("Global Employment Trends for Youth 2013: A generation at risk," 2013). The main ways of measuring the skills mismatch are:

1. Comparing the level of training of those engaged with the level of job requests - analysis identifying over-education or under-education. As a general rule, due to further expansion of education in developed countries there is an increase in the share of those over-educated, while in the developing countries, due to poor access, education cases of under-education are more frequently.
2. Comparing level of training of the employed with that of those unoccupied, especially unemployed people. This type of analysis usually demonstrates the advantages on the labor market of those with higher education ("Global Employment Trends for Youth 2013: A generation at risk," 2013).

## 2.1 Over- and under-education in Europe

Over-educated - those who work in jobs of lower level of qualifications held suffers from numerous disadvantages compared with those whose education and employment are suitable ("Skills mismatch in Europe," 2014):

- Even if their wages are higher than those at the same place of employment they have the appropriate level of qualification, years return in addition to a school or training are less (additional qualification shall bring them a profit reduced in financial terms);
- Their wages are on average lower than of those who, at the same level of training have job corresponding to education;
- Lack of career opportunities for those over-educated may result in a deficit of commitment and satisfaction to work, so that those who are in this situation show a high probability to engage in search of the place of work;

Vertical skills mismatch has, however, some advantages one of them being that over-education is correlated with ascending mobility ("Skills mismatch in Europe," 2014).

International Labor Office of the International Labor Organization summarized the results of the measurements on over- and under-education in the European countries in the past few years, the data allowing a few conclusions can be drawn from a simple analysis:

- Skills mismatch estimates on the same country produce large variations in the results of what he raised doubts as to their consistency and their relevance to education policies and employment. This unsteadiness is rooted in different procedures used in the various estimates, the procedures described in the report ILO ( "Skills mismatch in Europe," 2014, pp. 10-11)
- Average rate of minimum over-education is nearly two times higher than the average minimum under-education (27% to 14 %) being required to emphasize that the number of countries in which it has been estimated under-education is much lower than of the countries for which we have estimates of over-education.
- Result in a conservative estimate that, on average, the European Union, the percentage of those who manifest skills mismatch of both ways is at least 40 %.

- The over-education rates for youth are smaller than the general over-education rates. Young people in the EU have a less probability than adults to suffer from over-education.
- Because of the number of countries for which there are no data is difficult to work out inferences regarding the relationship between under-education of young people and adults.
- In most cases the under-education rates of the young people are higher than those of over-education. From this we can infer that the percentage of young occupying occupational positions for who are not sufficiently trained is larger than the number of young people who are in the reverse situation. This gives us indications for certain regional imbalances in the labor market (employers prefer, for example to employ young under-educated people and over-educated adults).

**Table 1. Over and under-education in European countries - synthesis of research published between 2007-2014 carried out by the International Labor Office**

| Country | %Over-educated | % Over-educated young people (under 30 years) | %Under-educated | %Under-educated young people (under 30 years) |
|---|---|---|---|---|
| Austria | 58,0 | 1.1 -10,6 | | 8.4 -30,6 |
| Belgium | 10.5 | 1.5 -59,0 | 25,8 -32,4 | 5.4 -25,5 |
| Czech Republic | 50.0 | 1.5 -9,3 | | 11.1 -17,8 |
| Denmark | 34.0 | | | |
| Estonia | 39.0 | 2.2 -8,4 | | 18.4 -33,1 |
| Finland | 11.1 | 3.3 -14,1 | | 10.9 -26,3 |
| France | 28.0 | 4.4 -13,9 | | 14.4 -15,4 |
| Germany | 11.8 -60,6 | 2.2 -12,6 | 12.1 | 6.3 -25,9 |
| Greece | 32.0 | | | |
| Hungary | 37.0 | | | |
| Iceland | 30.0 | | | |
| Ireland | 33.0 In | | | |
| Italy | 13.9 -71,5 | 4.0 -19,0 | 17.1 | 11.7 -22,5 |
| Latvia | 43,0 | | | |
| Lithuania | 31,0 | | | |
| Luxembourg | 27.0 | | | |
| Netherlands | 11.2 -39,0 | 2.9 -41,7 | 12 70 | 5.3 -25,2 |
| Norway | 16 76 -34,0 | 2.5 -20,4 | | 11.6 -29,1 |
| Poland | 13.9 -29,0 | | | |
| Portugal | 12.6 -33,0 | 3.4-6.5 | 17.0 -38,0 | 22.6 -50,8 |
| Romania | 10.1 -25,0 | 14.5 | 33.3 | 29.4 |
| Slovakia | 49.0 | | | |
| Slovenia | 36.0 | | | |
| Spain | 13.8 -37,2 | 6.5 -24,8 | 11.0 -25,6 | 7.1 -23,8 |
| Sweden | 27.0 | | | |
| Switzerland | 13.4 -14,9 | | 1.9 | |
| Great Britain | 13.0 -36,8 | 13,7 -53,0 | 17.0 | 5.5 -26,1 |

Source: "Skills mismatch in Europe," 2014

Using ISCO methodology (International Standard Classification of Occupations) the measurement of the vertical skills mismatch exists by successive waves of ESS (European Social Survey) ILO (International Labor Organization) has reached the following conclusions concerning the skills mismatch identified between 2002-2010 ( "Global Employment Trends for Youth 2013: A generation at risk," 2013, pp. 30-31) :

- **Over-education** has increased during the period under consideration, the growth being accelerated in time of crisis. Having regard to the methodology used, the increase reflects the growing level of training for the young people in the period under consideration. Moreover, accelerated growth of over-education reflects and a sharpening of competition for jobs associated with crisis of jobs. According to Eurostat data is especially about an increase in the number of young people with higher education employed in jobs un-manual with low qualification requirements.
- **Under-education** decreased constantly throughout the period in question, with acceleration in the years of crisis (2008-2010). It reflects, in the same way, increased competition for jobs in this period. In contrast to the overall trend, however, in time of crisis under-education rates to young people have increased. Specialists appreciate that this evolution, in contrast with those of the entire population, reflect changes in occupational structure, especially the decline an increasing number of unskilled jobs occupied by young people.

Vertical skills mismatch affects around half of active people on the labor market in Romania, the percentage for young people being approximately 40 % and under-education being, before crisis, about twice as over-education frequency than in the case of young people. Unfortunately these data are calculated for the last set of data ESS in which Romania has contributed, in 2008, so that an estimate of crisis effect is uncertain.

### 3. Skills mismatch between the supply and demand for employment in Europe

Skills mismatch between the supply and demand for employment can be quantified using indices of dissimilarity Duncan and Duncan. It starts from the comparison between the structure of training levels of those employed and those unemployed, the skills mismatch being identified when unemployment rates differ between employees with different levels of training. The index varies from 0 to 100, where the value 0 is reached when there are no differences between rates on unemployment and training levels (shall be taken into account, usually three levels - primary, secondary and tertiary). On the other hand, if all the workers with primary and tertiary education are employed and those with secondary education are all unemployed, dissimilarity index is 100.

**Table 2. Skills mismatch between the supply and demand for employment of the young people (persons under 30 years of age)**

|  | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Change 2010–11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Austria | 12.0 | 14.7 | 6.8 | 13.2 | 21.6 | 17.2 | 19.0 | 18.6 | 20.6 | 17.2 | 13.5 | 17.3 | 3.8 |
| Belgium | 18.0 | 31.6 | 22.5 | 19.1 | 14.0 | 12.8 | 14.5 | 15.8 | 16.9 | 11.6 | 19.4 | 20.6 | 1.2 |
| Bulgaria | 13.8 | 21.3 | 17.9 | 17.5 | 17.8 | 22.9 | 23.2 | 19.9 | 23.3 | 18.3 | 13.1 | 15.0 | 1.9 |
| Cyprus | 10.1 | 3.8 | 11.9 | 18.9 | 18.2 | 0.3 | 11.2 | 7.3 | 3.6 | 8.2 | 5.9 | 9.2 | 3.3 |
| Czech Republic | 18.8 | 19.4 | 18.0 | 18.8 | 20.0 | 16.5 | 16.6 | 19.9 | 27.7 | 18.9 | 16.3 | 18.7 | 2.4 |
| Denmark | 5.8 | 5.5 | 15.4 | 15.4 | 4.4 | 4.7 | 8.0 | 10.7 | 10.4 | 7.1 | 7.8 | 9.0 | 1.2 |
| Estonia | 25.6 | 9.2 | 34.0 | 14.9 | 16.1 | 11.4 | 15.7 | 26.2 | 15.3 | 21.2 | 14.3 | 10.7 | –3.6 |
| Finland | 26.7 | 24.1 | 29.9 | 26.7 | 27.3 | 17.9 | 20.9 | 22.8 | 25.9 | 20.3 | 19.7 | 23.3 | 3.6 |

| Country | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| France | 19.4 | 22.8 | 18.7 | 15.6 | 17.7 | 15.6 | 17.8 | 19.3 | 18.5 | 19.4 | 19.1 | 18.7 | –0.4 |
| Germany | 8.3 | 6.2 | 4.0 | 4.3 | 2.2 | 8.2 | 12.3 | 16.7 | 14.7 | 12.9 | 16.5 | 18.5 | 2.0 |
| Greece | 8.0 | 6.8 | 8.3 | 8.5 | 5.1 | 9.1 | 5.9 | 9.1 | 5.7 | 5.5 | 6.2 | 2.6 | –3.6 |
| Hungary | 13.6 | 14.9 | 14.8 | 20.3 | 17.4 | 14.4 | 16.7 | 15.9 | 16.3 | 18.7 | 14.2 | 15.1 | 0.9 |
| Ireland | 30.3 | 22.5 | 19.4 | 18.9 | 25.8 | 20.5 | 18.1 | 20.6 | 18.2 | 14.0 | 15.1 | 16.0 | 0.9 |
| Italy | 0.7 | 2.0 | 3.5 | 4.7 | 10.1 | 6.2 | 6.1 | 5.0 | 5.0 | 4.4 | 5.2 | 5.8 | 0.6 |
| Latvia | 19.4 | 19.3 | 19.1 | 14.2 | 11.0 | 25.9 | 26.1 | 16.7 | 17.3 | 18.7 | 12.2 | 12.2 | 0.0 |
| Lithuania | 12.6 | 12.2 | 9.6 | 11.6 | 5.9 | 11.0 | 4.9 | 5.7 | 16.3 | 13.5 | 11.5 | 10.6 | –0.9 |
| Luxembourg | 14.8 | 14.6 | 29.7 | 11.8 | 15.5 | 19.3 | 22.7 | 20.9 | 14.6 | 15.8 | 23.3 | 22.7 | –0.6 |
| Netherlands | 22.6 | 18.2 | 17.4 | 17.3 | 18.3 | 18.5 | 22.2 | 20.7 | 18.9 | 16.8 | 17.2 | 19.3 | 2.1 |
| Norway | 23.4 | 22.6 | 26.4 | 20.6 | 9.4 | 20.9 | 16.6 | 21.0 | 21.4 | 14.8 | 14.9 | 15.3 | 0.4 |
| Poland | 1.0 | 2.5 | 2.8 | 5.2 | 2.5 | 2.9 | 4.0 | 0.9 | 2.7 | 2.7 | 4.3 | 3.9 | –0.4 |
| Portugal | 0.7 | 2.6 | 1.9 | 0.9 | 5.3 | 4.2 | 5.7 | 5.2 | 7.0 | 3.6 | 2.2 | 5.8 | 3.6 |
| Romania | 17.2 | 14.2 | 9.3 | 11.7 | 5.7 | 8.7 | 3.7 | 3.4 | 4.5 | 2.7 | 12.0 | 8.5 | –3.5 |
| Slovakia | 8.7 | 10.2 | 10.2 | 11.3 | 18.2 | 23.0 | 25.5 | 26.9 | 25.7 | 14.7 | 13.3 | 12.4 | –0.9 |
| Slovenia | 13.1 | 14.0 | 14.9 | 10.8 | 6.3 | 6.9 | 6.2 | 6.5 | 3.5 | 9.1 | 10.0 | 13.9 | 3.9 |
| Spain | 2.0 | 1.3 | 0.3 | 3.2 | 2.5 | 7.3 | 6.9 | 8.2 | 15.3 | 16.2 | 17.7 | 14.3 | –3.4 |
| Sweden | 7.8 | 24.2 | 20.9 | 20.4 | 18.1 | 21.3 | 23.8 | 25.2 | 27.2 | 23.2 | 24.1 | 23.1 | –1.0 |
| Switzerland | 4.2 | 21.2 | 0.7 | 1.3 | 7.7 | 5.9 | 4.2 | 4.6 | 1.7 | 3.7 | 1.4 | 1.6 | 0.2 |
| United Kingdom | 25.5 | 26.7 | 26.0 | 26.1 | 27.7 | 23.3 | 22.4 | 24.4 | 24.7 | 20.1 | 19.3 | 18.3 | –1.0 |
| Average | 13.7 | 14.6 | 14.8 | 13.7 | 13.3 | 13.5 | 14.3 | 14.9 | 15.1 | 13.3 | 13.2 | 13.7 | 0.5 |

Source: Eurostat data processed by ILO

It has to be stressed that the measures this type of skills mismatch does not constitute indication for responsiveness quality or speed of education and training systems. In addition, in view of the fact that the index corroborates unemployment rates on three levels of training, the index itself doesn't say much about different opportunities on the labor market of young people with different levels of training.

As stresses the specialists of the International Labor Organization ("Global Employment Trends for Youth 2013: A generation at risk," 2013, p. 26) skills mismatch is not necessarily correlated with unemployment rate. Very high rates of unemployment in Greece shall be accompanied by a very small index of dissimilarity - this shows that unemployment affect them equally young Greeks, indifferently of the level of training. In contrast, low incidence of unemployment in Germany is accompanied by big difference in prospects of gaining access to the labor market of young Germans, according to their training level. These differences are explained by the fact that unemployment among young people is explained by many factors.

Compared with the average EU, skills mismatch between the supply of and demand for labor in the case of young people in Romania is below the European average. Dissimilarity in the case of youth unemployment rates between the three categories of level of training in Romania is 8.5 percent as opposed to a European average of 13,7 % in 2011 - in some countries skills mismatch being above 20% (Sweden, Belgium and Finland).

## 4. Factors which explain different chances in the labor market of young people compared with adults

For skills mismatch is pretty easy to blame the deficit of skills of those who are in search for a job. As a matter of fact, ask about the causes of the difficulties encountered in job occupation, European employees indicate the most common that are missing appropriate competences ("the school it prepares for yesterday's labor market and we are preparing for the world of tomorrow") (CEDEFOP, 2014)

Strangle in the course of recruitment (lack of competent) happens it's true, in the case of certain classes of occupations, as well as those of technology, engineering or medicine and lack of responsively of education and training systems can be accused for the skills mismatch. However, stresses specialists CEDEFOP (2014), should not be ignored the impact of other frictions of the labor market: low mobility of labor force, seasonal variations in the application of labor, lack of information and wage rigidity.

ILO report on trends in commitment of young people at the global level has tested several hypotheses regarding the macro-level determinants (at the level of the country) and at the individual level in situation of the skill mismatch ("Global Employment Trends for Youth 2013: A generation at risk," 2013, pp. 34-35). In summary, the findings of the statistical modeling of the ESS data (2010, when Romania was not involved) by macro variables are:

- A larger proportion of tertiary education graduates increases the incidence of over-education.
- The proportion of employment in non-qualified manual occupations decreases the risk of over-education and increases the under-education.
- As I have already stated, the unemployment rate is a predictor of poor skills mismatch. Unemployment rate increases the risk of over-educations for men, regardless of age group and decrease under-education rate for young men.

At the same time, the predictors at the individual level of skills mismatch are:

1. Young people (15-29) are much more exposed to the risk of over-education than mature employees and have a significant lower risk than the others to be under-educated.
2. Women are more likely than men to be over-educated, since they are more frequently in the situation to work in jobs below their level of qualification.
3. Young men with a background of migration are exposed to a greater risk of under-education.
4. Disability increases the risk of over-educated to young men and mature women.
5. Contrary to expectations, the situation of having a child does not enhance young people risk of being over-educated.
6. Having a partner, regardless of his occupational status, decreases the risk of over-education for young men and, as in the case of children, with whom it is covariate, increases the under-education risk.

### In conclusion

Skills mismatch measurements are carried out by indirect indicators (proxy) each of them with its advantages and disadvantages. The main ways of measuring the skills mismatch are: comparing the level of training of those engaged with the level of training of the jobs - analysis identifying over-education or under-education. As a general rule, due to further expansion of education in developed countries there is an increase in the share of those over-educated, while in the developing countries, due to poor access education cases of under-education are more frequently; and comparing level of training of the employed with that of those unoccupied, especially unemployed people. This type of analysis usually demonstrates the advantages on the labor market of those with higher education.

The vertical skills mismatch analyses has reached the following conclusions: Over-education has increased during the period under consideration, the growth being accelerated in time of crisis. Having regard to the methodology used, the increase reflects the growing level of training for the young people in the period under consideration. Moreover, accelerated growth of over-education reflects and a sharpening of competition for jobs associated with crisis of jobs. According to Eurostat data is especially about an increase in the number of young people with higher education employed in jobs un-manual with low qualification requirements; and under-education decreased constantly throughout the period in question, with acceleration in the years of crisis (2008-2010). It reflects, in the same way, increased competition for jobs in this period. In contrast to the overall trend, however, in time of crisis under-education rates to young people have increased. Specialists appreciate that this evolution, in contrast with those of the entire population, reflects changes in occupational structure, especially the decline, an increasing number of unskilled jobs occupied by young people.

Skills mismatch between the supply and demand of employment can be quantified using indices of dissimilarity Duncan and Duncan. The analyses show that skills mismatch is not necessarily correlated with unemployment rate.

One of the findings regarding the macro variables are that a larger proportion of tertiary education graduates increases the incidence of over-education. At the same time, the predictors at the individual level of skills mismatch are that young people (15-29) are much more exposed to the risk of over-education than mature employees and have a significant lower risk than the others to be under-educated.

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# OCCUPATIONAL SEGREGATION BY GENDER – WHERE DOES ROMANIA STAND?

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**Abstract:** *The issue of occupational segregation is a topic discussed in the foreign economic literature, but on which documents written by Romanian authors are not so numerous. Still, during the last decades, this problem gained attention and began to preoccupy more individuals, especially on the basis of female emancipation process. In the past, various occupations were destined to be developed only by male employees. Women represent more than half of the overall population of the world. Even if prejudices on women are no longer as intense as they were in the past, and the access to education is widely open even in less-developed countries, consequently increasing the number of female workers, there are still several issues regarding occupational segregation and gender inequality that need to be solved. Today, many prejudices are lost, and female employees are more appreciated and manage to occupy traditional positions, as well as the ones that in the past were allocated only for the opposite gender. An assumption met in literature is that a rich country is able to confront more efficiently its problems and that the level of development should lower the gender gaps also. The purpose of this paper is to illustrate the situation of occupational segregation in Romania, through both theoretical and empirical methods. Still, the research is a qualitative one, considering that the available data is limited, at the present moment. The first part illustrates the concept of gender equality and occupational segregation, followed by an interpretation of the official data provided by the reports elaborated by the institutes in the field. The last part consist in a brief analysis of the relationship between the gender equality index and the economic growth, illustrated by the values of GDP.*

**Keywords:** female employees, occupational segregation, labor market, GDP, gender equality

**JEL classification:** J24

## 1. Theoretical input

Women represent more than half of the overall population of the world. Even if prejudices on women are no longer as intense as they were in the past, and the access to education is widely open even in less-developed countries, consequently increasing the number of female workers, there are still several issues regarding occupational segregation and gender inequality, that need to be solved.

According to Lofstrom (2012), "gender equality is a multidimensional term embracing economic, cultural and social dimensions alike".

The problem regarding discrimination by gender, equality of chances and the wage differences between men and women were analyzed in several articles in literature. Equality is promoted by the European Union, still it is not a secret than in many cases, women earn less than men in terms of wage (Webb). The main goal is to harness the true potential at optimal level of female employees, the more as they are, according to Forbes studies, "half of the workforce, although so far have been concentrated in areas less paid,

practicing professions as commercial workers, waiters, administrative assistants" (Forbes).

According to Akerloff and Kranton (2010) there are still various differences between male and female employees, differences which underlie the concept of occupational segregation. Among them, we may identify reasons as: the fact that women devote a part of life to motherhood and implicit assumption that they are less attached to employment or invest less in their careers, are listed as the main determinants of the allocation of lower wages for women, based on the perception of weaker skills (Akerloff, Kranton, 2010).

At the same time, the wage differences between the two genders can be explained through the following aspects (Dobre, 2011):
- The difference regarding productivity and human capital (Edgewoth, 1992, Mincer, 1974);
- The choices of women regarding the workplace;
- The mobility differences between men and women.

According to the European Commission, nowadays the highest percentages in terms of segregation criteria are identified in the case of Estonia (32.2%) and Slovakia (30.2%), while the lowest rates are Greece (22.4%) and Romania (23.3%) (Eurostat).

During the last decades, the European Union has promoted the issue of equality between men and women, not only theoretically, but also in practice, the main directions of action being:
- Nondiscrimination regarding work independence;
- Equal wages;
- Equal right in decision making;
- Gender equality, integrity and dignity preservation;

Many times, literature speaks of segregation in the same terms as about discrimination, as we consider the case of limitation of rights (Sanduleasa, 2010). We can therefore speak of segregation on the grounds of gender, which requires employees of a particular gender to focus in specific different sectors, resulting at the same time several wage differences. This is also called the horizontal segregation (Dobre, 2010), but we can identify a vertical segregation (Akerloff, Kranton, 2010), consisting of gender differences in the hierarchy of an organization, still frequent in organizations belonging to all sectors of the economy.

Vertical segregation was noticeable in the past through a smaller number of women in leadership positions, but last thirty years have contributed heavily to the "empowerment of women and their implicitly acceptance by society and collectively as an equal of men, while continuing to carry out, in addition to the latter, unpaid work in the household" (Dobre, 2011).

Lofstrom states that "it is a generally known fact that women have lower pay levels than men in all member states, which directly reflects the differing conditions and circumstances under which men and women live".

Authors like Bergmann (Bergman, 1974) state that male employers "are against the employment of women in certain professions and can conspire to not allow women to occupy positions well paid, reserving the gains for other men", case in which we may notice a sharp discrimination on grounds of gender. Anker, on the other hand, (Anker, 1998) speaks, moreover, of a mismatch index, defined as "an amount between the minimum proportion of women and the minimum proportion of men who should change their profession so that the proportion of women to be identical in every profession", indicator which is used in order to carry out the comparisons in the different regions or countries.

## 2. The Gender Equality Index and its contribution to measuring the rate of segregation on the labor market

The European Commission, through the reports elaborated by Eurostat, lists a series of causal factors/elements that bring their contribution to the occupational segregation issue. The analysis made through official reports state the following:
- The size of responsibilities, both professional and especially ones regarding family;
- Labor market segmentation;
- The mentality;
- Stereotypes place in society;
- The level of investment;
- Quality of work;
- Subjective preferences;
- Organizational culture.

Following the conclusions of studies that promote equality between the two genders, the occupations predominantly carried by women represent about 11% of all occupations. Forbes publication describe the long journey that women have crossed during time in order to evolve in their careers, promoting alongside the phenomenon of gender empowerment, occupying management positions and others that require a higher level of training (according to Forbes), currently reaching to predominate also in some professions that were previously distributed only to male employees. Thus, nowadays financial and accounting jobs are mostly obtained by women. According to Eurostat statistics, women receive fewer hours of professional development than their peers of the opposite gender, although in terms of appearance rendering tasks over ordinary working hours is found in both sexes.

Regarding the propensity of individuals to a particular profession or to a specific category of work, this is manifested as early as during studies (Rosen, 1986).

The present employment rate in Europe is 63% for women and 75% for men. The constant tendency is the maintenance of the female employment rate under the one belonging to the opposite gender, the researches revealing the fact that women are more willing to develop part-time jobs, while the reports of Eurostat indicate a much higher level of the daily work load.

The European Institute for Gender Equality developed "a unique measuring tool", which "synthesises the complexity of gender equality as a multi-dimensional concept into a user-friendly and easily interpretable measure. It is formed by combining gender indicators, according to a conceptual framework, into a single summary measure". This measurement tool is named the Gender Equality Index and consists of components like work, money, knowledge, time, power, health s.a. This index is calculated both individually, for each country in the European Union, and globally, for the purpose of determining the overall value for the Union. It also "provides a measure of how far or close each member state was from achieving gender equality".

According to the Gender Equality Index Country Profile Report (2013), considering all domains mentioned earlier, the Gender Equality Index state the following:
- "Relates to the position of men and women in the European labor market", by calculating the gender gaps, work quality or sectorial segregation;
- Measures the dimension of political involvement of women and their representation in the political and economic fields;
- Measures the equality of income distribution and the "access to financial resources", considering that "an analysis of gender gaps in the domain of money shows that women are, with few exceptions, disadvantaged compared to men";
- Measures the differences between genders in terms of knowledge, education training and lifelong learning;
- Measures the amount of time spent by women and men in the EU on activities

other than economic, considering the fact that a major gender gap regarding this aspect is being identified in the time that a woman spends taking care and educating children, or developing other housework, at the expense of taking part in leisure or cultural activities;
- Measures the balance in terms of health, life expectancy at birth.

## 3. The case of Romania – a view from the top

The European Institute for the Equality of Chances developed an Index of Gender Equality which shows the overall scores achieved by countries in the European Union. According to the reports elaborated by this Institute, the general score of the Union is 54, which represents a medium level, according to the scale on which 1 represents a total lack of equality and 100 resembles to total equality.

The case of Romania is presented both by the report mentioned above, and by the one published by the World Economic Forum. The main difference between the two is that while the first one developed an analysis based only on the EU-27 countries, the second one takes into consideration 136 countries worldwide, conducting a research based on information regarding the level of opportunities, education, health and political emancipation (GGPI Report, 2013).

The WEF report indicated that Romania is places on the 70th position from 136 countries (according to the Global Gender Parity Index). It is however necessary to consider the fact that a gender difference of 15-20% is found also in countries with strong economies, while this gap is higher in the less developed countries, with a poor economy.

The data regarding the situation of Romania during the last four years may be illustrated as follows:



**Figure 1** – The Gender Parity Index
Source: World Economic Forum Report (2014)

The detailed situation, according to the World Economic Forum Report concerning the Gender Parity Index is presented in the table below:

**Table 1**: The Gender Parity Index
Source: The World Economic Forum Report, 2014

| ROMANIA | General | | Economical aspect | | Level of education | | Health | | Political participation | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Place | Score | Place | Score | Place | Score | Place | Score | Place | Score |
| **Gender Parity Index - 2013** | **70** | **0,691** | **55** | **0,693** | **50** | **0,994** | **34** | **0,979** | **91** | **0,097** |
| **Gender Parity Index – 2012** | 67 | 0,686 | 54 | 0,681 | 52 | 0,994 | 34 | 0,979 | 97 | 0,089 |
| **Gender Parity Index – 2011** | 68 | 0,681 | 46 | 0,694 | 45 | 0,995 | 41 | 0,979 | 112 | 0,056 |
| **Gender Parity Index - 2010** | 67 | 0,683 | 41 | 0,708 | 73 | 0,989 | 50 | 0,977 | 109 | 0,056 |

The European Institute for Gender Equality states the following situation regarding the GE Index in the EU. The overall value corresponding to the European Union is 54%, indicating a general score of 54, while the situation of the component countries is represented in the figure bellow, where we can identity a maximum score of 74,3 in the case of Sweden, and a minimum score of 35,3 in the case of Romania.

If 1 represents a total lack of equality and 100 resembles to total equality, we find that Romania faces a situation still difficult from this point of view, being situated on the last place among the other member countries of the European Union. The 27th place is not a very honorable one, the main cause for this unsatisfactory position being both of economical, social, political and cultural nature.
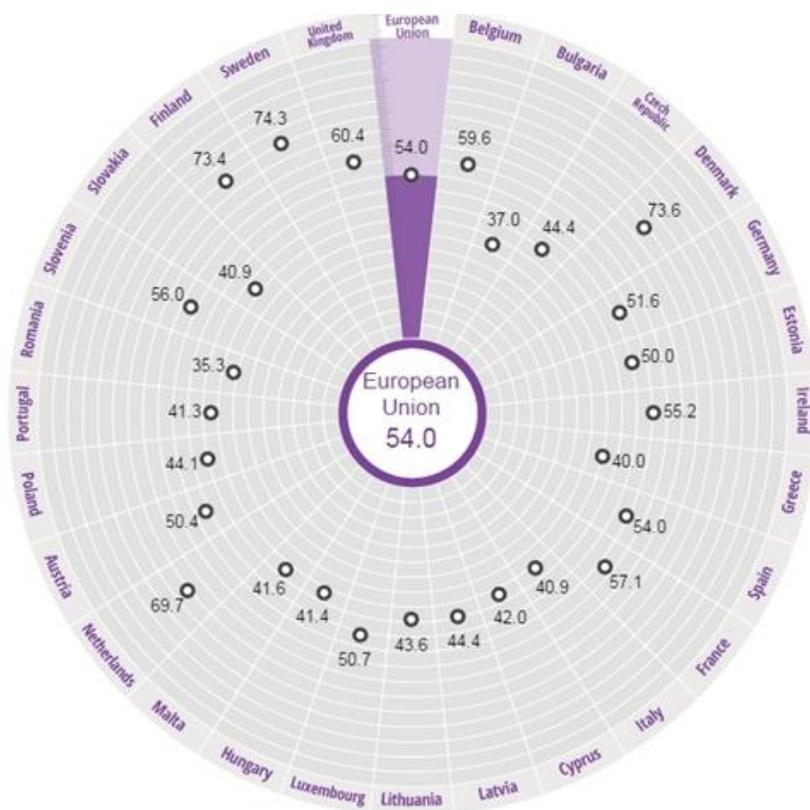
**Figure 2** – The Gender Equality Index
Source: http://eige.europa.eu/content/gender-equality-index

The first four positions are occupied by Sweden – 74,3, Denmark – 73,6, Finland – 73,4, the Netherlands – 69,7. Almost all of them are Nordic countries, which are mainly recognized for the very efficient educational systems. However, from the fourth position – Netherlands, which records a high score – almost 70, and to the fifth place – United Kingdom – 60,4, there is large gap.

As we find in the figure above, Romania is being exceeded by other Balcanic countries, like Bulgaria – with a score of 37 or Greece – 40.

Still, if we analyze the second situation, regarding the Global Gender Parity Index, in which Romania is placed on the 70th position from 136, we find that, even if, among the member states of the European Union we occupy the last position, there are, on a global level, more disadvantaged countries.

Lofstrom states a relationship between GDP and the level of gender equality, explaining that "when gender equality increases, growth will also increase, since more people's work is marketed and thus counts towards GDP", in terms of favorable impact of both the GDP level and growth rates.

If we consider the Gender Equality Index as recording the following values for the period 2010-2013: 67, 68, 67, 70, and the GDP of Romania expressed in billion Euros:

- 2010 – 124,1 billion
- 2011 – 131,5 billion
- 2012 – 132,6 billion
- 2013 – 139,8 billion

We can state the following relationship:

**Table 2**

Dependent Variable: GDP
Method: Least Squares
Date: 04/10/15   Time: 21:22
Sample: 1 10
Included observations: 10
GDP=C(1)+C(2)*GEI

|  | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C(1) | -1275.333 | 1185.461 | -1.075812 | 0.3946 |
| C(2) | 38.16667 | 17.43042 | 2.189659 | 0.1600 |

| | | | |
|---|---|---|---|
| R-squared | 0.705649 | Mean dependent var | 1320.000 |
| Adjusted R-squared | 0.558473 | S.D. dependent var | 64.25470 |
| S.E. of regression | 42.69563 | Akaike info criterion | 10.65292 |
| Sum squared resid | 3645.833 | Schwarz criterion | 10.34607 |
| Log likelihood | -19.30585 | Hannan-Quinn criter. | 9.979557 |
| F-statistic | 4.794606 | Durbin-Watson stat | 1.510667 |
| Prob(F-statistic) | 0.159971 | | |

Source: author's interpretation

We find that there is a direct relationship between the Gender Equality Index and the GDP of the country, assertion proved by the value of the C(2) : 38,1(6), which indicated a strong relationship, the conclusion being that the GEI manifests a strong and direct influence over the GDP evolution. Also, we identify a value of 0,70 for the R-squared test, which

indicated a direct and strong relationship, which tends to +1.

According to data provided by the National Statistics Institute (Romanian Statistical Yearbook, 2013), the active population in Romania registered a downward trend over the years, ranging from 10.041 million people in 2006 to 9,868,000 in 2011. This is due primarily to the large volume of migrant phenomenon that Romania is facing at a growing level. The situation reflected in the following table presents the same trend both in terms of gender criterion and that of the residence - urban or rural.

**Table 3** – Structure of active population

|  | 2009 | 2010 | 2011 |
|---|---|---|---|
|  |  |  |  |
|  |  |  |  |
| **Active population** |  |  |  |
| **Total** | **9924** | **9965** | **9868** |
| By gender |  |  |  |
| Male | 5524 | 5549 | 5457 |
| Female | 4400 | 4416 | 4411 |
| By residence |  |  |  |
| Urban | 5475 | 5538 | 5563 |
| Rural | 4449 | 4427 | 4305 |
| **Occupied population** |  |  |  |
| **Total** | **9243** | **9240** | **9138** |
| By gender |  |  |  |
| Male | 5100 | 5112 | 5026 |
| Female | 4143 | 4128 | 4112 |
| By residence |  |  |  |
| Urban | 5032 | 5032 | 5072 |
| Rural | 4211 | 4208 | 4066 |

Source: National Statistics Institute

## 4. Conclusions

According to studies that promote equality between women and men, female occupations represent about 11% of all occupations. However, women began to evolve in their careers, promoted alongside the phenomenon of gender empowerment, occupying management positions and others that require a higher level of training (according to Forbes), currently reaching to predominate also in some professions that were previously distributed only to male employees. Today, in financial and accounting jobs we mostly find women, statistical studies showing that "women acquire three bachelor's degrees at every two obtained by men," thus surpassing them at the chapter education. They also represent more than half of the existing financial managers at this time (54.7% according to Forbes), nearly 60% of budget analysts or agents insurers. Women are also prevalent, particularly in areas categorized from the beginning as being more "soft", such as human resource management (where the proportion of women managers reaches almost 70%), managers of communication, negotiation, event-planners.

Medical field is no longer a barrier for the development of women, although the occupation was listed as rather dedicated to men employees. We therefore witness, in the context of globalization, a reversal of the situation of the initial allocation of professions, an idea reinforced in terms of recent sociological studies in the field and the distribution of income in the family.

The biological differences, perhaps the most striking and conspicuous, caused by differences over time in the distribution of tasks, gradually leading to a gender division of labor, with the evolution of technology differences began to decrease but women began to be employed in more demanding jobs or which thereto were distributed to men.

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# THE EFFECT OF 'ORGANIC' LABELS ON CONSUMER PERCEPTION OF CHOCOLATES

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**Abstract:** *One of the most important success factors in the organic food industry is the positive image that a significant number of customers attach to organic products in many countries, which includes the perception of healthiness and also sensory characteristics such as smell, texture or taste. Several papers have examined the effect of organic certification on consumer perceptions for many types of products from a number of perspectives. The present study aims to reveal the effect of organic ('bio') labels on customers' evaluation of chocolates regarding five product attributes: fragrance, taste, healthiness, calorie content and price. The two research questions are: (1) 'How do consumers modify their perceptions about a given chocolate after receiving information as to whether the given chocolate is an organic or a non-organic product?' and (2) 'How do consumers' evaluations of organic and non-organic chocolates relative to each other change after it is revealed which ones have an organic certificate?' To find the answers an experiment was conducted on a sample of 32 second year bachelor university students from the 'Commerce and Marketing' major. During the experiment the students tasted 4 dark (2 regular and 2 organic) and 3 milk (2 regular and 1 organic) chocolates in two phases. In the first phase they had no information as to whether organic products were involved in the experiment, but in the second the organic products were labelled. The students had to evaluate fragrance, taste, healthiness, and calorie content, and estimate the price in both phases. The results show that 'organic' labels can significantly modify consumers' perception and evaluation of chocolates with every attribute for one or more of the chocolates. Labelling can also widen the perceived gap between organic and regular chocolates according to fragrance, healthiness, calorie content and price. However, changes were identified only in the case of healthiness and price. Both were absolutely and relatively evaluated as higher for organic products after labelling.*

**Keywords:** organic food; chocolate; food marketing; imperfect information

**JEL classification:** M31; D83

## 1. Introduction

In a saturated food market, the consumption of organic products has grown considerably in many European countries, and they have gained a considerable market share (Canavari and Olson in Hemmerling et al., 2013:58). A major factor in this successful development of the organic food industry is the positive image that many consumers attribute to organic products. This includes both health benefits and sensory characteristics such as smell, taste, or appearance (Idda, Madau and Paulina, 2008; Hamm and Gronefeld in Hemmerling et al., 2013:58). In the case of organic products, there are a number of studies that deal with factors influencing (non-sensory) perceived product quality (Schifferstein and Oude Ophuis, 1998; Hughner et al., 2007; Zanoli and Naspetti, 2002). However, the

majority of the studies provide evidence about the consumers' stated or expected perception of quality.

In our research we aimed to simulate a situation in which a customer chooses between different types of treats at a given price level. With the general assumption in economics that market price evolves as the equilibrium between the forces of supply and demand, we can also state that prices reflect the overall utility a good provides to the customer. Our question is: how much of this utility derives from the 'objective' features of a chocolate (sensory characteristics: taste, smell, texture; and non-sensory characteristics: calorie content, healthiness, price) and how much of it can be explained directly by the information (via the organic certification) indicating that the manufacturer has followed the requirements of controlled ecological (organic) farming methods.

We selected chocolate because it is a product which is well-known and frequently bought by Hungarians. In addition, chocolate as a good provides an interesting study of the role of labels since it is often considered to be a luxury or a special treat. Moreover, health arguments in favour of organic consumption are less likely to hold when considering chocolate (Rousseau, 2015).

## 2. Literature Review

A product label is a quality signal for the customer, therefore the organic food label is an important tool in helping customers identify organic products. Without an organic label, the consumer might not be aware that the product is organic because the differentiation between conventional and organic food may not be that discernable (Van Loo et al., 2011). At the same time, several research studies (e.g. Janssen and Hamm, 2012; Szakály et al., 2014; Rousseau, 2015) have shown that knowledge of organic labels is very low.

Brunso, Fjord and Grunert (2002), and Zanoli and Naspetti (2002) showed that consumers relate organic food to perceived good quality. Although the traditional food quality attributes, including sensory attributes such as taste and smell are important for most consumers, the non-sensory attributes such as calorie content, a lack of additives and residues or the process in which the product was produced are becoming increasingly significant (Wilkins and Hillers, 1994).

Several studies have found 'taste' to be among the most important criteria in organic food purchases (see among others Lusk and Briggerman, 2009). According to Rousseau (2015), chocolate consumption is all about taste, since four of the five highest ranked aspects when buying chocolate are related to sensory experiences. According to Hughner et al. (2007), Shuldt and Schwarz (2010), Westcombe and Wardle (1997) and Bauer et al. (2013) consumers of organic food do perceive taste advantages over conventional alternatives. Naspetti and Zanoli (2014) showed that both regular and occasional organic food shoppers tend to feel organic products are tastier than conventional ones. The research by Szente (2005) conducted among Hungarian consumers arrived at a similar conclusion. There is a strong significant relationship between the purchase of organic foods and the evaluation of taste. According to people who consume organic foods regularly, these products are tastier than the conventional ones. Those not consuming organic products thought some foods (goat cheese, vegetables) very tasty, while others (sweets, bread) disappointed them (Szente, 2005). This phenomenon has also been supported by several other studies. Lee et al. (2013), examined consumer evaluations of yoghurt among American consumers, while Hemmerling et al. (2013), did the same for the citizens of six European countries, and they both concluded that consumers thought that the yoghurt with an organic label tasted better than the one without a label; however, in a blind test they liked the conventional product better. Rousseau (2015) examined the evaluation of organic and conventional chocolates' attributes via a blind test and concluded that the majority of the respondents preferred the taste of conventional

chocolate over that of labelled chocolate (some 50-70%); still, there was a sizeable group of respondents who were undecided between both types of chocolate, or who even preferred the taste of labelled chocolate. However, the global claim 'organic food tastes better' is not valid for all organic food categories. Fillion and Arazi (2002), conducting a sensory test of orange juices did not find significant differences between organic and conventionally labelled products. Moreover, in the research of Lee et al. (2013) consumers preferred the taste of conventional cookies over organic ones after they realised they were not organic. These results suggest that the effect of organic labels on perceived taste may be different for different product categories and countries (Hemmerling et al., 2013).

The overwhelming majority of studies find 'health' to be the primary reason consumers buy organic foods (Hughner et al., 2007; Zagata, 2012; Rousseau and Vranken, 2013). A series of research studies (Schifferstein and Oude Ophuis, 1998; Brécard et al., 2008; Mondelaers et al., 2009; Lee et al., 2013; Bauer et al., 2013) revealed that the central benefit of organic foods for consumers is that they believe in their outstanding healthiness compared to conventional foods. Even for a not particularly healthy product such as chocolate, a sizeable portion of consumers still associate an organic product with a less negative health impact compared to a conventional product (Rousseau, 2015). When the product is defined as originating from 'organic farming' this fact influences the perception of other brand characteristics (in this case sensory characteristics, e.g. taste, and non-sensory characteristics, e.g. healthiness) which can be explained by cognitive psychology as a manifestation of the halo effect. However, Wansinck (1994) established that there is a misconception among consumers that healthy foods have a bad taste, and unhealthy foods have a good taste. Raghunathan, Naylor and Hoyer (2006) refer to this phenomenon as the 'unhealthy=tasty' intuition. Thus people believe an unhealthy food is inherently tastier, from which it follows that they perceive healthy products as less tasty (Wilkins and Hillers, 1994). Research studies by Schuldt and Schwarz (2010), and Westcombe and Wardle (1997) also show that although products with an organic label were thought healthier, consumers judged them less tasty.

Some studies have found that consumers believe organic food to be more nutritious (Hill and Lynchehaun, 2002; Bauer et al., 2013). It is worth noting that there has been no conclusive evidence for this (Hughner et al., 2007). Based on the examination of three products (cookies, potato chips, and yoghurt) Lee et al. (2013) stated that consumers assumed products with organic labels have a lower calorie content than regular products. Schuldt and Schwarz (2010), analysing consumers' evaluation of cookies with and without organic labels drew the same conclusion.

According to the majority of consumers – especially those not consuming organic foods –, organic products are more expensive than conventional ones (Naspetti and Zanoli; 2014, Rousseau, 2015). The high price premiums associated with organically produced food result in ambiguous consumer signals. While consumers indicate the high price of organic food to be prohibitive in their purchasing behaviours, they use price to form opinions about the quality and taste of organic food items. Several research studies have found that consumers are willing – at least hypothetically – to pay a premium for organically grown food (see among others Lee et al., 2003; Rousseau and Vranken, 2013; Bauer et al., 2013; Janssen and Hamm, 2012); however, their real behaviour shows a reduced willingness to pay a premium (Krystallis and Chryssochoidis, 2005), and many are not willing to pay as much as the current market price premiums (Millock et al., 2002). Tagbaka and Sirieix (2008) found that consumers are willing to pay as much as a 78.5% price premium for organic dark chocolates, however, Rousseau (2015) found a contradictory result that consumers in Flanders have a negative willingness to pay a premium for organic chocolates.

## 3. Method and Sample

In the experiment we intended to use bio and non-bio labelled chocolates (in this paper we use 'bio', 'ecologically produced' or 'organic' as synonyms) within a comparable price-range (we selected products with standard non-promotional prices). Although in the English language food marketing literature the term 'organic' is used (Janssen and Hamm, 2012), in this paper we use the term 'bio' referring to the labelling of organic products because in Hungary products indicate their organic origin with this term.

The characteristics of the chocolates we used in our research are presented in Table 1. Every item was bought on the same day (17 January 2015) in varied shops. Table 1 also shows what coded labels were used during the tasting. The tasters were divided into two different groups. One of them was given red-labelled tasting samples, the other were provided with black-labelled samples. Red- and black-labelled samples contained the same chocolates, but in reverse order, to avoid the rank order effect during the experiment.

**Table 1: Characteristics of the chocolate bars used in the tasting**

| Brand | Vivani | Bonbonetti | Alnatura | Wawel | Stühmer | Alnatura | Wawel |
|---|---|---|---|---|---|---|---|
| Type | Dark | Dark | Dark | Dark | Milk | Milk | Milk |
| Category | Bio | Not bio | Bio | Not bio | Not bio | Bio | Not bio |
| Price (HUF) | 599 | 499 | 599 | 579 | 543 | 599 | 579 |
| Cocoa % | 71 | 70 | 70 | 70 | 33 | 33 | 36 |
| Expiry (m/y) | 05/2016 | 11/2015 | 11/2016 | 03/2016 | 02/2016 | 04/2016 | 01/2016 |
| Red label | A | B | C | D | E | F | G |
| Black label | D | C | B | A | G | F | E |

Note: bio means that the chocolate is certified as an organic product.

The tasting event was arranged on 26 March 2015. The data collection was conducted in two phases and four rounds, as follows:

First phase:

- Tasting of 4 dark chocolates. No information provided about involvement of organic products.
- Tasting of 3 milk chocolates. No information provided about involvement of organic products.

Second phase:

- Tasting of 4 dark chocolates again. The organic products were labelled and announced.
- Tasting of 3 milk chocolates again. The organic product was labelled and announced.

During the tasting process the participants were supplied with about 1 to 2 grams of each chocolate in the actual round. Non-sparkling mineral water was also provided. The participants were informed that the order and even the types of the chocolates had been changed between the phases (however, this was not true).

On the evaluation sheet we used a semantic differential scale for the evaluation of sensory, health and calorie characteristics. The respondents had to mark the given chocolate's place along five dimensions graphically represented by 7 centimetre long sections. The dimensions and the two opposite endpoints of the sections were the following (in this order):

Fragrance:      bad smell – good fragrance
Taste:          bad taste – good taste
Texture:        bad texture – good texture
Healthiness:    not healthy – healthy
Calorie:        low calorie – high calorie

During the data recording we used the millimetre distance from the left-side endpoint of the section between 0 and 70. A higher value always means a higher quality in the first four dimensions and higher (perceived) calorie content in the fifth.

The total sample of the respondents included 32 second year students from the 'Consumer Behaviour' course on the 'Commerce and Marketing' bachelor level major of the University of Debrecen. The total headcount of the course is 67, thus the participation rate is 47.7%. A strong self-selection effect must be taken into consideration, because it was the students' decision whether or not to take part in the research. However, they were motivated by the offer of an extra 5% for the final grade of the Consumer Behaviour course. The evaluation sheets were anonymous, but sex and year of birth were asked. 10 male and 22 female students participated, with the following birth years (number of students in brackets): 1988 (1), 1990 (1), 1991 (2), 1992 (4), 1993 (10), 1994 (11), 1995 (3).

Our samples, both of the chocolates and of the respondents, were selected according to availability (convenience sample) and thus do not make it possible for us to draw general conclusions on the absolute and relative consumer evaluation of organically produced chocolates. However, these samples are more than sufficient to seek answers for the following research questions:

*Q1: How do consumers modify their perception about a given chocolate after receiving information as to whether the given chocolate is an organic or a non-organic product?*
*Q2: How do consumer evaluations of organic and non-organic chocolates relative to each other change after it is revealed which ones have an organic certificate?*

In other words, we can identify and analyse the perception-biasing effect of bio labels, if it exists. However, the sequential nature of the applied tasting procedure should be taken into consideration: it is possible that some of the tasters become full (saturation effect) or the previously tasted flavours can distort their sensing ability for the later rounds.

## 4. Results

In the first step of the analysis we calculated the descriptive statistics for each chocolate in both phases (see Table 2). In the second step – to answer the first research question (Q1) –, we compared the means of each chocolate with a paired samples *t*-test for all the 5 dimensions to identify differences that are statistically significant. The test outcomes are presented in Table 3. In the case of organic products, revealing the organic qualification seems to modify the fragrance (in a positive direction) only for Vivani. The taste increased for Vivani (bio) and Alnatura Milk (bio), but decreased for Alnatura Dark (bio). There were no significant changes in texture evaluations. Supporting the previous findings of the literature, for all the three organic products the bio label enhanced the perceived healthiness. Calorie content was estimated to be lowered only for Alnatura Dark (bio). Respondents assigned a higher price to all the three organic products at a significance level of at least at 10% after receiving the information that they are certified as organic food, but in the case of Vivani (bio) and Alnatura Milk (bio), this effect was significant at the 1% level.

Information about not being an organic product seems to positively modify the smell perception of Wawel Dark but negatively that of Wawel Milk. Taste and texture evaluations moved downwards for Bonbonetti, but did not change for other products. Healthiness estimations did not modify significantly for any of the non-organic chocolates. Stühmer was estimated to have a higher calorie content and to be more expensive in the second phase (both significant only at 10%). Thus the only consequent effects of informing the respondents of a chocolate's organic or non-organic origin were the increased healthiness perception and the higher estimated prices of organic products.

**Table 2: Descriptive statistics of the the brands**

| Brand | Vivani | | Bonbonetti | | Alnatura | | Wawel | | Stühmer | | Alnatura | | Wawel | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Type | Dark | | Dark | | Dark | | Dark | | Milk | | Milk | | Milk | |
| Category | Bio | | Not bio | | Bio | | Not bio | | Not bio | | Bio | | Not bio | |
| Phase | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd |
| **Fragrance** | | | | | | | | | | | | | | |
| Mean | 38 | 27 | 36 | 37 | 34 | 33 | 30 | 39 | 37 | 36 | 35 | 37 | 40 | 31 |
| S.D. | 20 | 17 | 18 | 17 | 19 | 17 | 19 | 17 | 16 | 14 | 16 | 15 | 15 | 16 |
| *N* | 31 | 32 | 31 | 31 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 |
| **Taste** | | | | | | | | | | | | | | |
| Mean | 14 | 21 | 37 | 29 | 35 | 26 | 36 | 36 | 44 | 44 | 39 | 47 | 28 | 27 |
| S.D. | 15 | 19 | 20 | 18 | 17 | 18 | 20 | 17 | 16 | 17 | 18 | 18 | 19 | 20 |
| *N* | 31 | 32 | 31 | 31 | 31 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 |
| **Texture** | | | | | | | | | | | | | | |
| Mean | 26 | 24 | 43 | 30 | 38 | 32 | 40 | 38 | 46 | 46 | 44 | 46 | 32 | 32 |
| S.D. | 21 | 20 | 18 | 20 | 20 | 18 | 20 | 19 | 12 | 16 | 16 | 17 | 19 | 21 |
| *N* | 31 | 32 | 31 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 |
| **Healthiness** | | | | | | | | | | | | | | |
| Mean | 30 | 42 | 34 | 36 | 35 | 44 | 40 | 42 | 30 | 33 | 29 | 43 | 25 | 29 |
| S.D. | 22 | 19 | 16 | 16 | 15 | 15 | 19 | 15 | 14 | 15 | 13 | 15 | 16 | 18 |

| N | 31 | 32 | 31 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Calorie** | | | | | | | | | | | | | | |
| Mean | 29 | 30 | 37 | 39 | 35 | 28 | 36 | 36 | 42 | 46 | 42 | 40 | 38 | 35 |
| S.D. | 21 | 18 | 14 | 16 | 13 | 15 | 16 | 14 | 14 | 13 | 12 | 16 | 17 | 18 |
| N | 31 | 31 | 31 | 31 | 32 | 31 | 32 | 31 | 32 | 32 | 32 | 32 | 32 | 32 |
| **Estimated price** | | | | | | | | | | | | | | |
| Mean | 292 | 418 | 349 | 311 | 344 | 395 | 359 | 355 | 317 | 345 | 305 | 410 | 268 | 271 |
| S.D. | 312 | 409 | 414 | 154 | 354 | 403 | 357 | 371 | 350 | 354 | 404 | 374 | 359 | 162 |
| N | 31 | 32 | 31 | 32 | 32 | 32 | 32 | 32 | 32 | 31 | 32 | 32 | 32 | 32 |

Notes: *N* is the sample size, S.D. is the standard deviation

**Table 3: Results of the paired samples *t*-test to identify changes after receiving 'bio' information**

| Brand | Vivani | Bonbonetti | Alnatura | Wawel | Stühmer | Alnatura | Wawel |
|---|---|---|---|---|---|---|---|
| Type | Dark | Dark | Dark | Dark | Milk | Milk | Milk |
| Category | Bio | Not bio | Bio | Not bio | Not bio | Bio | Not bio |
| Fragrance | 2.655** | -0.037 | 0.406 | -2.160** | 0.302 | -0.435 | 3.928*** |
| Taste | -2.200** | 2.324** | 2.723** | -0.063 | -0.115 | -2.371** | 0.540 |
| Texture | 0.475 | 4.098*** | 1.504 | 0.700 | -0.011 | -0.378 | 0.034 |
| Healthiness | -3.589*** | -0.249 | -2.870*** | -0.845 | -0.962 | -4.644*** | -1.395 |
| Calorie | -0.254 | -0.719 | 2.272** | 0.251 | -1.814* | 0.473 | 1.360 |
| Estimated price | -3.947*** | 0.683 | -1.778* | 0.198 | -1.973* | -3.781*** | -0.083 |

Note: *t*-statistics are presented in the cells. *** 1% significant, ** 5% significant, * 10% significant

The second research question (Q2) addresses the separating effect of bio labels: whether the perceived gap between organic and conventional products becomes more identifiable after organic chocolates are labelled than before. Even if providing information on a chocolate's bio or non-bio category did not modify consumers' perceptions of product attributes significantly, it is still possible that the accumulated changes of the bio and on the non-bio product categories – which are individually non-significant – can reach a significant size. Table 4 contains data from paired samples *t*-tests between bio and non-bio chocolate categories for both phases. Values for the categories were computed as unweighted means of the individual values of products belonging to the given category. In the first phase – according to the *t*-tests –, we can reject the equivalence of organic and non-organic chocolates in 3 cases at the 1% significance level, in 2 cases at the 5% level and in 1 case at the 10% level. In the second phase we have found the two categories significantly different at the 1% level in 10 cases, at the 5% level in 2, and at the 10% level in 2 cases. Hence, there are more significant differences between the two product groups in the second phase than in the first phase; therefore we can conclude that bio-labelling has a separating effect among chocolates.

If the organic chocolates are labelled, it became significant at 1% that – according to the participants – a price gap exists between regular and organic chocolates (the latter tend to be perceived more expensive). Organic chocolates also became relatively healthier, according to the respondents, if they are labelled (the significance level is 10% for the dark and 1% for the milk chocolates). A positive taste difference became significant for the organic chocolates only in the case of milk chocolate bars (the significance is 1%). Texture differences did not change between phase 1 and phase 2. After labelling the organic chocolates, calorie content and fragrance differences became significant for dark chocolates (the significance is 1%). The perceived calorie content became relatively lower (this is also true for the total sample at the 1% level) and the perceived smell became relatively worse (the significance is 10% for the total sample) for the organic chocolates.

**Table 4: Paired samples *t*-tests to identify differences between bio and normal chocolates**

|  | **Phase 1:** bio labels not provided | | | **Phase 2:** bio labels provided | | |
|---|---|---|---|---|---|---|
| **Brand** | **Dark** | **Milk** | **Total** | **Dark** | **Milk** | **Total** |
| **Fragrance** | | | | | | |
| **Mean** | -3.435 | 3.109 | -0.089 | 7.661 | -3.328 | 3.132 |
| **S.D.** | 20.077 | 17.455 | 11.103 | 14.947 | 14.835 | 10.122 |
| *t* | -0.953 | 1.008 | -0.044 | 2.854*** | 1.269 | 1.723* |
| **Taste** | | | | | | |
| **Mean** | 11.467 | -3.234 | 6.214 | 8.548 | -11.516 | 2.145 |
| **S.D.** | 14.672 | 16.707 | 11.690 | 13.264 | 20.151 | 10.969 |
| *t* | 4.281*** | -1.095 | 2.912*** | 3.588*** | -3.233*** | 1.089 |
| **Texture** | | | | | | |
| **Mean** | 9.242 | -5.531 | 3.653 | 5.750 | -6.781 | 2.380 |
| **S.D.** | 11.076 | 14.319 | 9.848 | 13.986 | 15.364 | 9.726 |
| *t* | 4.646*** | -2.185** | 2.065** | 2.326** | -2.497** | 1.384 |
| **Healthiness** | | | | | | |
| **Mean** | 3.887 | -0.906 | 0.801 | -3.922 | -11.813 | -7.901 |
| **S.D.** | 17.994 | 8.943 | 11.676 | 12.460 | 16.663 | 10.801 |
| *t* | 1.203 | -0.573 | 0.382 | -1.780* | -4.010*** | -4.138*** |
| **Calorie** | | | | | | |
| **Mean** | 4.742 | -2.219 | 2.882 | 8.903 | -0.078 | 6.304 |
| **S.D.** | 15.672 | 11.244 | 11.432 | 12.079 | 17.017 | 11.738 |
| *t* | 1.685 | -1.116 | 1.403 | 4.104*** | -0.026 | 2.990*** |
| **Estimated price** | | | | | | |
| **Mean** | 34.855 | -12.813 | 9.460 | -73.688 | -104.758 | -87.858 |
| **S.D.** | 97.116 | 76.540 | 55.985 | 172.652 | 169.037 | 156.885 |
| *t* | 1.998* | -0.947 | 0.941 | -2.414*** | -3.451*** | -3.118*** |

Note: Mean is the difference between the mean of the non-bio labelled chocolates and the mean of the bio labelled chocolates.

## 5. Conclusion

In our research we aimed to answer how the perception of a product's (in this case chocolate's) characteristics is modified by the information that the product is organic or conventional. According to the literature, products with an 'organic' label have a positive image that is transferred to the sensory (e.g. taste, smell, texture) and non-sensory (e.g. calorie content, healthiness) attributes as well.

Our empirical findings support the idea that bio labels can modify consumers' perceptions in the case of chocolates, in multiple dimensions (fragrance, taste, texture, healthiness,

calorie, estimated price). We also conclude that these labels can create a larger perceived gap between organic and conventional products, even in dimensions where differences were not identified before the introduction of bio labels (fragrance, healthiness, calorie content). However, only in the dimensions of estimated price and perceived healthiness were the results consequent: in these cases, the labels positively modify the perceptions of organic chocolates, both absolutely and relatively.

One of the limitations of our research is that the examination covers only one type of product (chocolate), thus it would worth expanding it to further products in the future. Besides this, the sample was small in size, and the relatively homogeneous demographic characteristics of the participants (about 20-22 year old university students) might influence their attitudes towards, and knowledge about, organic foods. We also did not examine whether the frequency of organic food consumption influences our results.


## 6. Acknowledgements

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# THE QUALITY OF HUMAN RESOURCES IN ROMANIA AMID THE DEVELOPMENT OF THE *KNOWLEDGE ERA*

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**Abstract:** *Following the transformations through which national economies have been going through recently, we note that there has been a change in the type of economic development. Basically, the shift is made from the traditional economy to the "new economy" that focuses on long-term sustainable economic development. This economy pursues human and technological development. In this context, the contribution of the human capital to economic development should be analysed in terms of its qualitative side. Considering that Europe is heading towards a new type of economic development based on the quality of the human factor, the main factors (education, research - development, health, but also labour-related incentives) determining a certain level of quality of the human capital should be subject to analysis. In order to identify and understand the current state of affairs, the trends in the evolution of Romanian economy, in the context of European development strategies, a broad approach perspective is needed, to combine the historical approach with the economic and sociological ones. For Romania, this process is all the more important and difficult to carry out the longer the period of time (the communist period) was, during which the human resource was seen as a production potential, not as a beneficiary of the economic activities. Practically, man lived to work, and not the other way around. Romania had a lot to catch up with, important structural changes needed to be made in order to achieve a sustainable economic development. Given all this, the paper brings forward all the issues related to the training of the human capital during communist times, in order to understand the difficulties in the approach of the Romanian economy seeking to transform itself as required by the European Union Strategy.*
*Sustainable economic growth cannot be achieved without certain skills and without certain social and professional standards. This paper aims to produce a qualitative, as well as a quantitative analysis, based on the comparison between the dynamics of indicators representative for the situation of important influence factors of the efficiency and current and potential quality of the human capital in Romania. The period considered for our study refers to the period following Romania's accession to the EU.*

**Keywords: quality of human resources, education, research-development, health, Romania**

**JEL classification: I 15, I 23, O 15, O 32, O 52**

## 1. Introduction

The analysis of the current economies and factors that influence a certain dynamics must take into account a series of features. Thus, economy has moved from *traditional* to the *new* version. A comparison of the two highlights several noteworthy aspects: traditional economy aims to have a static approach, a short-term one, whereas the new economy addresses the dynamic approach on the long term. In the first case, economic growth, balance and stability, full employment and price stability are major objectives; in the second case, we are dealing with long-term sustainable development (human & technological development) (Suciu 2002: 37).

*The new economy* considers a series of principles that address the current situation and the immediate requirements, aspirations, but also the long-term ones, also taking into account the need to counterbalance, eliminating the negative effects accumulated throughout the human existence so far. It wishes to be a new step in the progress of economic theory, it is the expression of a new economic reality that began to be established in the most developed countries, but which, in theory, may be accessible to others, too.

If the traditional economy was marked by the industrial revolution, the new economy is marked by the information revolution centred on the human capital in all its quantitative, as well as qualitative aspects. It relies on the competitive advantage. Thus, the organization cannot ignore the need to focus internally on employees who create the service/product, especially those who come in direct contact with the customers. (Naghi, Para 2014:60)

Given that the major aim is human and technological development, the question arises of how and to what extent can man, with his qualities and skills, help grow the organisations in which he is working.

*Creating, acquiring and the actual development of knowledge within an organisation has become the main source* of competitive advantage. The organisations that use their knowledge as a source of competitive advantage are called "organisations that learn". *An organisation based on knowledge* also requires an economy in which the clients learn. In the new value chain, knowledge becomes the main raw material that feeds the system. *Knowledge, in the shape of intellectual property* or of intellectual capital has replaced labour and capital as traditional production factors.

The society of the third millennium is a society in which workers are valued in relation to what they know. In many of these companies, value does not materialize in tangible assets, but in intangible assets. Intellectual capital is the term related to the combination of intangible assets that help an organisation operate efficiently. Currently more and more emphasis is put on individual development but also on the development of teams, on the added value brought in by employees so that the organization should gain the desired competitive advantage in the market. The focus is no longer on holding "a job for life", the labor market being perceived more fluidly, and jobs have to be adapted to the needs of employees, in the same way that employees should perform accordingly in order to keep their jobs. Organizations now realize that they must be in constant learning to be able to survive. (Cioclov, Naghi, Boldea 2014)

With regard to the new type of economic development we can identify diametrically opposed ideas. On the one hand, the advocates of the enhanced role of knowledge believe that the rapid advances recorded in the new economy, the knowledge-based one, alter the rules of economic development. "Societies or regions may pass from agrarian societies to a *knowledge-based economy*, with absolutely no need to go through the same stages of the old industrialisation style." (Gereffi 1999:507). But, given that the services are less marketable and because of the difficulties of relocating them, those countries only specialised in services may experience bigger problems with the payment balance than the countries specialised in production (Chang 2011:113).

Often we think of Switzerland as having a highly developed tertiary sector, but it actually has the biggest production of goods per capita in the world (or it may be second to Japan). With a few exceptions that have special resources for tourism, no country has achieved a decent living based on services (Chang 2011: 114). Therefore, we may consider that not even the rich countries have reached the post-industrial era.

Referring to the *new economy* and to the *new type of worker,* James W. Cortada, one of the consecrated authors in the field, suggested that: "Just like people had to learn about the specific activity in a farm when they wanted to start farming, and later they learned about manufacturing, when it became a basic economic activity, now they have to face the perspective of learning how to work in a society increasingly based on IT services. Having the necessary qualifications for e-commerce activities, maintaining them and being able to

develop them in relation to the new exigencies is, obviously, more than a requirement that must be met; it is, simply, a different world than the one workers faced twenty years ago." (Cortada 1995: 21)

The issue of the human resource contribution to the development of a nation is also considered by the Europe 2020 Strategy. (***,Europe 2020 Strategy). Its interrelated objectives address the following: *employment* - an employment rate of 75% of the population aged 20 to 64; *social inclusion* - reduction by at least 20 million of the number of people suffering or likely to suffer from poverty and social exclusion; *research, development and innovation* - a level of public and private investment in research and development of 3% of the gross domestic product of the EU; *education* – reducing school dropout to below 10%, increasing the rates of higher education graduates to over 40% of the population aged 30 to 34.

## 2. Human Resources in Current Economies

The quality of work is an essential component that leaves its mark on the manpower used. It can be expressed as skilled labour, semiskilled or unskilled, with corresponding consequences on labour productivity. The more qualified labour is, the more it can decrease in quantity and increase production through its superior efficiency.

The quality of the labour is closely dependent on the level of general knowledge and vocational training, as well as on the level of economic development of the country. Over the millennia, worldwide, human activity has moved from that of agriculturer and breeder, to that of manufacturer and currently it is switching to creative labour. In this process, the shift has gradually been made from mainly physical effort to the ever stronger assertion of the intellectual one. Through the automation, robotics and computerisation of production, the place and role of man in the economy are changing. Under these conditions, creative work becomes the determinant factor of economic life.

As the quality content of labour and its fruitfulness improves, there is an objective tendency of increasing leisure time throughout a man's life, expression and prerequisite for increasing the role of the human factor, the degree of civilisation, in general.

Generally, we can say that the most important factors that can influence the quality of human resources in general and in particular are: *education, the level of general awareness of the manpower and the research- development activity* (as well as *the availability of other factors of high quality*; *the overall health of the manpower; the incentives offered* (there where there are few incentives, labour is less effective, and where there are adequate incentives, the manpower will become more involved, bringing its physical and intellectual contribution, increasing labour efficiency).

## 3. Human Resources in Romania

Surely, the final objectives of any economic policy address social welfare. Therefore, the main focus is man. The "Europe 2020" Strategy back all this up. The objectives set by Romania in this strategy are ambitious, as noted in Table no.1.

Table no.1. Romania's objectives in line with the "Europe 2020" Strategy and their current status (2013)

| "Europe 2020" Objectives | Romania's objective in the context of the strategy | Current status of achieving the objectives in Romania |
|---|---|---|
| Investments in research-development (% of the GDP) | 0,48% | 2% |
| Employment (%) | 59,7% | 70% |
| Early school dropout (%) | 16,3% | 11,3% |
| Level of tertiary education (%) | 18,38% | 26,7% |

Source: ***, Strategia Naţională pentru Ocuparea Forţei de Muncă 2013-2020.

From table no.1 we note that Romania needs to focus more on the issue of human resources in order to reach the targets proposed in the European strategy. According to the same official data, another indicator refers to *reducing the number of people living in poverty or exclusion or risking poverty or exclusion*, as 9.1 million people living in poverty or exclusion have been identified and another 3.0 million risking poverty. The ultimate goal is to reduce by 580,000 the number of people risking poverty.

The importance as well as the difficulty of achieving these targets is even greater as for a long time (during communism) human resources were often ignored in Romania. This can be seen when talking about the human being as a representative of the demand, but also as an important production factor which needs to be trained.

As a consumer, one may note that during that entire time, investments in the manufacturing business of consumer goods were permanently under 8% of the total industry. Regarding the training of some well prepared work resources, we may mention that the investments in these services were reduced systematically reaching, by the end of this period, tot below 1% of the total investments (Murgescu 2010: 338).

The new type of economic development towards which Europe is heading, needs to be given extra attention not only to the quantitative aspects of the human factor (such as, for example, the employed population), but also to the qualitative aspects, implicitly of the factors determining this qualitative dimension (education, research – development, health, incentives). In relation to the reference achievements at international level, the Romanian organisations record, in this respect, a falling behind of 1-2 generations of ideas and solutions, which is reflected in the neutralisation of the intangible assets as strategic economic assets (Miron 2006: 71).


### 3.1. Education and Research-Development Activities

An important factor for the quality of human resources is *education, the awareness of the human resources.* Education is important because it gives the individual the ability to develop their potential and to live an independent, more fulfilling life. But, one must not think that if education expands, the country will thrive (Chang 2011: 195).

Economic science began to be increasingly concerned about the role of education in the economic development of the nations after the Second World War. Thus, the economics of education began being considered a distinct field once the "revolution of human investment" was triggered, as Bowman called it in 1966 (***, Dictionary of Economics 2006: 348).

The human capital of an individual is his knowledge. This level depends on each individual who is willing to invest in himself. This level is also influenced by a series of factors, among which: the return on investment, personal skills, financing capacity.

The educational system exerts two functions: education and certification. If education generates a process of individual knowledge accumulation, certification brings about discontinuities (obtaining a diploma or not), which validate or invalidate the acquisition of a minimum amount of knowledge (***, Dictionary of Economics 2006: 350).

Therefore, education should be a major component in the complex educational process of the human resources.

In order to achieve a higher level of quality in the human factor, the educational process in utterly important. An analysis of the degree of inclusion in the educational system of the school-age population in Romania shows a constant decline after joining the European Union (table no.2). The biggest problems are in the age group comprising young people attending university. If during the period of economic growth their rates were decreasing significantly, after the crisis the percentage collapsed.

Table no.2 The rate of enrolment in education of the school-age population (%)

| Year / Age groups | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|---|
| Total | 81,1 | 85,9 | 86,5 | 84,1 | 80,4 | 79,6 | 79,4 |
| 3 – 6 years old | 79,2 | 79,8 | 81 | 81,8 | 82 | 84,1 | 83,7 |
| 7 - 10 years old | 94,5 | 97,1 | 97,3 | 95,7 | 93,6 | 92,8 | 92,8 |
| 11 – 14 years old | 81,1 | 89,4 | 94,3 | 94,3 | 93,1 | 92,1 | 91,5 |
| 15 – 18 years old | 83 | 88,5 | 88,8 | 86,2 | 84,2 | 82,2 | 81,5 |
| 19 – 23 and older | 72,5 | 78,3 | 76,4 | 70,1 | 59,7 | 55,4 | 54,5 |

Source: ***, Tempo Online, Institutul Național de Statistică, www.insse.ro, visited March 22, 2015

The collapse of the enrolment rate of young people in higher education can be explained by the difficulty of graduating the final high school exam. However, the situation is much better compared to 1989 when only 8.6% got into the higher education system, while the European average was 26.4%, and 14% worldwide (Grigorescu 1993: 228).

Another anachronistic problem at the time was the very large imbalance between the specialisations developed. At pre-university level 71.1% of the high schools were industrial. Another anomaly unprecedented in any other country (Sadlak 1990: 60) referred to the percentage of students in the engineering field, which consistently exceeded 50% (56,1% in the academic year of 1978/1979 and 68,8% in 1988/1989) (Constantinescu 2002: 278). Under these circumstances, an analysis is required, regarding the structure of the Romanian university education after having completed the transition stages towards a functional market economy and the accession to the European Union (table no.3).

Table no.3. Students enrolled in higher education, per groups of majors (number of persons)

| Year / Majors | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|---|
| Total | 907353 | 891098 | 775319 | 673001 | 539852 | 464592 | 433234 |
| Technical | 178258 | 188660 | 168863 | 160432 | 152657 | 139932 | 134391 |
| Medical | 294417 | 281421 | 223961 | 170217 | 114703 | 92653 | 80360 |
| Economic | 294417 | 281421 | 223961 | 170217 | 114703 | 92653 | 80360 |
| Law | 116538 | 127399 | 112621 | 96148 | 67698 | 48974 | 42595 |
| Pedagogical | 265624 | 235923 | 210126 | 182442 | 141789 | 119526 | 111703 |
| Artistic | 11118 | 9937 | 9689 | 9387 | 8460 | 7730 | 7519 |

Source: ***, Tempo Online, Institutul Național de Statistică, www.insse.ro, visited March 22, 2015

Table no.3 indicates a clear balance between the main major classes within the Romanian universities. The balance is obvious if we look at the relationship between the technical and pedagogical sciences.

Another priority component of the global education system is lifelong learning. The EU lifelong learning programme is an EU-funded pilot programme in the fields of education and vocational training. It allows individuals to pursue learning opportunities at all stages of their lives. It consists of four sub-sectoral programmes, each focusing on different levels of education: *Comenius* – for schools, *Erasmus* – for the higher education, *Leonardo da Vinci* – for education and vocational training and *Grundtvig* – for adult education. Four transverse programmes are complementary to the above mentioned ones, to ensure the

achievement of the best results: *Cooperation and Innovation Policies*, *Foreign Languages*, *IT and Communications, and Result Dissemination and Exploitation*.

Universities wish to be the central poles of *research – development.* Thus, this is very closely related to education. Research – development is the subject of recurrent debate in economic theory. The standard approach is that this is an activity of innovation, a public good. After all, just like Arrow (1962) showed, technology is the result of research and development activities. The public good characteristic creates a distortion between the commercial success of an innovation and the benefits of the innovator (\*\*\*, Dictionary of Economics 2006: 137). The economic impact of scientific progress, of research-development activities can be analysed in terms of their contribution to the growth of the economic sectors and of the national economy (table no.4). From table no.4 we can observe that the industrial sector comprises more enterprises than the tertiary sector. Also, both in the industrial and in the service sectors, innovative companies represent about a quarter of all existing enterprises in that sector.

Table no.4. Innovative and non-innovative enterprises per activity (number of enterprises)

| Year Enterprises per activity | | 2006 | 2008 | 2010 | 2012 |
|---|---|---|---|---|---|
| Total | Industry | 17281 | 17260 | 14742 | 15210 |
| | Services | 11207 | 12719 | 11588 | 13656 |
| Innovative enterprises | Industry | 3789 | 6003 | 4439 | 3415 |
| | Services | 2224 | 3983 | 3677 | 2553 |
| Non-innovative enterprises | Industry | 13492 | 11257 | 10303 | 11795 |
| | Services | 8983 | 8736 | 7911 | 11103 |

Source: \*\*\*, Tempo Online, Institutul Național de Statistică, www.insse.ro,, visited March 22, 2015

Following the situation of the expenditure on research – development (table no.5), we note that at the beginning of the period analysed, the private sector recorded higher expenses than the governmental sector, but after the crisis the situation changed, the state and higher education were now able to support the research – development activities in Romania more.

Table no.5. Total expenditure on research – development activities per activity sectors (thousands of lei)

| An Activity sector | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|---|
| Total | 2177335 | 2980674 | 2356907 | 2413467 | 2786830 | 2872728 | 2464779 |
| Business environment | 906506 | 892998 | 947047 | 924780 | 1004536 | 1119435 | 755710 |
| Private non-profit sector | 6922 | 6877 | 4080 | 9972 | 10520 | 11390 | 9738 |
| Governmental sector | 739165 | 1220835 | 822725 | 887391 | 1134566 | 1175263 | 1213368 |
| Higher education | 524742 | 859964 | 583055 | 591324 | 637208 | 566640 | 485963 |

Source: ***, Tempo Online, Institutul Național de Statistică, www.insse.ro, visited March 22, 2015

*To all this, the availability of other high quality factors is added.* For Romania the challenges are all the bigger as at the end of the communist period, the rated lifecycle of the production equipment was 2-3 decades, while in other countries it was 5-6 years (Japan, USA) or 12.5 years in the Soviet Union (Ionete 1993:90). Romania still has a lot cu recover if one takes into account that the competitive advantage is still ensured by the low cost of labour.

In relation to its real potential, the economy of Romania is facing gaps and imbalances that are manifested through the incompatibility between the academic offer and the current and even potential need of human capital, the entropic diversity of university majors in relation to the European and international good practices, the insufficient use of internal human and innovation potential, disparities in the field of knowledge between the urban and rural areas and between the different regions of the country, the chronic underestimation of the investments in the intellectual sectors – intensive, hard to manage macroeconomic imbalances, which are risky for a modern economy. The persistence of this situation affects the harmony of scientific structures, the driving effects that the correlations between economy and scientific and technological intensity can power and, implicitly, the dynamics and quality of the economic development.

## 3.2. Health Status and Work Incentives

Another major influence factor is the *health of the population*. The assessment of health faces a series of difficulties.

The first problem is related to defining and measuring the quantity and quality of the resulting product. Hence the question: what does the consumer want? They want to get back their health or so improve it. If we start from the definition of the World Health Organisation according to which *health is a state of complete physical, mental and social welfare, which consists not only of the absence of illness or infirmities*, it appears that it is operational to quite a small extent because it alludes to a series of criteria difficult to measure because of subjectivity.

The second difficulty refers to the fact that the information that consumers (patients) have about themselves is minimum and they approach professionals to obtain clear information about this condition: a diagnosis. The answer can only be given in probabilistic terms. Similarly, the results obtained by applying certain tools and processes to maintain or improve this condition are also laid down in terms of probability.

Despite all these problems, one may try to put together an overall objective picture on health. We can get a first impression based on the hospital discharge forms depending on the condition of the patients (table no.6). A look at the new illnesses during the period analysed overall and at the main diseases caused by hygiene problems and stress shows a slight increase from year to year, with the exception of 2013, when the situation improved slightly.

Table no.6. New cases of illnesses by disease groups (thousands of people)

| Year<br><br>Disease type | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|---|
| Total | 14287 | 14362 | 15407 | 16005 | 16233 | 15921 | 15154 |
| Infectious and parasitic diseases | 688 | 648 | 623 | 582 | 611 | 607 | 552 |
| Endocrine and metabolism diseases | 491 | 565 | 494 | 503 | 512 | 507 | 559 |
| Diseases of the nervous system | 1021 | 1055 | 1135 | 1288 | 1385 | 1427 | 1313 |
| Diseases of the circulatory system | 778 | 761 | 831 | 885 | 905 | 950 | 860 |

Source: ***, Tempo Online, Institutul Național de Statistică, www.insse.ro, visited March 23, 2015

Another indicator that can be taken into account, depending a lot on the education of the population, meaning that prevention is better than cure, is also the situation of emergency care (table no.7).

Table no.7. Emergency care (number of people)

| Year<br>Emergency care | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|---|
| Self-rescue | 3123 | 2753 | 2547 | 2536 | 2556 | 2689 | 2783 |
| Patients transported | 1840997 | 1754994 | 1866580 | 1824990 | 1929610 | 1931218 | 2200042 |
| Patients assisted | 783528 | 812646 | 879351 | 847323 | 735218 | 863015 | 751473 |

Source: ***, Tempo Online, Institutul Național de Statistică, www.insse.ro, visited March 23, 2015

Table no.7 indicates a relative constancy in terms of self-rescue (first aid at the place of the incident, possibly followed by transportation to the hospital) and an increase in the number of patients being transported.

An important element is related to the incentives offered to labour. In this case, the identification, measurement and the macroeconomic aggregation of all incentives offered by the companies is both difficult to carry out, and also not representative. Instead, we may talk about economic incentives in health and safety at work, which refer to ways of rewarding organisations for creating jobs with compliance of these safety and health conditions. An example can refer to the granting of insurance premiums or the reduction of taxes for companies that improve their performance in this area. Basically, we can talk about the existence of a legal system that should encourage companies to reward their employees. Using these incentives is a useful way of making organisations to invest in the occupational safety and health, because rules and regulations are often insufficient to get them to do so.

## Conclusions

After 1989, Romania found itself confronted with the problem of transforming its centralised economy into a functional market economy. Another great challenge came immediately afterwards from the new form of economic development at international and European level. It was the *new economy,* the economy typical of the *era of knowledge.* The key to success in the new international and European context, in which the central idea was the ownership and exploitation of the values of the knowledge-based economy, was optimising the management of intangible assets.

The new type of knowledge/economic development required focusing on the qualitative side of the human factor. The main challenge for the Romanian economy was increasing the capacity of assimilation of technological progress, which also required a greater capacity of generating it. From a strategic perspective, this means that our economy should be directed towards those areas of economic development that require less costly infrastructure, less energy, and where the gap between countries is measured in years, not decades or even centuries. Romanian economy will not be able to diminish the gaps in terms of energy development anytime soon. It can do much better when it comes to the management of information.

It is necessary to build a strategy of growth and sustainable economic development, to identify a set of measures that should contribute to the conservation, enhancement and exploitation of all resources available. Among these, human resources become a priority thanks to the fact that a country's development is done primarily by the people and especially for the people. This is, in fact, the purpose of the *Europe 2020 Strategy.* In the case of Romania, difficulties are also caused by the fact that achieving these objectives requires relatively high costs, with benefits seen at a time difficult to determine.

A total reconsideration (compared with the communist period) of the role of the human factor in economic processes is required. The qualitative side has a major importance, and the increase of this quality is done through education, through the advancement of research-development activities, through the availability of other quality production factors, but also through a good health state of the workforce.

Often we speak of education as a major factor in the development of a nation. In the human communities where the workforce has an advanced, superior general education, and it is also well informed, there is the possibility of a quick adaptation to the new economic and social conditions. But this education does not ensure immediate material enrichment.

Another problem related to the costs of education and research-development refers to the well trained specialists from some fields which are less demanded on the labour market for a short period of time. Abandoning them can further generate costs and, therefore, losses that outweigh their support during this period. Training a specialist involves considerable material and financial costs and it is done during a large interval of time.

The productivity of the human factor is also influenced by the health status. There, where through the way of feeding and the other services related to people's welfare, conditions for a general health state are guaranteed, the prerequisites of enhancing the efficiency of work are also created. In their absence, the progress of a nation is slow or difficult to achieve, a vicious circle of development appears, meaning that work efficiency does not increase, because general health is not guaranteed, and it cannot be guaranteed, because the efficiency necessary for labour, which should produce the adequate financial resources, is not achieved.

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# THE EFFECTS OF REGIONAL POLICIES IN ROMANIA

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**Abstract:** *If we were to consider that Romania was formed by the unification of provinces that experienced a strong unity through culture, language, religion, as well as through the intense trade relations existing between them over time, we may say that our country has an important historical experience regarding regionalisation. After 1989, Romania underwent a radical change of economic and political organisation (from a centralised economy to a free, market economy) and the approximation to the Western economic structures, the European Union (EU). Under these conditions the national authorities had to take into account the principles and the organisation and functioning of the European capitalist economies. During the communist period, Romania had an administrative-territorial and economic organisation that favoured centralised decision making. In the case of market economies, organisation allows and encourages the decentralisation of decision making. In the mid '90s, the economic and social realities of Romania lead to the achieving of the regionalisation of the national territory in accordance with the subsidiarity principle of the EU. Regionalisation sought to identify the most appropriate spatial and territorial framework for guiding the economic development processes, by facilitating the use of tools and resources provided by the European Union. The regional development policy is a continuation of the policies of national economic growth and development, both aiming at improving the economic and social life of the national communities. The final aim of this paper is to identify the economic and social situation of the development regions in Romania. The study provides insight into Romania's relations with the European Union, with regard to the access and use of the pre-accession European funds. Furthermore, the paper achieves a qualitative analysis, through a positive approach, but also a quantitative one of the economic and social situation of each development region in Romania, taking into account the final aim of the regional development policy. The time period considered for the analysis starts in the year when negotiations for EU membership officially began and goes on for as long as possible, depending on the availability of official statistics. A heuristic presentation of the evolution of regional development in Romania is targeted through the analysis of certain economic indicators representative for the situation of the human communities in each development region.*

**Keywords: regionalisation, development region, regional development policy, Romania**

**JEL classification: O18, O29, O 52, R 11, R 58**

## 3. Introduction

Regionalisation requires a series of complex actions involving the embedment of several communities, located nearby one another, that have a significant degree of cultural and socio-economic homogeneity, and in some cases even an ethnic one.

We can tell that a certain spatial separation is considered, as well as integrative-like actions (for example, the way in which the regions and macro regions are formed in Romania or the successive stages of accession of the countries to the EU area).

It is obvious that this process can not affect the territorial integrity of the states and, implicitly, its decisional sovereignty.

The territorial regionalisation is determined by the different evolution of the spatial economic structures and has a highly practical character. Its aim is to create territorial frameworks suitable for starting the growth and economic development processes, so as to ensure the premises for improving the economic disparities between communities and better the economic and social life. These differences are determined by the different ability of the regions to produce goods and services, to offer opportunities of earning higher incomes for their members (Polèse 1999:299-314).

Hence the concept of regional development, which "implies the use of resources (primarily the local ones, but also of those attracted from the national and international area) to increase overall competitiveness of the territory, to increase the adaptability of the production and functional elements to the structural adjustment needs (in order to meet the regional and national needs) and, ultimately, from the macroeconomic perspective, to reduce the disparities between different components from the structure of the national economic space". (Jula 2002)

Obviously, the European Union wants a reduction of the disparities within it, which ensures a greater economic and social cohesion. This balances the economies of the states and boosts trade by creating new markets. At the same time, this would significantly reduce social distress caused by the overcrowding of the more developed regions (it would ensure a balanced territorial development).

## 4. Brief History of the Issue of Regionalisation in Romania

All throughout the modern era, Romania has experienced several models of economic and social organisation, some incompatible with each other, which caused many economic and social failures, with negative effects on social welfare.

Considering the way in which The Great Romania was formed, through the unification of its principalities, it is clear that Romania experienced regionalisation many centuries ago. We can also note an ethnic diversity (as well as a cultural one) important in interwar Romania - Hungarians present in Transylvania, Germans in Transylvania, Banat and Bukovina, Ukrainians in Bukovina and Bessarabia, Turks, Bulgarian Tatars in Dobruja and Jews all over the country (Boia 2012:46).

However, overall, in the historic regions, there has been a strong unity over the centuries manifested through the language, culture and religion (Malița 2010:96-114). Furthermore, economically they had tight cooperation relations.

Already during communism, measures were taken in Romania to develop certain areas of the country, as well as to reduce and eliminate the economic and social disparities. The division of Romania in 1968 into territorial administrations may be deemed as having the clear purpose of facilitating the intensification of population control, but irrespective of this, the development of all counties was also pursued (Părean, Oţil, Boldea, 2012:623-624).

If in the interwar period we may consider that the development of each region was based on the potential of each territory, subsequently, as a result of the communist principles, a massive, autarchic industrialisation of each area and region followed.

In post 1989 Romania, ethnic issues reappeared. They were increasingly discussed and, thus, amplified. If we follow the evolution of heterogeneous nations from this point of view, we realise that ethnic differences can affect economic growth in many ways, but they should not be exaggerated. We are thinking of the ethnic diversity of societies based on immigration, the United States of America, Australia, Canada. Similar situations can be found in Europe, too: Belgium, Switzerland with its four languages, two religions and a history of several civil wars of religious origin (Chang, 2011:133); to this we add Spain with the Catalan and Basque ethnic issues.

## 4.1. The Pre-Accession Period

In 1995 a plan was drawn at the EU level detailing the financial and technical aid for the candidate states for the opening the accession negotiations (O'Brennan 2006:29). It was stated that the pre-accession instruments were not negotiable. The EU tried to help Romania as much as possible by encouraging the adoption of measures with certified economic results throughout the years in the perimeter of the older member states. Thus, it followed the implementation of the *subsidiarity principle*, suggesting *regionalisation* for distributing the power at primary levels. In this way, the influence of the central government would be reduced, while the importance of the regional and local decision makers would increase, since they were the ones who were better acquainted with the needs of those communities.

In 1997, a green book on regional development was published, It was created by a Danish company (Ramboll), specialised in the topic of decentralisation. It was considered that the national territory was too fragmented and the administrative-territorial units were too small to act as a channel for attracting pre-accession funds. 8 development regions were suggested, that later would become territorial units in the regionalisation process of the country. Problems arose immediately because their status was unclear; it was not an extension of the Government, but they were not even non-profit organisations.

In Romania, the support programmes suggested in 1995 were carried out late, and those who began to get acquainted with them were moved from one institution to another, while many left for the private sector, where the remuneration was more appealing.

The oldest programme was Phare. Gradually, Phare turned into a programme intended to facilitate the expansion process. It was envisaged that 30% of the Phare budget would be used for administrative and institutional reform (Papidimitriou, Phinnemore 2004:624), precisely for the enhancement of the capacity of attracting structural funds. The activities covered by the programme targeted capacity building at the central and local level, grant giving for small firms and the civil society, social programmes. The projects were supposed to take place in cycles of three years (two years for the programming and contracting and one for the implementation). Late 2005, in Romania there were ongoing programmes for which the final payments had to be made in 2003, 2004, 2005, to which other outstanding payments would be added (Ioniţă 2006:3).

Starting 1998, the Phare programme also had an important twinning component.

Civil servants from the candidate states were paired with people from the member states to collaborate on specific projects. This twinning was meant to allow a transfer of knowledge and competence in areas considered to be crucial for the adoption of the acquis. The civil servants that had to be relocated to Romania for two years did not benefit from training courses to become acquainted with the culture of Romanian administration, thus many were faced with a long and difficult period of adjustment (Papidimitriou, Phinnemore 2004:630). Unfortunately, most were busy filling in different documents with no energy left for achieving project objectives. A "fireman-like approach" appeared, that lead to the slow progress of the candidate states' capacity of adopting European standards based on meritocracy and efficiency.

A major problem occurred in the primary sector. The aid instrument in this situation was Sapard (Special Pre-Accession Programme for Agricultural and Rural Development). It addressed the problems in agriculture and the rural area, as well as the implementation of the acquis regarding agriculture. In 2004 in Romania 47,8% of the population was living in the rural area. Also, 36% of the population was working in agriculture, 70% depended on this economic sector and the contribution to the GDP was only 12% (Şerbănescu 2004). Another source stated that two years before, 35% of the population lived off the land, which could provide a subsistence living. Also, in the first part of the years 2000, 85% of the agricultural production was obtained on private land, but the average size of a private property was of 2.8 hectares, a fragment of a plot of land in Poland, which was a big obstacle in the way of rural development (Marinaş 2002). Moreover, EU Agriculture

Commissioner Franz Fischler warned in 2004 that middle size farms were missing in Romania, while only small and very small ones existed, and that phytosanitary standards were far from normal.(Gallagher 2010:90)

The Sapard programme started three years late in Romania, for lack of an appropriate organisation of the payment agencies. Normally, the funds should have been spent in a year, those between 2000 and 2002 were combined with those for 2003 and contracted in 2005. (Ioniță 2006:13) The programme began in 2002 and ran until 2006, and the money for 2004 – 2006 was to be contracted in 2006. The programme was worth € 600 million and Romania only managed to use a quarter of it. (Gallagher 2010:91). The bulk of these funds were meant for infrastructure and diversification of the rural economy.
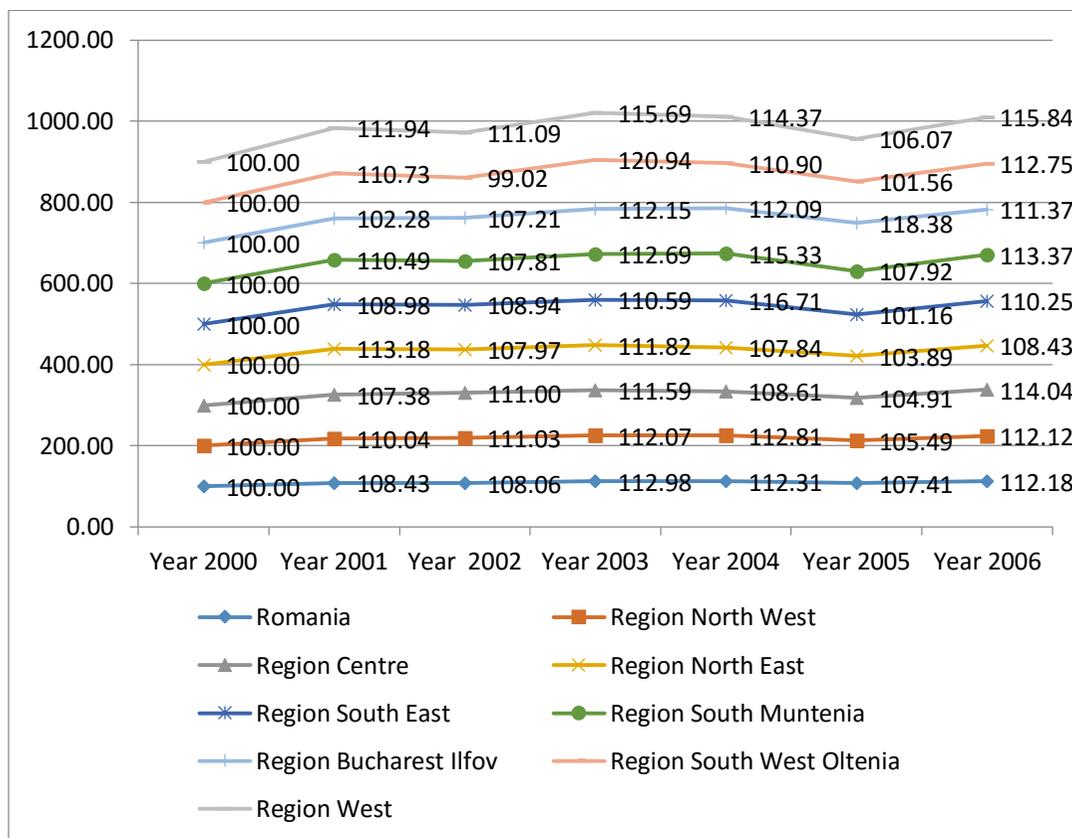


Chart 1. Dynamics of the GDP per capita at the regional level in Romania, 2000-2006
Source: personal processing based on data extracted from the ***,Anuarele Statisice ale României, 2001-2007

Contracting Sapard funds was low because the peasants had to contribute part of the money (usually half of the value of the project), and the banks were willing to give loans at high interest rates. To this, the very extensive documentation and reports were added, quite discouraging for a regular person used to manual labour. Basically, there was a social chasm between bureaucrats and peasants, and the state was unable to solve the rural issue probably because it focused much more on solving the urban ones. In May 2006, Romania was given three red flags for agricultural problems to be solved urgently: a better organisation of the payment agencies (APIA): 1,400 professionals needed to be hired, an appropriate computer software, as well as a better gathering, treatment and disposal of animal waste were to be implemented. Since 2005, some simplifications have

been made. Thus, for the areas affected by natural disasters, EU contribution increased from 50% to 75%; for the young farmers (under 40 years old) and for those living in mountainous regions, European support increased to 60%, and if the farmers were young and living in a mountainous region then they would get 65% of the value of the project. In September 2006, in the final pre-accession report, it was stated that the issues related to agriculture had been solved, but after the accession the malfunctioning of the payment agencies came to light.

Bucharest is the only region that managed to reach European average levels. There are some other areas in Western and Central Romania that managed to come close to the development rates recorded by the Bucharest region. These areas were favoured by their position, due to their proximity to Western markets and because they depended very little on the agricultural sector. In this respect, we should also follow the dynamics of the gross domestic product (GDP) per capita (chart no.1). It is noted that in general the dynamics in the regions has been increasing from year to year except for 2005. Also, the South-Western region recorded a decrease in 2002 compared to 2001.

The pre-accession instruments, *Phare, ISPA and Sapard*, were designed to reduce the regional economic disparities, but the results were, at best, modest. Regional disparities related to income were deepened. Table no.1 shows that the difference between the total income and expenditure of the households in all regions of the country is small. What's more, there are situations where it is negative. In this respect, the situation of the Bucharest-Ilfov region for the year 2000 is interesting, but afterwards it recorded the highest rates of saving. Therefore, saving, which could further support a sustainable development and give people confidence, was insignificant. According to official data, the share of household expenditure on investments and production did not exceed 5% in any of the years.

Table no. 1 Dynamics of the total average income and expenditure of households at regional level in Romania (lei/person)

| Region \ Year | | 2000 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|---|---|
| North – West (lei RON) | Income (I) | 123,01 | 237,97 | 292,37 | 388,41 | 417,89 | 474,64 |
| | Expenditure(Ex) | 121,78 | 238,05 | 297,04 | 387,76 | 407,10 | 470,94 |
| | I- Ex | 1,23 | -0,08 | -4,67 | 0,65 | 10,79 | 3,70 |
| Centre (lei RON) | Income (I) | 127,53 | 241,09 | 300,98 | 382,04 | 434,06 | 485,48 |
| | Expenditure(Ex) | 125,03 | 234,92 | 290,52 | 387,76 | 403,78 | 442,62 |
| | I- Ex | 2,50 | 6,17 | 10,46 | -5,72 | 30,28 | 42,86 |
| North-East (lei RON) | Income (I) | 116,30 | 199,18 | 252,25 | 338,68 | 367,10 | 426,36 |
| | Expenditure(Ex) | 116,62 | 201,08 | 255,93 | 342,07 | 365,36 | 409,10 |
| | I- Ex | -0,32 | -1,90 | -3,68 | -3,38 | 1,74 | 17,26 |
| South – East (lei RON) | Income (I) | 125,39 | 220,58 | 271,98 | 329,40 | 374,10 | 425,09 |
| | Expenditure(Ex) | 124,44 | 224,39 | 275,51 | 323,44 | 363,90 | 403,64 |
| | I- Ex | 0,95 | -3,81 | -3,53 | 5,96 | 10,20 | 21,45 |
| South Muntenia (lei RON) | Income (I) | 117,94 | 207,30 | 265,97 | 335,55 | 376,26 | 424,45 |
| | Expenditure(Ex) | 116,17 | 205,17 | 253,35 | 325,36 | 358,32 | 415,90 |
| | I- Ex | 1,77 | 2,13 | 12,62 | 10,20 | 17,94 | 8,55 |
| Bucharest Ilfov (lei RON) | Income (I) | 139,49 | 301,44 | 362,97 | 478,50 | 578,21 | 686,71 |
| | Expenditure(Ex) | 140,82 | 207,85 | 350,26 | 448,88 | 523,35 | 609,91 |
| | I- Ex | -1,33 | 93,59 | 12,71 | 29,61 | 54,86 | 76,80 |
| South-West (lei RON) | Income (I) | 131,92 | 216,86 | 266,35 | 345,77 | 384,10 | 441,74 |
| | Expenditure(Ex) | 128,75 | 209,73 | 255,82 | 319,87 | 347,85 | 397,62 |
| | I- Ex | 3,17 | 7,13 | 10,53 | 25,90 | 36,25 | 44,12 |
| West (lei | Income (I) | 127,87 | 238,21 | 291,14 | 392,41 | 430,06 | 496,00 |

| RON) | Expenditure(Ex) | 123,38 | 227,02 | 280,84 | 367,73 | 400,67 | 465,44 |
| | I- Ex | 4,49 | 11,19 | 10,30 | 24,68 | 29,39 | 30,56 |

Source: ***, Tempo Online, Institutul Național de Statistică, www.insse.ro, visited March 20, 2015

An overview on people's confidence in a better life is also provided by the balance of the definitive external migration (table no.2). If until 2002 the number of immigrants had been higher than that of the emigrants, after 2002 (starting January 1 the EU no longer required travel visas for the Romanians) the status of the migration balance was reversed. For Romania the situation is all the more critical as the negative balance is higher for the working-age population, followed by the category of people in the pre-active period (under 18).

From 1990 to 2005 the EU allotted € 6.5 billion to Romania, as pre-accession funds, most of the money being meant to speed the economic and social modernisation of the country. (Ioniţă 2006:13). In June 2006, only 11% of the funds allotted for the past six years had been used, especially because the national authorities failed to adopt transparent procedures for public procurement and many projects were disqualified. The biggest failure seems to have been recorded in accessing the ISPA funds. (Gallagher 2010:274). In the European Parliament the correct perception that Romania is incapable of accessing European funding goes back to 2005 when it was so stated by Austrian parliamentary Herbert Bosch and hence it had to be excluded in 2007 from the EU budget. In 2006 the European Court of Auditors showed that less than half of the funds allotted to Romania were used for the purposes for which they had been granted. The Court of Auditors criticised the way in which the European Community managed projects from three points of view: the management capacity was overestimated, the principles of sustainability and co-financing were ignored (often, the projects approved were not backed up with Romanian money, although that was a requirement).(European Court of Auditors 2006:7), plus the carelessness towards the added value and general impact of the projects (Istrate 2006).

Table no.2 Migration balance for Romania by age groups, 2000 - 2006 (number of persons)

| Year Definitive external migration | | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|---|---|---|
| Total | Emigrants | 14753 | 9921 | 8154 | 10673 | 13082 | 10938 | 14197 |
| | Immigrants | 11024 | 10350 | 6582 | 3267 | 2987 | 3704 | 7714 |
| Under 18 | Emigrants | 4372 | 2860 | 1233 | 1677 | 1417 | 765 | 963 |
| | Immigrants | 1743 | 1822 | 898 | 437 | 404 | 554 | 1083 |
| 18 – 25 years old | Emigrants | 1513 | 938 | 1029 | 1426 | 1920 | 1408 | 1726 |
| | Immigrants | 1893 | 1772 | 1278 | 547 | 414 | 426 | 868 |
| 26 – 40 years old | Emigrants | 1551 | 1013 | 915 | 1159 | 1414 | 1355 | 1782 |
| | Immigrants | 3588 | 3427 | 2405 | 1140 | 1028 | 1410 | 3265 |
| 41 – 50 years old | Emigrants | 1551 | 1013 | 915 | 1159 | 1414 | 1355 | 1782 |
| | Immigrants | 2017 | 1802 | 1164 | 550 | 489 | 649 | 1469 |
| 51 – 60 years old | Emigrants | 657 | 429 | 417 | 449 | 577 | 545 | 839 |
| | Immigrants | 908 | 833 | 526 | 315 | 348 | 376 | 729 |
| 61 and older | Emigrants | 943 | 664 | 588 | 524 | 580 | 506 | 689 |
| | Immigrants | 875 | 694 | 311 | 278 | 304 | 289 | 300 |

Source: ***, Anuarele Statisice ale României, 2001 -2007

In fact, already in 2002 the European authorities recognised that regional planning had failed (there hadn't been a correlation between local, regional and national planning). This had previously been observed and said by Vasile Pușcaș (chief negotiator of Romania with the EU), considering that the failure had been caused by excessive politicising of the regionalisation process. (Gallagher 2010:68). It was surprising that the best results were obtained by North-East Romania, the poorest region of the country. This was possible because many activities had been coordinated *The British Department of International Development* for the promotion of local and regional partnerships (Gallagher 2010:68).

### 4.2. The Post-Accession Period

As a general idea, one must note that during the economic growth of the years 2000 a recovery of the economic disparities was recorded compared to the EU average. (Mureşan 2008:419-448). Indeed, the recovery of disparities is obvious, but at the time of accession of our country to the European structures, Romania had a level of economic development of a little over a third of the European average, with about 30% of the population engaged in the subsistence agriculture. (Cerna 2011:2).

After the accession, Romania proved to be a rather dull member, lacking personality and initiative (Boia 2012:104). In 2007 Romania became a net contributor to the EU budget with € 1.35 billion (1.3% of the GDP) (Gallagher 2010:275), and the situation wasn't improved.

In 2007, upon accession of Romania, out of the 15 poorest regions in the EU, six were from Romania. The poorest region in the EU was the North-East region; practically, the only region not classified as "very poor" was the Bucharest-Ilfov region, which had 74% of the average EU GDP. (Rădulescu 2008). At the regional level (chart no.2) one can note the marked decrease of 2009, decrease which was also maintained, with some minor exceptions, in 2010. And the following year, the growth of some regions, apparently favoured by their position as well, determined a slight increase at the national level.
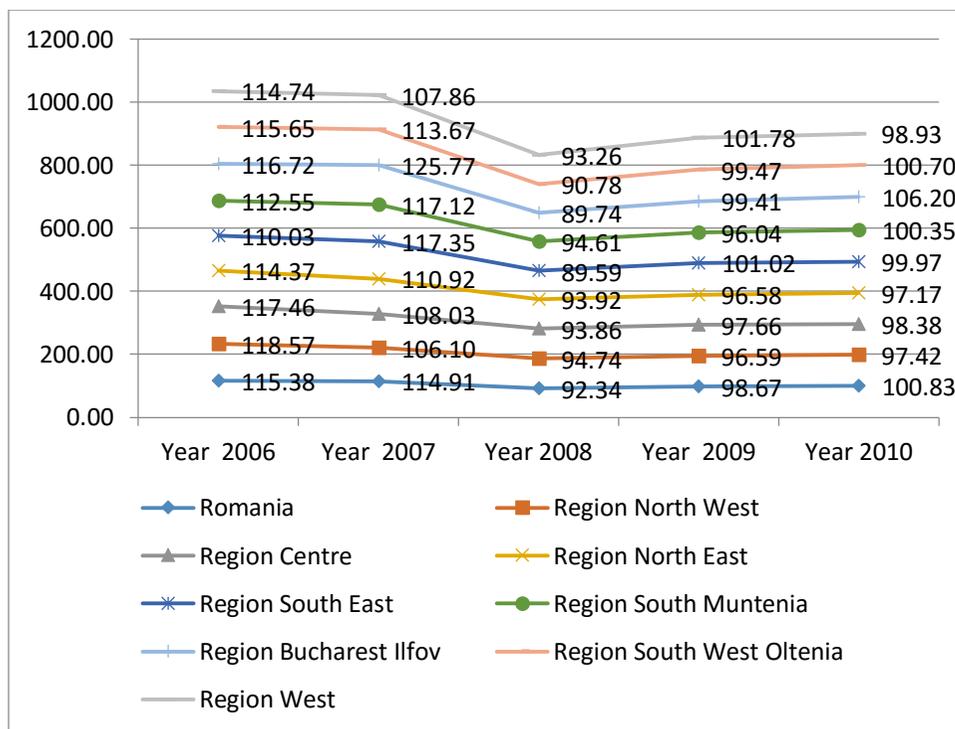
Chart 2. Dynamics of the GDP per capita at the regional level in Romania, 2007-2011
Source: personal processing based on data extracted from the ***, Anuarele Statisice ale
României, 2008-2012

Global experience shows that "catching up" requires, among other things, high saving and investment rates. Unlike the previous period, the income-expenditure balance situation has improved significantly (table no.3). However, the consumption expenditure structure has undergone insignificant change.

Table no.3 Dynamics of total average monthly income and expenditure of the households at the regional level in Romania (lei/household)

| Region \ Year | | 2007* | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|---|---|
| North – West (lei RON) | Income (I) | 582,05 | 2193,69 | 2270,76 | 2307,85 | 2511,94 | 2523,17 | 2609,73 |
| | Expenditure(Ex) | 516,40 | 2004,49 | 2055,01 | 2138,45 | 2293,19 | 2314,65 | 2398,23 |
| | I-Ex | 65,65 | 189,2 | 215,75 | 169,4 | 218,75 | 208,52 | 211,5 |
| Centre (lei RON) | Income (I) | 583,85 | 2132,87 | 2290,43 | 2298,97 | 2478,45 | 2504,25 | 2740,38 |
| | Expenditure(Ex) | 525,83 | 1896,33 | 1984,15 | 2015,94 | 2223,05 | 2233,54 | 2470,59 |
| | I-Ex | 58,02 | 236,54 | 306,28 | 283,03 | 255,4 | 270,71 | 269,79 |
| North-East (lei RON) | Income (I) | 508,03 | 1911,16 | 2133,73 | 2047,4 | 2174,58 | 2256,72 | 2303,47 |
| | Expenditure(Ex) | 481,77 | 1775,07 | 1971,48 | 1908,95 | 2056,73 | 2123,5 | 2175,4 |
| | I-Ex | 26,26 | 136,09 | 162,25 | 138,45 | 117,85 | 133,22 | 128,07 |
| South – East (lei RON) | Income (I) | 528,32 | 1922,76 | 2086,59 | 2029,69 | 2178,77 | 2170,37 | 2206,9 |
| | Expenditure(Ex) | 503,40 | 1748,01 | 1862,24 | 1823,86 | 1977,75 | 1980,47 | 2005,35 |
| | I-Ex | 24,92 | 174,75 | 224,35 | 205,83 | 201,02 | 189,9 | 201,55 |
| South Muntenia (lei RON) | Income (I) | 553,62 | 2059,45 | 2251,42 | 2369,21 | 2337,56 | 2434,89 | 2431,04 |
| | Expenditure(Ex) | 513,85 | 1889,46 | 2013,58 | 2120,07 | 2090,72 | 2209 | 2189,64 |
| | I-Ex | 39,77 | 169,99 | 237,84 | 249,14 | 246,84 | 225,89 | 241,4 |
| Bucharest Ilfov (lei RON) | Income (I) | 828,96 | 2845,47 | 3154,05 | 3039,82 | 3121,55 | 3113,15 | 3327,46 |
| | Expenditure(Ex) | 725,19 | 2387,89 | 2621,64 | 2598,37 | 2657,57 | 2679,87 | 2817,54 |
| | I- Ex | 103,77 | 457,58 | 532,41 | 441,45 | 463,98 | 433,28 | 509,92 |
| South-West (lei RON) | Income (I) | 515,65 | 1960,39 | 2067,69 | 2134,13 | 2159,54 | 2251,56 | 2363,22 |
| | Expenditure(Ex) | 459,94 | 1723,18 | 1770,09 | 1834,16 | 1919,76 | 2007,89 | 2131,63 |
| | I-Ex | 55,71 | 237,21 | 297,6 | 299,97 | 239,78 | 243,67 | 231,59 |
| West (lei RON) | Income (I) | 598,05 | 2183,69 | 2427,42 | 2344,64 | 2541,9 | 2733,13 | 2702,69 |
| | Expenditure(Ex) | 553,70 | 1992,93 | 2185,01 | 2147,51 | 2374,35 | 2547,22 | 2512,43 |
| | I-Ex | 44,35 | 190,76 | 242,41 | 197,13 | 167,55 | 185,91 | 190,26 |

* lei/person

Source: personal calculations based on the statistical data provided by ***, Tempo Online, Institutul Național de Statistică, www.insse.ro, visited March 20, 2015

During times of crisis, the major problem, both for Romana and for the Union as a whole, is that of employment. Accordingly, even if not at the same level, the labour resources have decreased, i.e. the working-age population (aged 15-64). Table no.4 highlights the fact that after the accession, the number of immigrants was higher than that of the emigrants until the effects of the crisis began to be felt harder by the population. This situation can be explained through the sustained economic growth up until 2008, and afterwards, the crisis and measures adopted by the government in 2010 for the macroeconomic stability generated a massive emigration phenomenon.

Table no.4 Migration balance for Romania by age groups, 2007 - 2012 (number of persons)

| Year / Definitive external migration | | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|---|
| Total | Emigrants | 8830 | 8739 | 10211 | 7906 | 18307 | 18001 |
| | Immigrants | 9575 | 10030 | 8606 | 7059 | 15538 | 21684 |
| Under 18 | Emigrants | 1003 | 1214 | 1316 | 1062 | 4746 | 4787 |
| | Immigrants | 1434 | 1451 | 1266 | 951 | 1396 | 1844 |
| 18–25 years old | Emigrants | 1062 | 1107 | 1270 | 1074 | 3417 | 3715 |
| | Immigrants | 1002 | 1309 | 1266 | 975 | 3405 | 5236 |
| 26–40 years old | Emigrants | 4979 | 4722 | 5351 | 3955 | 6155 | 5857 |
| | Immigrants | 3755 | 3878 | 3104 | 2382 | 6322 | 9099 |
| 41–50 years old | Emigrants | 982 | 974 | 1393 | 1156 | 2003 | 1921 |
| | Immigrants | 1880 | 1687 | 1399 | 1264 | 2320 | 2922 |
| 51–60 years old | Emigrants | 460 | 445 | 522 | 406 | 1188 | 1047 |
| | Immigrants | 1004 | 1142 | 977 | 878 | 1332 | 1839 |
| 61 and older | Emigrants | 344 | 277 | 359 | 253 | 798 | 674 |
| | Immigrants | 500 | 563 | 594 | 609 | 763 | 744 |

Source: ***, Tempo Online, Institutul Național de Statistică, www.insse.ro, visited March 20, 2015.

The liberalisation of movement increased the number of Romanian citizens who chose to go to work in the West, therefore their number was estimated at approximately 2-2.5 million in 2007, of which 1.1 million were thought to be in Italy and 800 thousand in Spain. If in the year 2000 the Romanian migrants' remittances were estimated at under $ 100 million, in 2004 they had reached  $ 1.7 billion, in 2006  $ 6.7 billion, and in 2008 $ 9 billion (Murgescu 2010:473). This may also somehow explain the higher amounts saved by the households in Romania.

**Conclusions**

Regionalisation in Romania is deeply rooted in history. The historical provinces that formed Romania shared close cultural and economic ties over time. Despite this, a series of important economic and, implicitly, social disparities remained. In Romania, we find the concern to reduce these disparities already after the Union of 1918. This concern was pursued further in communist times, but then, the way in which it was done was not based on sound economic criteria. The programme of labour force displacement from rural to urban areas was intensely supported, without offering the slightest prospect of optimism to the rural population, outside the ties with the cities. To all these issues, the existence of mono-industrial urban centres was also added.

Their different endowment with natural and human resources was not taken into account, neither were the relatively specific evolution frameworks (economic, technological, demographic, social, political, cultural), that had shaped their development throughout history. Thus, after 1989, when economy had to observe the principles of efficiency and optimality, malfunctions appeared to be ever greater and more difficult to repair.

Surely the EU wanted Romania to restructure itself economically, but the transition from a centralised economy to a market economy was not managed properly. A regionalisation process took place, but its implementation failed because of institutional reasons (the unclear status of the regions) and not only: regionalisation implies a very good cooperation between people, and this was seen by the population as a return to a centralised control of economic and social activities, like in communist times, although its implementation back then had been totally different. We may say that the attitude of the European Commission was quite shallow. The fact that Romania had a considerable tradition of economic centralism and totalitarianism was ignored.

Romania has great trouble absorbing the pre-accession funds, and acknowledging this would have jeopardized EU accession. Nonetheless, in 2007 Romania became a contributor to the EU budget, rather than its beneficiary.

The regional development policy should be a natural continuation of the economic growth/development policy. But the implementation did not lead to the expected results. The mono-industrial areas suffered greatly, amid the development of urban centres which brought economic benefits, but also more social discomfort. Basically, transmitting the beneficial effects from the growth poles (primary and/or secondary) to the periphery (rural area found at a greater distance from these centres) failed. One can also draw this from the economic situation of the population. From its income, the population at the beginning of the analysis period often failed to cover its consumption, and later the amounts saved were still quite small. Amid all this, a massive exodus of the population to Western countries is natural.

**Acknowledgement**

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# ASPECTS REGARDING THE LINK BETWEEN SUSTAINABLE DEVELOPMENT, ENVIRONMENTAL POLLUTION AND POVERTY

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**Abstract:** The pollution of the environment has become a main problem that requires all of our attention. Degradation of the soil, atmospheric pollution with various greenhouse gases which is proven to have made people and animals sick and in some cases it has led to the extinction of certain animals and plants, water pollution – water being very important for our survival and other such examples that prove the consequences of neglecting environmental problems. This paper tries to see what the influence is, but more importantly how the impact of environmental degradation is felt by the poor countries. Equality and poverty reduction are two social and economic objectives, meant to reduce the vulnerability of individuals and to ensure the basic needs of the population. Between biodiversity, economy and human capital there is a strong link. We could say that these elements are in a state of continuous interdependency. Life is based on ecosystems and we can find them at the base of every human activity. Nature offers us a series of vital goods and services for maintaining well-being and for economic and social development without which we could not advance. Eradicating poverty is and will be a part of the objectives set in the process of making a sustainable development. Sustainable development, at present, follows to prevent and solve the environment problems that humanity is facing, out of which we will mention: climate change, exhaustion of natural resources and clean water supplies, drought, floods, loss of biodiversity, difficult waste management, especially of the radioactive kind, workforce migration etc. – all these events may create hard to manage economic and social consequences.

**Key words: pollution, poverty, environment**

**JEL Classification: O13, O44.**

## 1. Introduction

Pollution represents the contamination of the environment with materials that affect human health, the quality of life or the natural function of ecosystems (living organisms and the environment they live in). Even if sometimes the pollution of the environment is the result of natural causes like volcanic eruptions, the largest part of polluting substances come from human activities.

If we refer to the contamination of air by humans, this has been around in various forms since people started using fire for agriculture, making food, heating homes, etc. But the real problem – as to what pollution is concerned – appeared during the Industrial Revolution (18th-19th centuries), when air pollution has recorded levels that have not been seen until then.

In urban areas, pollution measures very high values mainly due to cars (which in some places are very numerous) but also because the development of industrial areas. This type of pollution is called "smog" and it is made up of a mixture of carbon monoxide and organic compounds resulting from the incomplete burning of fossil fuels such as coal, and sulfur dioxide from the impurities in fuels. In contact with oxygen, these fat and sulfuric acids condense in the form of raindrops, thickening the fog.

As a prime consequence of this phenomenon, the quality of air has started to decrease especially in large cities but not only there, because pollution has no form of barriers. The reduction of air quality has been recorded for the first time in Los Angeles, around the 1930s, when a different type of smog, the photochemical type, caused by the engines of cars and planes that release hydrocarbons from incompletely burnt fuel into the atmosphere.

Most of the pollutants are "washed away" by rain, snow or fog *these pollutants are not always made in the area where they are washed; they can be sometimes brought to different continents). Through this process, through the mixture of pollutant substances and rain, what is produced is called "acid rain". This falls over lakes and forests, causing the death of fish and animals, of the entire ecosystem which leads to the death of people. Not only the health of the individuals is affected, but also the good they create. For example, historical statues, building facades and car paints etc. (the facades of buildings from Rome, Athens and London are the most affected by acid rain, due to the wind which blows from greatly industrialized areas).

Another consequence of pollution is global warming, which represents the increase of the Earth's temperature. This phenomenon manifested especially in the 20$^{th}$ century, when due to the extensive use of fossil fuels, the concentration of carbon dioxide in the atmosphere has risen dramatically, a phenomenon which is still happening today.

Carbon dioxide, but also other gases are known under the name of greenhouse gases – because of the fact that they lead to the thinning of the ozone layer (which has a role in blocking solar radiation).Thus, air pollution affects the upper regions of the atmosphere, the so-called stratosphere, by exhausting the ozone layer and creating a hole (above the Antarctic there is one such hole which is formed for a few weeks each year).

The powerful industrialization and the continuous growth of economics has determined the apparition of ecologic phenomena that are increasingly frightening. For example, the cities of China pump into the atmosphere a huge cloud of dust and hydrocarbons which travels up to 1700 km above the Pacific Ocean.

In order to create a sustainable economy but in the same time without affecting the environment in a very significant way, the notion of "sustainable development" appeared, which not only has the purpose of protecting the environment, but also the quality of life.

In this paper, the necessity of coming up with a sustainable development in mainly presented, because of the rise of population worldwide. This in turn determines the increase of survival needs. The fact that the Earth's population registers a steadily increasing level of education, has led to the creation and diversification of some needs and wishes of people.

The notion of "sustainable development" and the need to make it happen has traveled a long way until it became universally accepted. Along the way, many authors wrote about the problem of exhausting resources, about the effects of pollution and the economic, ecologic and social implications that arise. From observing the pollution phenomenon and its implications, to the point when we are aware of this problem and a large part of the population has accepted this problem, a great number of authors had to write about it, from economists to ecologist, biologists or psychologists. All have talked about this problem in various conferences made with the purpose of finding a solution to the issue.

This report presents in its first part several notions about sustainable development and its links with the level of poverty or the degree of implication of women in society, and in the second part it will present the analysis of the main measuring indicators for making this development come true.

## 2. Opinions on sustainable development

Sustainable development has become in the last decades the engine of all international environmental protecting agencies; a key word found in almost all development plans, the

theme for numerous conferences and the slogan of environmental activists (Bell, Morse, 1999, pg. 4)

Across time, the notion of sustainable development received a series of definitions, but Simone Bell and Morse Stephen attribute a totally unique one: "sustainable development means not cheating the future of your children" (Bell, Morse, 1999, pg. 5). In their vision, sustainable development can be seen as any activity that does not damage the environment.

Pearce David, Barbier Edward and Markandya Anil (Pearce, Barbier, et al. 1990, pg. 1) define sustainable development as being that type of development that can persist in time, specifically meaning it will not degrade the natural capital stock. By the notion of "natural capital" the authors understand all the above ground and underground resources, like, for example, water, fish and not forgetting air quality.

Starting from the word "sustainability", Rogers P. (Rogers, Kazi et al, 2008, pg. 22), along with other co-authors, defines sustainable development as a bridge, a connection between the edges of a pit, where at one end is the much sought economic growth and at the other end is the environment. From the wish of finding out what makes this bridge, the authors enumerate nine steps in their works, which need to be followed in order to make a sustainable development. These steps are:

**Table 1:** The nine steps to sustainability

| |
|---|
| Leave everything clean or transform it in its original state |
| Develop and produce as much as you can without exceeding the renewal capacity of the system |
| Sustainability will be made as income will increase – Kuznets |
| Pollution makers and those who are polluted can find an efficient solution together – Coase |
| Let the market balance itself |
| Internalize externalizations |
| Let the ecologic accountability system reflect the expenditures made for protecting the environment |
| Reinvest the profit into renewable resources |
| Let future generations the possibility to develop at least as well as the present ones |

Source: Roger P. Peter. Jalal K. Kazo, et all, Measuring Environmental Quality in Asia, 1997, taken from  Roger P. Peter, Jalal K. Kazi, Boyd A. John, *An introduction to sustainable development*, Earthscan, 2008, pg. 23

After all the nine steps towards sustainability have been made, the authors say that all that is missing is the most important thing, which they define as being the "key" to sustainability – which is "saving".

**Table 2:** Savings as key to sustainable development

| Savings as a GDP percent. | ≥ | Depreciation of human knowledge | + | Depreciation of man-made capital | + | Natural capital depreciation |
|---|---|---|---|---|---|---|

Source: Roger P. Peter. Jalal K. Kazo, et all, Measuring Environmental Quality in Asia, 1997, taken from  Roger P. Peter, Jalal K. Kazi, Boyd A. John, *An introduction to sustainable development*, Earthscan, 2008, pg. 27

Savings, calculated as a GDP percent, need to be higher or equal to the sum between the depreciation of human knowledge and the depreciation of man-made capital plus the depreciation of natural capital. At present, what is followed is generally only the economic growth, which leads to the fact that other aspects are mostly omitted, thinking that money can solve any kind of problems. The authors pose a pertinent question, meant to shed light

on this issue: "How can the increase of GDP stop the extinction of the Dodo bird?" (Rogers, Kazi et al, 2008, pg. 28).

## 3. Opinions on the pressure made by poor countries on the environment

In specialized literature, we see a constant dispute as to who is responsible to the level of pollution we have today. On one hand, the representatives of developed countries blame the poor countries for a lack of a good governing, non-polluting technologies from those places and the fact that the people living in such countries are preoccupied with ensuring only their basic needs, which leaves the environmental issue untreated. On the other hand, poor countries declare that the present modern lifestyle with multiple and diverse needs, with developed industries and many transport systems relying on nonrenewable resources which on top of that are extremely pollutant, contribute to the massive degradation of the environment. We do not know who is completely right, but we can offer you data in helping us decide who to believe (Hill 2010, pp. 26-27). Each individual from the North American, Western Europe, Japan and Australian regions use approximately 32 times more resources than an individual from poor countries and produces that much more waste.
In our research, we have identified 5 myths (Rogers, Kazi et al, 2008, pg. 51) about this link:

   a. **Most environmental problems are made by poor countries.** The explanation of this myth has to do with the fact that the poor frequently resort to cutting trees in order to ensure their basic needs, which leads to local deforestation. This creates the main cause for landslides, pollutes surface water because they don't have filtering and purification technology for the waste waters, which even if they reach the underground waters in a small amount, it is enough to leave catastrophic damages behind.

   b. **Reducing the poverty level obligatory leads to the degradation of the natural environment.** The argument behind this myth is that once the level of poverty is reduced, consumption will be stimulated, which will lead to an increase in the demand of good obtained directly from nature, the increase of pollution levels as a result to making these goods and a decrease in resources. In reality, when the poor increase their revenue, from one dollar a day to two dollars a day, they will have the necessary resources, time and disposition to focus their concerns (which until now were concentrated on satisfying basic needs) on protecting nature.

   c. **An increase in population will inevitably lead to environmental degradation**. This theory has its roots in Ehrlich Paul's work, named "The Population Bomb", in which he raised an alarm on the fact that the Earth's population was increasing at an alarming rate, which will lead to an inevitable larger pressure on the planet. At a first look, this theory is not wrong. Ehrlich correctly observes that the population of the globe is getting bigger and bigger, as does the Population reference Bureau shows in the table below:

**Table 3:** Earth's population evolution

| Nr. Billion people on Earth | Year | Nr. Years between each new billion |
|---|---|---|
| 1 | 1800 | - |
| 2 | 1930 | 130 |
| 3 | 1960 | 30 |
| 4 | 1975 | 15 |

| 5 | 1987 | 12 |
|:---:|:---:|:---:|
| 6 | 1998 | 11 |
| 7 | 2009 | 11 |
| 8* | 2020 | 11 |
| 9* | 2033 | 13 |
| 10* | 2046 | 13 |
| 11* | 2066 | 20 |
| 12* | 2100 | 34 |

\* - predicted data

d. **The poor don't have enough resources to invest in environmental protection**
e. **The poor do not have sufficient technical and technological knowledge in the field of resource management.** Unfortunately, the poor have a difficult time accessing knowledge regarding environmental protection. Most of the times, their activities are guided by the local culture and customs. Buying such technologies involves a much too large effort for them, and when a part of these technologies are donated by various NGO's or associations, they frequently remain unused, because they don't know how to manage them.

To better explain the link between poverty and development, the authors use a chart in which the two components are presented as vicious circles.
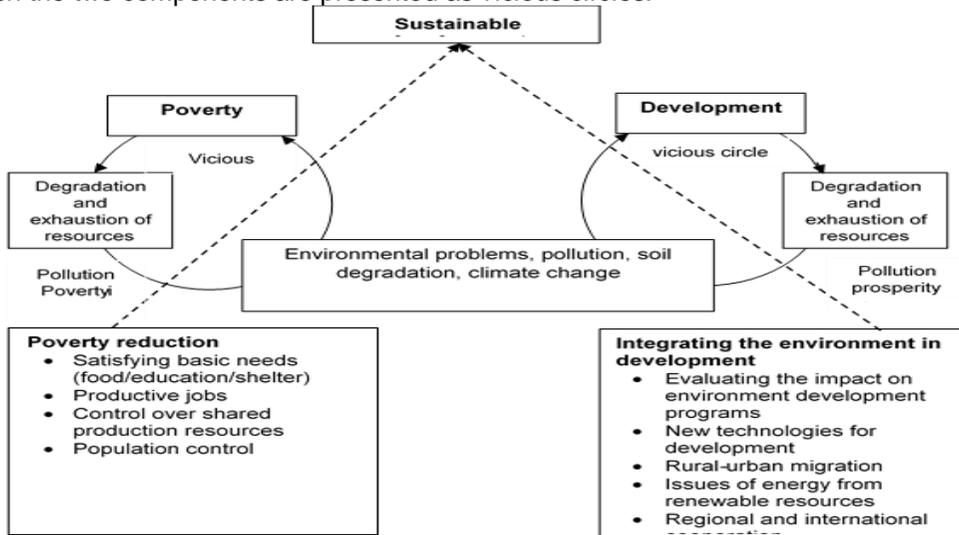


**Figure 4**: The link between sustainable development, environment and poverty
The first circle illustrates how poverty is accountable for the exhaustion of resources and degradation of the environment, because here only the need to survive is essential. The second circle shows how developed countries, in their wish to produce even more, lead to the exhaustion of resources, excessive pollution, which in turn is responsible for the present climate changes. As the graph clearly shows, the two circles can be broken only by coming up with a sustainable development.

As to what poverty is concerned, it is defined by Aliber Michael as being "a system of relations whose cumulated effects exclude a part of the population from the development and well-being processes." (Aliber, 2002, pg. 6).

According to publications made by WMO, from 1992, in most poor countries, the level of atmospheric pollutants was so high that it was responsible for an increasing number of diseases or even premature deaths caused by respiratory illness (Singh 2002, p.336).

Another author that believes in the existence of a link between environmental degradation and poverty is Marquita Hill (Hill 2010, p.26). In her vision, the lack of a good governing is the main problem of poor countries, but does not forget examples in which developed countries (or cities, such as Los Angeles) have a very high level of atmospheric pollution.

According to existing predictions, if the population of Earth will maintain its present growth levels, will be over 9 billion by 2050. But, as Hill notes, there are predictions for the number of people, but for technology's evolution or science, there are none. Given these conditions, the degradation of the environment is an inevitable process, and the most affected countries will be, most certainly, the poor and underdeveloped ones.
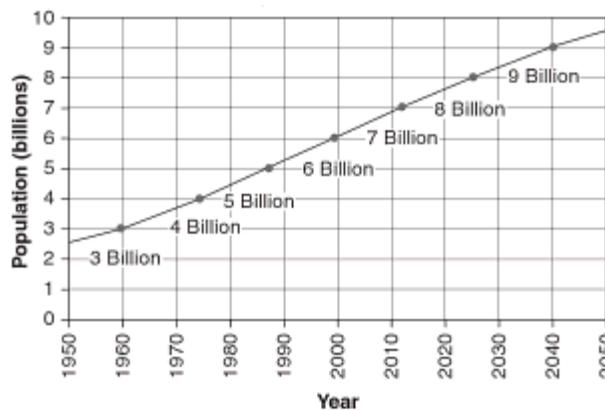


**Figure 5:** The Earth's population 1950-2050
Source: US Census Bureau, taken from Hill Marquita, Understanding Environmental Pollution, Third Edition, Cambridge University Press, Cambridge, UK, 2010, p. 26

In 1987 the *World Commission for Development* is established, also known as the *Brundland Report*. The main purpose of this report was to study the dynamics of environmental degradation and to offer long term viable solutions for human society. This report contains some objectives, according to which making sustainable development means:

- Ensuring a continual growth for the economy, with respecting the basic conditions of conserving natural resources;
- Eliminating poverty and ensuring conditions for satisfying the essential needs: work, food, energy, water, home and health;
- Directing economic growth processes towards a new quality;
- Ensuring a controlled population growth;
- Conserving and boosting natural resources, overseeing the impact of economic development on the environment;
- Restructuring production technologies and maintaining their risks under control;
- Ensuring an integrated approach to economic growth decisions, environment and energy resources.

**In conclusion**, we can say that, As Michael Aliber (Aliber 2002, p.26) stated in his work, that there is a strong link between the problems regarding the protection of the environment and that making a sustainable development cannot be done without eradicating poverty. But we cannot say for sure, as others authors do, that poor countries are accountable for the present environmental degradation problems with which we have to live.

**Acknowledgment**

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# THE ANALYSIS OF SEVERAL RESULTS OBTAINED BY ROMANIA IN THE FIELD OF SUSTAINABLE TRANSPORT

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**Abstract:** We know that between the transport sector and all other branches of economy there is a strong interdependence link but also between it and the surrounding environment, being one of the most polluting sectors of activity. Transport is considered a primary field in any national economy development context, especially if we take into account its interdependence with other branches of national economy. Developing of transports also includes improving road, rail, river and sea services, as well as air transports. The objectives of the EU aim especially to modernize the transport infrastructures, be them by road, ship or by air, which would result in increasing the speed of freight transport, fluidizing traffic, attracting new foreign investors in various areas, accelerating the renewal of the auto park and decommissioning morally and physically worn vehicles which are extremely pollutant, the revival of maritime transports through Romanian ports, progressive completion of imposed performances through standards and regulations on the transport market, etc. All these objectives have as a main purpose the reducing of energy consumption, reducing transport costs as well as increasing competition in the national transport system.The development of transport has the role of stimulating public transport services and to guarantee a minimum general accessibility to public services for all citizens. Children, the elderly, disabled people or other vulnerable categories of people are not and will not be forgotten, for which certain standards set by the European Union must be respected.The present paper wishes to analyze a part of the results, either positive or negative, in the field of transports, made by our country.

**Keywords:** sustainable transport, road vehicles, public transport

**JEL classification:** R41, R58

## Introduction

About the necessity of making a sustainable transport system there have been talks during the first times and in the Agenda 21, which represents a guide of actions that need to be taken in order to accomplish sustainable development. The subjects which were debated during it were: (Digby 2001) Agriculture, Atmospheric pollution, Biodiversity, Biotechnologies, Home Insurance for all people of the globe, Demographic, Modifications of the consumption and production structures, Desertification and floods, Ecologic education and awareness in people regarding present and future ecologic problems, Human settlements, Industry and information, International law, Natural resource management, Mountains – warming of the climate and melting of the mountain snows, Seas and oceans –their rise, Poverty, Sustainable tourism, Technologies and technologizing, Transport, Waste – radioactive, solid, household waste, Commercialization of pollution rights.

Then the fifth Environment Action Program called "Towards Sustainability" (Hunter, Smith, 2005) followed. It proposed to accomplish a sustainable development for the 1993-2000 period, through establishing new relations between economic agents and environment. During this program, five activity sectors have been established in which economic

development should be done in a sustainable way: in industry, energy, transport, agriculture and tourism.

For the period between 2013-2020-2030, there are 7 problem categories that have been analyzed in this strategy. We will enumerate and describe them as follows:

1. Climate change
2. Sustainable transport
3. Sustainable production and consumption
4. Conserving and managing natural resources
5. Public health
6. Social inclusion and managing natural resources
7. Global poverty and defying sustainable development

As to what the situation of Romania is concerned in this chapter, the Objective for 2013 follower the promotion of a transport system that would provide safety, speed and efficiency to people and freight at a national and international level, according to national standards.

For accomplishing said objectives we have mentioned earlier, a Sectorial Operational Program for the 2007-2013 period has been made, entitled "Transport" which includes the Strategy for Sustainable Transport 2007-2013, 2020 and 2030. This strategy wants to minimize the negative effects transport has on the environment.

By implementing the Sectorial Operational Program 2007-2013 "Transport" the European and national transport network's modernization and development was set as objective, but above all, the creation of a sustainable transport. For this, a strategy was created, which follows the diminishing of the negative effects the national transport has on the environment, a strategy that is closely correlated with the policy of the European Union.

For the year 2020, the national objective is reaching the medium level in the EU for economic, social and environment efficiency of transports and making substantial progress in developing transport infrastructure (Strategia Națională pentru Dezvoltare Durabilă a României ).

Maybe the most complex definition of the sustainable transport definition is given by Basgan who states the following: "Sustainable transport is defined as a "complex system" destined to ensure mobility for future generations and the social-economic-ecologic levers are shown, through which humanity can develop in a sustainable way in the transport sector" (Bâsgan Ion , www.agir.ro).

We must not forget that the national transport system of Romania, analyzed from the infrastructure, means of transport and transport operators' point of view is at a middle development level, at present being able to satisfy the needs and wishes of the national and international economic agents at a low rate. As to what the increase of the infrastructure's capacity is concerned, of the efficiency and safety of transport, efforts have been made starting with the year 1990, but it must not be forgotten that these efforts need to intensify because of the fact that in this field, the demand registers a constantly growing trend.

According to the principles mentioned in the European Sustainable Transport Strategy, the sustainable transport policy has the role of traffic decongestion, reducing noise and pollution made by using means of transport that are less damaging for the environment.

The objectives taken into account through accomplishing the sustainable transport policy are (Strategia Națională pentru Dezvoltare Durabilă a României ):

- Creating a durable mobility and transport system;
- Modernizing the European framework for public transport services for passengers, in order to encourage improving efficiency and performance;
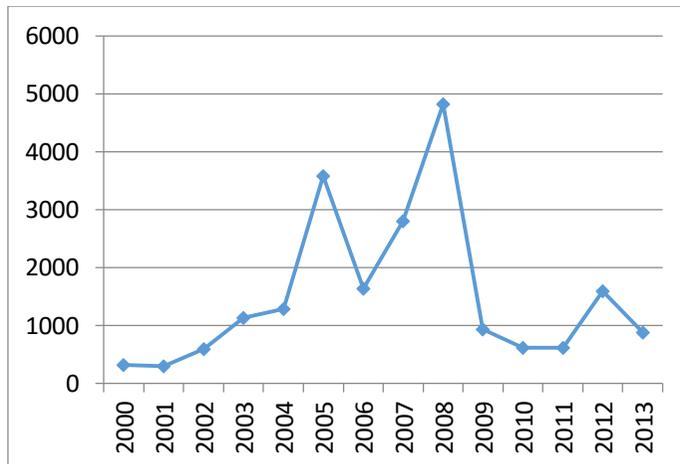
**Figure 1:** Registration of road vehicles for transport, buses, minibuses and coaches in Romania
Source: made by the author, based on the information supplied by the National Statistics Institute, available on-line at http://statistici.insse.ro/shop, accessed on 19.03.2015.

From the first chart we see that the transport sector, especially the road sector, butyl the start of the economic crisis, had massive growth. On one hand, this phenomena appeases us because most of the times it is followed by an economic growth, but on the other hand, it represents an increase of atmospheric pollution and a degradation of the surrounding environment. With the apparition of the economic crisis, the number of road vehicles destined for transport has fallen dramatically and even if it showed signs if improvement in 2011, these were not long lasting.
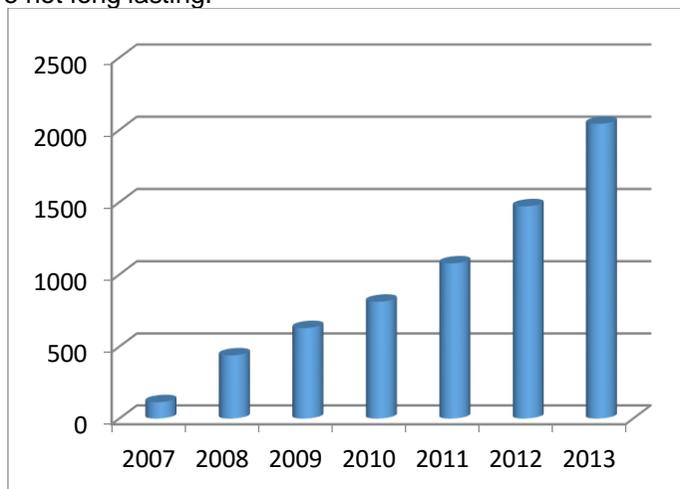


**Figure 2:** Buying of new road vehicles
Source: made by the author, based on the information supplied by the National Statistics Institute, available on-line at http://statistici.insse.ro/shop, accessed on 19.03.2015.

The renewal of Romania's auto park with the purpose of reducing greenhouse gasses released in the atmosphere was another objective of Romania. To this purpose, programs financed by the Government have been initiated, meant to support anyone who wanted to change their vehicle with a new one. According to data from the National Statistics Institute of Romania, the number of new road vehicles bought is on a constant growing direction. We must not forget in our analysis the fact that this phenomenon manifests even during an

economic crisis, which makes us believe that once the economy is restarted, the number of new road vehicles will register higher and higher values.

- ▪ Detaching the economic growth from the transport demand with the purpose of reducing the impact on the surrounding environment;

**Table 1:** Buying electric vehicles in Romania

|        | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|--------|------|------|------|------|------|------|------|
| Cars   | 114  | 439  | 629  | 812  | 1077 | 1472 | 2042 |
| Trucks | -    | -    | -    | 2    | 3    | 4    | 20   |
| Busses | -    | -    | -    | -    | -    | -    | 1    |

Source: made by the author, based on the information supplied by the National Statistics Institute, available on-line at http://statistici.insse.ro/shop, accessed on 19.03.2015.

The renewal of the auto park may reduce pollution levels, but also buying non-pollutant vehicles, like electric vehicles. At this chapter, Romania has made considerable progress but only to what buying new vehicles, which in most cases belong to private economic agents. If we refer to buying trucks and especially busses, the obtained data shows that the efforts made by Romania in this field are not enough.

**Table 2:** Buying of road vehicles that use other sources of fuel (biofuel) besides gas, diesel, electricity, LPG or natural gas.

|        | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|--------|------|------|------|------|------|------|------|
| Cars   | 3    | 3    | 1    | 1    | 20   | 4    | 7    |
| Trucks | 5    | 6    | -    | -    | -    | -    | -    |

Source: made by the author, based on the information supplied by the National Statistics Institute, available on-line at http://statistici.insse.ro/shop, accessed on 19.03.2015.

The consumption of biofuel as well as the number of road vehicles using other sources of fuel besides gas, diesel, LPG, natural gas or electricity (most of them use biofuel) have had smaller but constant growth during the post-accession period.

According to a European Union directive, member states have to gradually hybridize traditional fuels used in transport with biofuels, so that by 2020, biodiesel should represent 20% of diesel available on the market (Antal 2010,pp 20-30).

**Table 3:** Evolution of the use of biofuel in Romania

| YEAR | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|
| Thousand tones, petrol equivalent | 0 | 0,861 | 1,984 | 2,33 | 2,4 | 3,55 |

Source: National Statistics Institute, available on-line at http://www.insse.ro/cms/files/Web_IDD_BD_ro/index.htm, accessed on 07.05.2015.

Of all there resources, biomass is the most abundant and its use as an energy source dates from the time fire was discovered. We need to state that in the category of forest waste, the following trees are included: dead trees or commercially imperfect ones, as well as old trees which need to be cut to allow the forest to regenerate. Besides, some plant species that are included in the wood biomass category have a greater growth rate, between three and ten years. The first biofuel has been obtained in 1983, by Rudolf Diesel, having peanuts as primary source (Rossilo-Cale 2007, p. 2).

As to what Romania's situation is concerned, it has an important biomass quantity but it is one of the great biomass consumers of Europe, if we take into account that most of the individuals living in the rural environment obtain their energy through burning biomass. It is expected that in the future, biomass will be even more used, not only for cooking and ensuring thermic comforts, but also for producing biofuels. For example, animal waste are an important source of obtaining biofuels, because of the large amounts of biogas present in their composition, while the waste that comes out of extracting the biogas is an important agricultural fertilizer.

Worldwide, biomass is the fourth most used resource in producing energy, after coal, petrol and natural gas. It is mostly used for warming up homes (for example, stoves that burn wood in homes and in some industries), for cooking (especially in developing countries) as well as for producing fuels used in transports, such as ethanol. Biomass and waste contribute to about 10.1% from the total energy supply worldwide and out of this, more than 90% is made up of biomass. In more exact numbers, biomass is responsible to producing electric and thermic energy equivalent with 1067 million tons of petrol (Tushar, Ghosh 2011, p. 329). The greatest amount of biomass is consumed in developing countries, such as Burundi, Ethiopia, Nepal, Rwanda, Sudan and Tanzania, where it is not only used in cooking and ensuring thermic comfort, but it also represents 95% of the total primary energy sources used (Rosillo-Calle 2007, pp. 2-10).

As to what the situation of Romania is concerned, it possesses an important biomass quantity, but it is one of the important biomass users of Europe, if we take into account that most individual living in the rural areas obtain their thermic energy from burning biomass. It is expected that in the future biomass will be even more used, not only for cooking and ensuring thermic comfort, but also for producing biofuels. For example, animal waste are an important source of producing them, because of the large biogas quantity present in them, and the waste that is produced after extracting the biogas becomes an important agricultural fertilizer.

- Diminishing pollutant emission generated by transports to levels that reduce to a minimum the effects on the population's health/the environment's state.
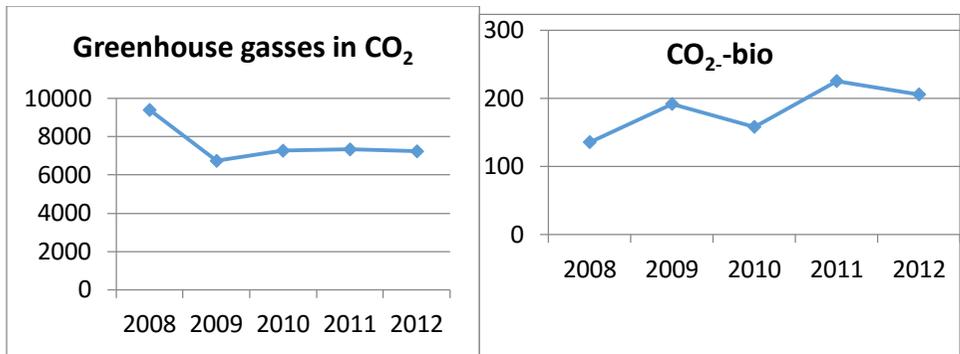
**Figure 3**: Greenhouse gas emissions from terrestrial transports
Source: National Statistics Institute, available online

The greenhouse gasses quantity released into the atmosphere, in $CO_2$ from Romania, has registered a decrease from the level it reached in 2008. We would like to believe these positive results are generated by Romania's effort to use renewable resources but, at least in the transportation branch, we cannot say that it is so. Still, Romania has made some progress in this chapter, as we can see from this present work, but the efforts it has to make in the future are considerable. From the category of positive results obtained, we can see that the CO2-bio values are on an ascending path.
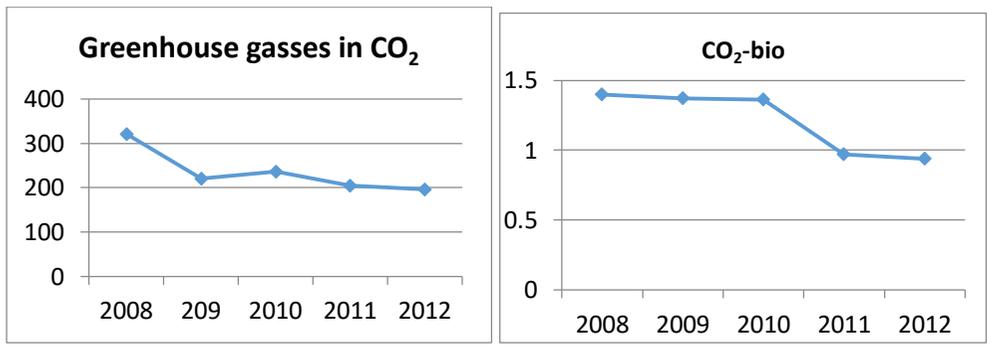


**Figure 4:** Greenhouse gas emissions from air transports
Source: National Statistics Institute, available online

Even if the quantity of gas emissions released in the atmosphere as a result of air transports and water transports has, starting with 2008, started to register lower and lower values, the CO2-bio quantity has been in a steady decrease, which leads us to believe that the use of biofuel in these transport categories is made in a very small manner.
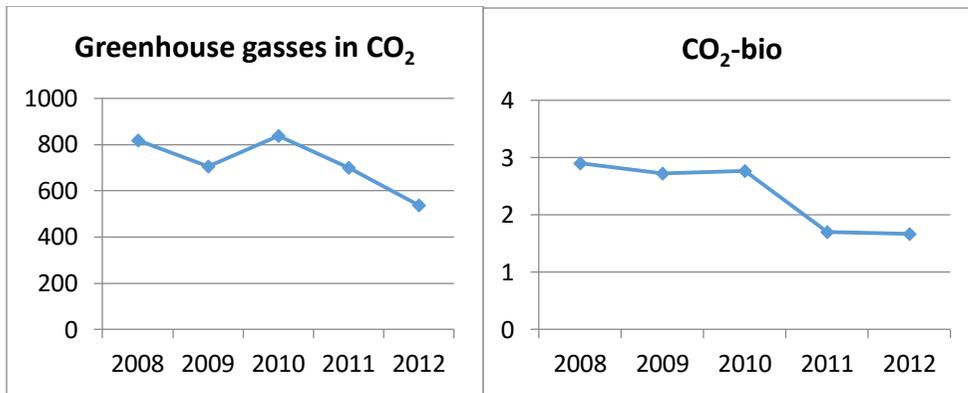
**Figure 5:** Greenhouse gas emissions from water transports
Source: National Statistics Institute, available online

Reaching sustainable levels of energy consumption for transports and diminishing the greenhouse gases effects generated by transports;

Greenhouse gas emissions, either if we think about the land or air/sea transports, has registered constant decreases since 2008, so, we can conclude that as to what this target is concerned, the results have been achieved.
- Reducing the noise made by transport;
- Respecting the European strategy referring to CO2 emissions generated by light vehicles, the new average auto park should reach CO2 emissions of 140g/km (by 2008/2009) and 120g/km (in 2012) and 95g/km (in 2021) (Green Report );
- Reaching a general savings level of 9% from the total energy consumption, on a 9 year period, by 2017;
- Adapting to the climate changes and reducing their effects should be integrated in all relevant community policies.

In conclusion, at present, transports are one of the main branches of any economy. Its contribution in creating economic growth is probably among the most significant. We must not forget the great impact it has (in a negative manner) on the environment. Because of this, making a sustainable transport system is one of the European Union and Romania's objectives. In regards to the progress made by Romania in this chapter, we cannot say that it is nonexistent, but if we compare it to the set objectives, we can say that they are insignificant.

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# CONSIDERATIONS REGARDING MONETARY POLICY IN ROMANIA

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**Abstract:** *The main objective of this paper is to study the Romania's monetary policy, in the period 1996-2013. The research starts with a theoretical review of the monetary policy, whose main purpose is influencing the broad money supply and the lending requirements and the institution in charge of achieving this objective is the Central Bank, highlighting its impact upon the economic activity, through the Keynesian analysis model IS-LM and a correlation between the monetary policy measures and the phases of the economic cycle whose results indicate that during the recession periods it is recommended to reduce interest rates in order to stimulate investments, by raising the money supply, and during the expansion period it is recommended to increase the interest rate in order to cut back the money supply. Starting from this premises, the research takes into account the study of the monetary policy measures adopted by the governmental authority of Romania, making a quantitative analysis of the main macroeconomic indicators: the real interest rate, the lending interest rate, the deposit interest rate and the broad money supply and through a multifactorial regression, highlighting the impact of the interest rates upon the monetary aggregate M2. Moreover, a comparison between the monetary policy measures adopted in Romania and the monetary policies recommended by specialized literature has been done, and the results have indicated that during recession periods the attention of the governmental authorities is focused upon adopting the right measures, but during the expansion periods this doesn't happen. The results of this research highlight the economic situation in Romania and the way in which the governmental authority intervened, through the monetary policy measures, in order to mitigate the negative effects of the cyclical fluctuations.*

**Keywords:** monetary policy; business cycle; money supply; interest rate

**JEL classification:** E51; E52

## 1. Introduction

The monetary policy represents that component of the economic policy whose main objective is controlling the money supply, and the authorities have two ways of achieving that: (1) *the monetary intervention*, meaning taking control over rates by imposing certain limits on the internal market or certain restrictions on the currency market, and (2) the monetary non-intervention, which means changing the money supply, with the purpose of reaching a certain monetary aggregate, a certain inflation or interest rate. (Hulsmann, 2003)

This paper's objective is to study the Romania's monetary policy, in the period 1996 – 2013.

First, we made a quantitative analysis of the representative macroeconomic indicators for the monetary policy (interest rates and money supply) and we showed the impact of the lending and the deposit interest rates on the broad money supply through a multifactorial regression.

The research continues with the determination of the cyclical component of the GDP and

its trend, using Hodrick-Prescott filter in Stata software, to identify the regression and expansion periods. Finally, we analysed the dynamics of the monetary policy indicators in correlation to the phases of the business cycle and compared the results with the correct measures recommended by the specialized literature.

The research results highlight the ways in which the governmental authority intervened, through the monetary policy measures, in order to mitigate the negative effects of the cyclical fluctuation in Romania.


## 2. Literature review regarding monetary policy

Clement Juglar (1862) believes that the monetary policy represents a way of mitigating the cyclical fluctuations of the economic activity, by acting upon the broad money supply, by the mean of interest rate and credit. During the recession phase, in order to stimulate the economic growth, lower interest rates are imposed, which stimulate investments and credit, increasing production, workforce occupation rate and consumption. During the prolonged boom period, when prices tend to grow, restrictions upon credit approval are added, and the control upon the money supply is more rigorous.

A monetary policy tries to influence the credit terms to mitigate the negative effects of the cyclical fluctuations. Taking into account the fact that the credit terms represent just one of the influential factors on the company's investment decisions, directing the monetary policy of often a frustrating task; it is not unusual for governmental authorities to feel discouraged when spending on investments stays high, regardless of the tight credit or the other way around, when spending on investments stays low, in spite of the easy credit, and the monetary factor takes charge when the monetary crisis threatens the economy. (Knodell and Levine, 1984)

Unless applied correctly, the monetary policy can turn into a factor that causes cyclic fluctuations. When it is correctly applied the monetary policy ensures a favourable environment for development, which is defined by a general stable level of rates, or with a slight grow, with a predictable rhythm, missing the expensive element of uncertainty; determines a better management of resources and a higher economic efficiency; and contributes, up to a certain point, to counteracting the exogenous disruptive effects with several different origins, thus reducing the economic cycles' amplitude and their damaging fluctuations.

According to the Keynesian vision, a growth of the broad money supply, determines a drop in the interest rate, but monetarists believe that it happens  exactly the opposite happens: "an expansionist monetary policy will determine high interest rates, at least after going through a short period of transition […] an overly abundant monetary emission will entertain a rise in rates which will end up by being foreseen by the economic agents and will have repercussions upon the nominal interest rate" (Brăileanu, 1998: 122).

Keynes (2009) was sceptical about the success of a monetary policy directed only towards influencing the interest rate. He stated that: "the state, which is in charge of establishing the marginal productivity of capital goods on the long term and on the basis of general social advantage, has to undertake also a bigger responsibility in order to directly organize investments."

The intervention of the governmental authority on the aggregate demand, can be illustrated with the help of the IS-LM equilibrium model, which takes into account the actual and monetary factors in determining the aggregate demand and allows an explicit account of the interdependence ratio between the two markets. (Chiriță and Scarlat, 1998)

- *The IS curve* represents the geometrical spot and the combinations between the interest rate (R) and the income (Y) which ensures the balance on the market of goods and services, this having a negative slope (because of the indirect relation between the two variables).
- *The LM curve* represents the geometrical spot of combinations between the

interest rate (R) and the income (Y), corresponding to the monetary market balance, this having a positive slope.

- The simultaneous balance between the two markets is reached when the two curves meet (E)
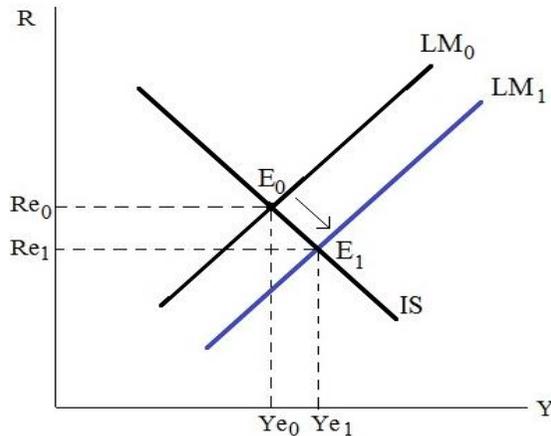


**Figure 1.** The impact of the expansion monetary policy on the economy
Source: made by the authors

If an expansion monetary policy is adopted (increasing the money supply) the LM curve moves further to the right and downwards, as it can be seen in Figure 1, and the balance will correspond to the $E_1$ point. Through this measure, it can be noticed that the interest rate is reduced which encourages economic agents to loan even bigger sums of money and thus balance is reached for a higher income level ($Ye_1$)

Any monetary expansion that goes over the balance level has positive results only on the short term. In turns, on the long term, this leads to great unbalances (economic and social costs).

Monetarists see the purpose of monetary policy as being that of balancing the money supply, because if there is too much money, inflation occurs, with its various negative consequences, and if there is not enough money, unbalance in the economic activity will take place. In these conditions, the task of the monetary policy is to ensure the correspondence between the currency and the other goods, and this purpose is achieved by modifying the currency quantity.

Milton Friedman (1948), in his work entitled "A Monetary and Fiscal Framework for Economic Stability", suggests a framework for monetary policy, adequate for an economy which is affected by cyclic fluctuations. He suggested a reform in the monetary and bank system through which is eliminates the private making and consumption of money and the discretionary control of the Central Bank's authority over the money supply.

In order to eliminate the discretionary authority, the existing power has to engage in transactions on the open market and the direct control over the credit supply has to be eliminated. These changes will put in charge the monetary functions of the bank systems: providing deposit and credit facilities.

The monetary policy that should be adopted, is fighting inflation and ensuring the stability of rates, by increasing the money supply by a certain percentage (5-6%), a percentage that must be kept at the same level and by applying the same rules regardless of the circumstances, going along with the idea of asserting the automatism of economic development on the free market.

Thus, Friedman reasons that the measures that the government delivers in the case of monetary policies influence through a time lag the demand, time lag that doesn't either

increase or decrease from one economic cycle to another, and this makes countercyclical policies lead to instability.

In conclusion, the monetary policy cannot accelerate the economic rhythm on its own, only together with the other countercyclical and structural policies, but it offers "a good set of wheels" (Okun, 1970: 59).

## 3. Methodology and data

Starting from these premises, the paper completes a quantitative analysis of the main macroeconomic indicators representative for the monetary policy using the data series from the World Bank database (www.worldbank.com) for the period 1996-2013:

- *Real interest rate*, which is the lending interest rate adjusted for inflation as measured by the GDP deflator;
- *Lending interest rate*, which is the bank rate that usually meets the short- and medium-term financing needs of the private sector. This rate is normally differentiated according to creditworthiness of borrowers and objectives of financing;
- *Deposit interest rate*, which is the rate paid by commercial or similar banks for demand, time, or savings deposits;
- *Money and quasi money*, which comprise the sum of currency outside banks, demand deposits other than those of the central government, and the time, savings, and foreign currency deposits of resident sectors other than the central government. This definition of money supply is frequently called M2 and it is expressed as a percentage of the GDP

**Table 1:** The dynamics of the monetary policy macroeconomic indicators, in Romania, in the period 1996-2013

| Years | Real interest rate (%) | Lending interest rate (%) | Deposit interest rate (%) | M2 ( % of GDP) |
|-------|------------------------|---------------------------|---------------------------|----------------|
| 1996 | 6,86 | 55,13 | 37,26 | 34,34 |
| 1997 | -30,24 | 72,53 | 55,83 | 31,56 |
| 1998 | 0,06 | 55,32 | 37,28 | 32,83 |
| 1999 | 12,09 | 65,64 | 45,87 | 33,82 |
| 2000 | 5,85 | 53,85 | 33,11 | 32,09 |
| 2001 | 5,51 | 45,40 | 26,87 | 26,01 |
| 2002 | 10,36 | 35,43 | 19,23 | 29,58 |
| 2003 | 1,56 | 25,44 | 11,02 | 27,58 |
| 2004 | 9,40 | 25,61 | 11,54 | 32,67 |
| 2005 | 6,78 | 19,60 | 6,42 | 33,57 |
| 2006 | 3,89 | 13,98 | 4,77 | 32,12 |
| 2007 | -0,22 | 13,35 | 6,70 | 35,62 |
| 2008 | 0,25 | 14,99 | 9,51 | 33,82 |
| 2009 | 12,26 | 17,28 | 11,99 | 37,88 |
| 2010 | 8,13 | 14,07 | 7,31 | 38,72 |
| 2011 | 7,91 | 12,13 | 6,30 | 38,78 |
| 2012 | 5,87 | 11,33 | 5,51 | 37,79 |

| Years | Real interest rate (%) | Lending interest rate (%) | Deposit interest rate (%) | M2 ( % of GDP) |
|---|---|---|---|---|
| 2013 | 6,49 | 10,52 | 4,55 | 38,26 |

Source: World Bank (www.worldbank.com)

Moreover, the real GDP of Romania has been estimated by using the Harmonized Consumer Price Index (HCPI) with the base year 1996, indicators were taken from the EUROSTAT database (http://ec.europa.eu/eurostat).

To obtain the percentage deviations of the series from its smooth trend, the data was converted into natural logarithms.

First, we had to test if the data series are stationary. For this operation we used the Stata software to apply the Augmented Dickey–Fuller unit root test, we choose the model with intercept, trend and 0 lags and obtain that T Statistic is 2,585 smaller than the critical value (-3,600) for 5% critical value, L1 value, -0,366 is negative, so the model with intercept and trend is valid and the null hypothesis is accepted: the time series data has a unit root and it is not stationary.

After that, we applied the Hodrick-Prescott filter to obtain the cyclical component of the GDP and its trend, in order to determine the phases of the business cycle.

The analyzed period stars with a crisis one, 1996 to 1998, when the GDP reaches his minimum point. The expansion period is from 1999 to 2008, with the economic boom starting in 2006 to 2008, when GDP reaches the peak, followed by a recession period and the economic crisis from 2008, second semester to 2010, after which the GDP shows a growth.

**Table 2:** The dynamics of the Gross Domestic Product in Romania, in the period 1996 - 2013

| Years | HCPI (%, 1996 = 100) | GDP (millions RON, current price) | Real GDP (millions RON) | Real GDP_ln | HP Cycle GDP_ln | HP Trend GDP_ln |
|---|---|---|---|---|---|---|
| 1996 | 100.00 | 11384.20 | 11384.20 | 9.340 | 0.079 | 9.261 |
| 1997 | 254.87 | 25529.80 | 10016.92 | 9.212 | 0.000 | 9.212 |
| 1998 | 405.48 | 37055.10 | 9138.69 | 9.120 | -0.055 | 9.175 |
| 1999 | 591.20 | 55191.40 | 9335.49 | 9.142 | -0.022 | 9.164 |
| 2000 | 861.26 | 80984.60 | 9403.06 | 9.149 | -0.033 | 9.182 |
| 2001 | 1158.13 | 117945.80 | 10184.20 | 9.229 | -0.001 | 9.230 |
| 2002 | 1418.91 | 152017.00 | 10713.66 | 9.279 | -0.024 | 9.303 |
| 2003 | 1635.51 | 197427.60 | 12071.33 | 9.399 | 0.004 | 9.395 |
| 2004 | 1829.98 | 247368.00 | 13517.50 | 9.512 | 0.014 | 9.498 |
| 2005 | 1995.99 | 288954.60 | 14476.74 | 9.580 | -0.024 | 9.604 |
| 2006 | 2127.84 | 344650.60 | 16197.19 | 9.693 | -0.013 | 9.706 |
| 2007 | 2232.27 | 416006.80 | 18636.07 | 9.833 | 0.038 | 9.795 |
| 2008 | 2408.91 | 514700.00 | 21366.52 | 9.970 | 0.112 | 9.858 |
| 2009 | 2543.41 | 501139.40 | 19703.46 | 9.889 | -0.002 | 9.891 |
| 2010 | 2697.88 | 523693.30 | 19411.33 | 9.874 | -0.031 | 9.905 |
| 2011 | 2855.06 | 557348.20 | 19521.43 | 9.879 | -0.032 | 9.911 |

| Years | HCPI (%, 1996 = 100) | GDP (millions RON, current price) | Real GDP (millions RON) | Real GDP_ln | HP Cycle GDP_ln | HP Trend GDP_ln |
|---|---|---|---|---|---|---|
| **2012** | 2951.68 | 586749.90 | 19878.54 | 9.897 | -0.021 | 9.918 |
| **2013** | 3045.96 | 628581.30 | 20636.57 | 9.935 | 0.010 | 9.925 |

Source: EUROSTAT (http://ec.europa.eu/eurostat)

From the dynamics of the indicator we observe an expansionist gap (cyclical component of the GDP is positive) in four periods, but only for two consecutive years: 1996-1997, 2003-2004, 2007-2008 and 2013-2014, and in the rest of the years is a recession gap (cyclical component of the GDP is negative).

## 4. Results and Discussion

The first monetary policy indicator analysed is real interest rate, which is calculated as the difference between lending interest rate and inflation rate.

Real interest rate has a negative value only in one year, in 1997 (-30.24) and in three years is almost 0: in 1998 (0.06), 2007 (0.22) and 2008 (0.25). The biggest decrease was in 1997, when it dropped by 340% compare with the previous year.
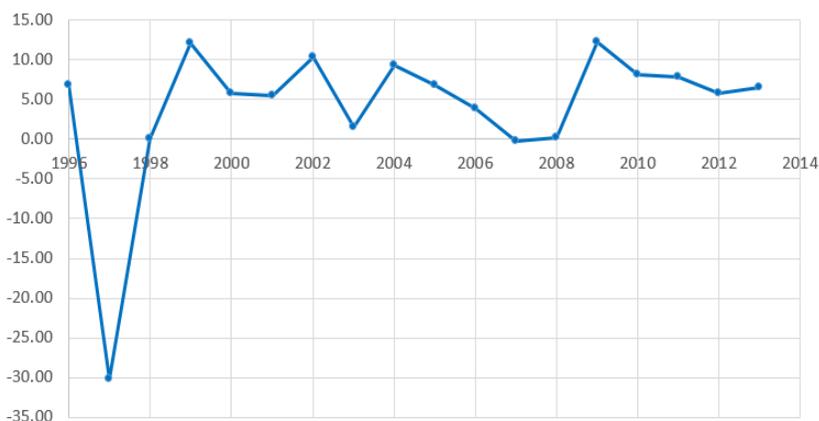


**Figure 2: The dynamics of the real interest rate (%)**
Source: Table 1

The highest growths were recorded in 1998, with 20000% compared to the value from previous year, and in 2009 with 4882% compare to the value from 2008, both years are in a crisis period. The average real interest rate, in the analysed period, is 4.05%.
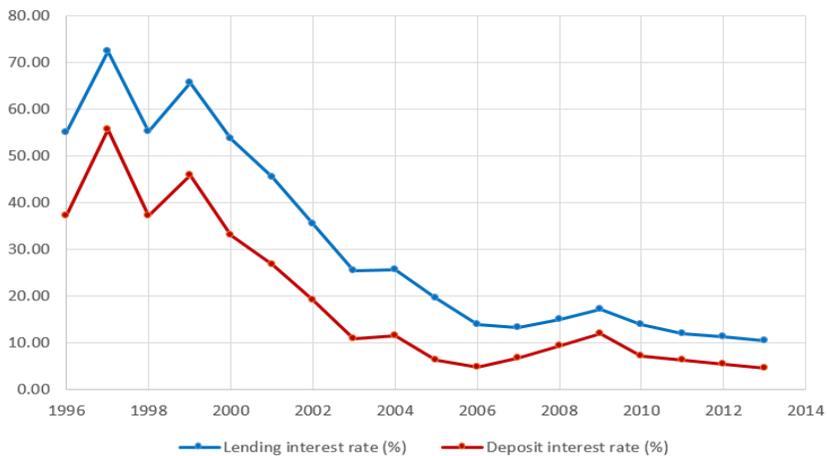
**Figure 3: The dynamics of the lending interest rate and the deposit interest rate**
Source: Table 1

We can observe a downward trend of the interest rates (in the analysed period the lending interest rate decreased, in average, by 7.32% and the deposit interest rate by 6.54%), in 1997 and 1999 was recorded the highest values and after that, the rates decreased every year until 2006. From 2006 to 2009 the lending interest rates increased by 7.6% and the deposit interest rate increased by 36.1%.
The average lending interest rate, in the analysed period, is 31.2% and the average deposit rate is 18.9%.
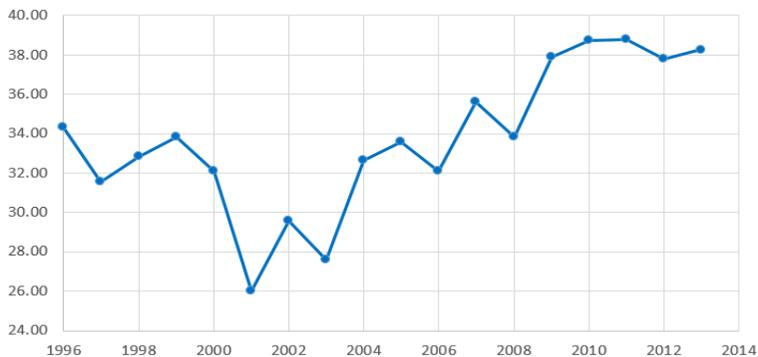


**Figure 4: The dynamics of the money and quasi money (% of GDP)**
Source: Table 1

The broad money supply as percent of GDP is oscillating, in the analysed period, from 1996 to 2001 has a downward trend and from 2001 to 2013 an upward trend. In average, the money supply represents 33.72% of the Gross Domestic Product of Romania, the biggest growth was in 2004 when increased with 18% compare with the previous year and the biggest decline was in 2001 (reaching the lowest value of 26.01%), when it dropped by 19% compare to the year 2000.
To highlight the impact of the interest rates upon the monetary aggregate M2 (as % of GDP) we made a multifactorial regression from which resulted that the multiple correlation coefficient, Multiple R is 0.75, which indicates a strong link between the broad money supply and the lending and deposit interest rates, the coefficient of determination, R Square is 0.57, which shows that 57% of the variation of broad money is influenced by the interest rates.

To test our hypothesis we used „Student test", that showed that *t Stat* parameter assigned for α is 25,73, *t Stat* parameter assigned for $β_1$, is -3.88 (the negative coefficient shows an indirect relation between the indicators) and *t Stat* parameter assigned for $β_2$, is 3.45 (the positive coefficient shows a direct relation between the indicators), all greater than *critical t* (2.10 is the critical value of the variable table according to 17 degrees freedom and probability of 5%), which means that the null hypothesis is rejected, thus we can say that there is a 95% probability that the parameter estimate is significant, and the model is statistically correct. Also, the *P-value*, which expresses the probability of failure of the test is very low. To test the validity of the model, we used ANOVA and obtained that: F parameter is 9.95, a score greater than the critical F, which means that the econometric model is good.

In the end we obtain the following econometric model: *Real money and quasi money (%GDP) = 40.12 – 0.68 Lending Interest rate + 0.79 Deposit interest rate*.

If the lending interest rate increases with 1% and deposit interest rate increases with 1%, then the broad money supply (as % of GDP) increases with 0.51%.

As we establish, four periods were considered in the analysis of the countercyclical measures: expansion in 1996-1998 and 2008-2010 and recession in 1999-2008 and 2011-2013. The comparison between the dynamics of the monetary policy indicators, in correlation to the phases of the business cycle, and the measures recommended by the economic literature are presented in the Table 3, with the correct measures adopted underlined.

**Table 3:** Synthesis of countercyclical policy measures adopted in Romania during expansion and recession periods

| Countercyclical measures recommended in expansion periods | 1999 – 2008 | 2011 - 2013 |
|---|---|---|
| Contraction of the money supply | M2 (as % of GDP) increased by 0.8%, in average | M2 (as % of GDP) decreased by 0.4%, in average |
| Increasing interest rates | The lending and deposit interest rates decreased with 9.4%, in average, but the real interest rate increased by 6% | The lending and deposit interest rates decreased with 11.9%, in average, and the real interest rate decreased by 6% |
| **Countercyclical measures recommended in recession periods** | **1996 – 1998** | **2008 - 2010** |
| Increasing the money supply | M2 (as % of GDP) decreased by 1,4%, in average | M2 (as % of GDP) increased by 3%, in average |
| Decreasing the interest rates | Lending and deposit interest rates increases by 4%, in average and real interest rate decreased by 213.8%. | Lending and deposit interest rates decreased with 13.7%, in average, but the real interest rate increased with 1544%. |

Source: made by the authors

The results indicate that during recession periods the attention of the governmental authorities is focused upon adopting the right measures, in 2008 – 2010 the broad money supply evolved like the economic literature recommends and lending and deposit interest

rates the same, but during the expansion periods not all the indicators followed the literature recommendation, only broad money supply decreased, like it should, but only by 0.4%.

## 5. Conclusion
The research performs a theoretical review of the literature associated with monetary policy and using scientific observation and comparative case studies, as research methods, illustrates the objectives of monetary policy and the instruments that have an impact on the economy, in opinion of important economists, like J. M. Keynes and M. Friedman.

Correlating the phases of the business cycle with the monetary policy, the economic literature recommends that in recession periods the money supply must increase and the interest rate decrease, and in expansion periods the money supply must contract and the interest rate increase.

From the analysis of the main instruments of monetary policy, we obtained that:

(1) The average real interest rate, in the analysed period, was 4.05%

(2) The average lending interest rate, in the analysed period, was 31.2% and the average deposit rate 18.9%.

(3) In average, the money supply represents 33.72% of the Gross Domestic Product of Romania and the biggest decline was in 2001, reaching the lowest value of 26.01%.

(4) The multifactorial regression shown that 57% of the variation of broad money supply, as percent of GDP, is influenced by the interest rates

As a general conclusion we can say that, the recession periods attract more attention from the governmental authority to adopt the right measures, the ones recommended by the economic literature, in comparison to the expansion periods.

The results of the empirical research highlights the main particularities of the economic activity in Romania and the way in which the governmental authority intervened, through the monetary policy measures, in order to mitigate the negative effects of the cyclical fluctuations.

## 6. Acknowledgements

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## ASSESSING THE GOVERNANCE FOR COMMODITY PRICE STABILIZATION – A RETROSPECTIVE LOOK

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**Abstract:** *The volatility of commodity prices has become once again a matter of profound and controversial debates for both political and academic spheres worldwide in the framework of the global economy severely distressed by the recent economic turbulences. Although commodity markets were already notorious for their price instability, the events the world economy experienced in the years 2000s offered new connotations to this phenomenon. In the first decade of this millennium, the commodity markets have struggled with high volatility, with prices reaching historical peaks just to crash dramatically some months later and very soon to restart their rise. The significant increase in volatility generated many debates about its triggering factors, the implications in terms of risk exposure of economic actors, but also the need for reconfiguring regulatory policy frameworks. The quest for the most appropriate means to deal with commodity price turbulences has known different stages over the years. Decision makers worldwide have sought alternatives, formulated and tested various mechanisms whose central aim was to mitigate price fluctuations. Governments formulate and implement consistent regulatory policies whose international coordination is a 'sine qua non' condition for stabilizing these markets. However, the turbulences on commodity markets often generate policy responses that sometimes exacerbate rather than mitigate the price instability. The purpose of this paper is to assess the subject of governance regarding commodity price stabilization, offering a retrospective look at the mechanisms implemented over the years, with a central focus on the International Commodity Agreements – instruments through which in the previous decades the producer and consumer governments worldwide pursued price stabilization for some key commodities like sugar, coffee, cocoa, tin and natural rubber. After analyzing the effectiveness of the International Agreements and debating their reason for failure and the lessons learned, the paper approaches the shift towards a different paradigm imposed by the current context of a globalized world economy where all actions and policies aim for market liberalization. As the price volatility is rarely the outcome of a singular cause, the results of the present paper suggest that combined solutions – public intervention and market-based – must be formulated in order to effectively tackle the problem of price instability.*

**Keywords:** price volatility; commodity markets; international agreements; governance for price stabilization; public intervention mechanisms; market-based mechanisms.

## 1. Introduction

The concerns regarding food and energy security, joint with the latest commodity market turmoil, in a context severely troubled by the recent global crisis and the sovereign debt crises, have brought commodity markets again into the debates of both political and academic spheres worldwide, offering new connotations to the price volatility phenomenon. The significant volatility increase generated many debates about its triggering factors, the

implications in terms of risk exposure of economic actors, but also the need for reconfiguring regulatory policy frameworks.

Price instability arises from three broad sources, namely (Galteir, 2009): natural instability (price fluctuations related to supply changes as a result of natural disasters affecting production); imported instability (price fluctuations related to price changes on correlated markets, fluctuations in exchange rates or in transportation costs); and endogenous instability (price fluctuations related to market functionality itself, like erroneous expectations, speculative bubbles, panic reactions). Though the main causes of price fluctuations are complex and impossible to express exhaustively, the researches (Piot-Lepetit and M'Barek, 2011) support the impact of three major factors: the specific characteristics of commodity markets, geopolitical tensions on international markets and the reduced effectiveness of an international system of governance in the management of this instability. All governments formulate and implement consistent regulatory policies whose international coordination is a condition for stabilizing markets. The history of governmental intervention on commodity markets is a complex one, dating at least since 1930s, when the international community started to search for mechanisms to tackle the consequences of the Great Depression. During the next decades, various international commodity agreements with economic provisions (price bands, stockholding, supply controls) were established with the stated objective of stabilizing prices (Gilbert, 2011). But these agreements proved to be unable to adapt to market changes, hence, by late 1990s, the economic clauses stipulated in them failed, victims of the political or economic context of the time. Since the problem of commodity price instability continued, the decision makers worldwide have continued their quest for alternatives.

The purpose of this paper is to assess the topic of governance for commodity price stabilization, offering a retrospective look at the mechanisms implemented over the years, with an accent on International Commodity Agreements, analyzing their effectiveness, while also approaching the shift towards a different paradigm imposed by the current context of a globalized economy where all actions and policies aim for market liberalization. The reminder of the paper is structured as follows. Section two offers a retrospective look at the mechanisms of price stabilization through public intervention, focusing on analyzing the effectiveness of International Commodity Agreements, based on a literature review and empirical investigations. Section three presents the transformation of the paradigm of addressing the price stabilization problem, while Section four finalizes the paper offering some conclusions and policy implications.

## 2. Retrospective Look at the Mechanisms of Price Stabilization
### 2.1. An Overview of the Major Public Intervention Mechanisms

The search for the optimum mechanism to stabilize prices on the world market has experienced, so far, two major stages of development:

I. The quest of "The New International Economic Order" through international agreements for commodities, from the 1930s until the late 1970s;

II. The search for liberal solutions through risk management instruments, since the 1980s onward.

A retrospective look at the price control mechanisms meant to ensure the stability of income for domestic producers led to the identification of several trends that occurred throughout history. For example, in respect to agricultural commodities, interventionist and protectionist measures have a long and controversial history that can be divided into three major waves (UNCTAD, 2003: 30):

- The first protectionist wave was initiated by the European countries and directed against the new territories of North America and Oceania, cereal, dairy and meat producers, in a context amplified by the revolution in transport and freezing techniques that took place in the late nineteenth century. These events formed the construction basis for what became, decades after, the European Union's Common Agricultural Policy.
- The second wave occurred in the interwar period in which both the exporting and importing countries have adopted and intensified interventionist policies and manifestations of economic nationalism.
- The third wave is associated with the period following the Second World War, being the result of several factors, as: the problems of post-war reconstruction and the difficulties in the balance of payments of the Western European states; the deepening of governmental implications in combating the disadvantages associated with low income levels for the population; notions of distributive justice for the agricultural sector, unable to capture the benefits but forced to bear the cost of technological development; the formation of regional economic groupings etc.

While developed countries were in a position to establish and implement its interventionist measures to support domestic producers, low-income countries, because of fiscal constraints, were unable to provide financial support, the gravity of their situation being directly determined by their degree of dependence on incomes generated by commodity exports. The assessment of this problem in the international arena began after the Second World War with the negotiations which materialized in the *Havana Charter* (1948), document that however remained unratified, but whose directions were to influence future international negotiations.

Moreover, the instability of commodity prices deepened in the early 1970s, caused by the replacement of the fixed exchange rate system with a flexible one. Also the emergence of derivatives and other financial instruments determined an increase in the speculative activities in the financial and commodity markets, generating supplementary pressure on market fundamentals and consequently additional volatility. After the recession of early 1980s, the IMF and the World Bank introduced Structural Adjustment and Stabilization Programs, putting the burden of change further on deficit countries (Shafaeddin, 2011; Mihut, 2015).

Confronted with such a challenging environment in which the triggering factors for commodity price instability were so numerous, since 1950, many governments have taken the commitment to manage commodity markets through international agreements. Under the auspices of the United Nations the producing and consuming countries signed five international commodity agreements:
- International Sugar Agreement (1954);
- International Tin Agreement (1954);
- International Coffee Agreement (1962);
- International Cocoa Agreement (1972);
- International Natural Rubber Agreement (1980).

The major guiding principles underlying the formulation of these agreements include the following provisions (Gayi, 2004: 3):
- The intervention through intergovernmental actions should be an exception required by severe disturbances, and not a trading norm.
- Both producers and consumers, represented in equal proportions, must take part in the agreements signed.

The major concern that led to the signing of the first two agreements, for sugar and for tin, was related to the risk of recording low prices, such as those registered in 1930, generated by a surplus of supply. The main instrument applied in both agreements was the management of supply through export quotas, while in the Tin Agreement buffer stocks

were also implemented. For the Cocoa and Rubber Agreements the buffer stock was the most important instrument, while the Coffee Agreement operated entirely based on supply control mechanisms (Gilbert, 1995). Table 1 summarizes the basic features of the five agreements, stressing for each of them the main data and the types of arrangements under which they operated.

Table 1: The characteristics of International Commodity Agreements

| | Sugar | Tin | Coffee | Cocoa | Natural Rubber |
|---|---|---|---|---|---|
| Date of first agreement | 1954 | 1954 | 1962 | 1972 | 1980 |
| Agreements with economic clauses* | 4 | 6 | 4 | 4 | 3 |
| Last agreement with economic clauses* | 1978 | 1982 | 1983 | 1987 | 1996 |
| Economic clauses | Lapsed in 1983 | Collapsed in 1985 | Suspended in 1989 | Suspended in 1988 | Suspended in 1999 |
| Buffer stocks:<br>- Upper limit<br>- Lower limit | no<br>–<br>– | yes<br>+15%<br>-15% | no<br>–<br>– | yes<br>+23.1%<br>- 23.1% | yes<br>+28.6%<br>- 25.2% |
| Export controls | yes | yes | yes | no | no |

*Note: The agreements concluded after the date specified in the table eliminated the price stabilization clauses. Thus, currently they have the main role of improving the information flow on the market of that specific product.
Source: Gilbert (1995); International Coffee Organization; International Cocoa Organization; International Sugar Organization, etc.

The difference between stabilization implying export controls and that implying buffer stock can be found in the financial implications of each practice and in the partaker on which the burden of stock holding falls. In export control agreements, the costs of stabilization fall on producers and producer governments which have the incentive to reduce future production, while in buffer stock agreements producers are not interested to reduce production (Gilbert, 2011: 214-215). Nevertheless, despite their rigorous mechanisms, the agreements generated several controversies on the international scene, since many governments from developed countries considered price stabilization to be an expensive deviation of funds from more important development goals. Thus, these agreements proved to be unable to adapt to market changes, hence, by late 1990s, the economic clauses stipulated in them failed, victims of the political or economic context of the time.

## 2.2 Analyzing the Effectiveness of International Commodity Agreements – Literature Review and Empirical Support

Many debates in the literature (Gilbert (1995), Plantos and Larson (1996), Viton (2004)) were focused towards establishing the effectiveness of these agreements. The extent to which they raised and stabilized prices remains controversial. An investigation of existing empirical analyses and own calculations made on available price series led to the conclusion that all these intervention schemes, some more effective than others, generated only a short-term impact on prices. The graphs in Figure 1 capture the evolution of commodity prices in the years immediately following the termination of agreements by which they were governed.

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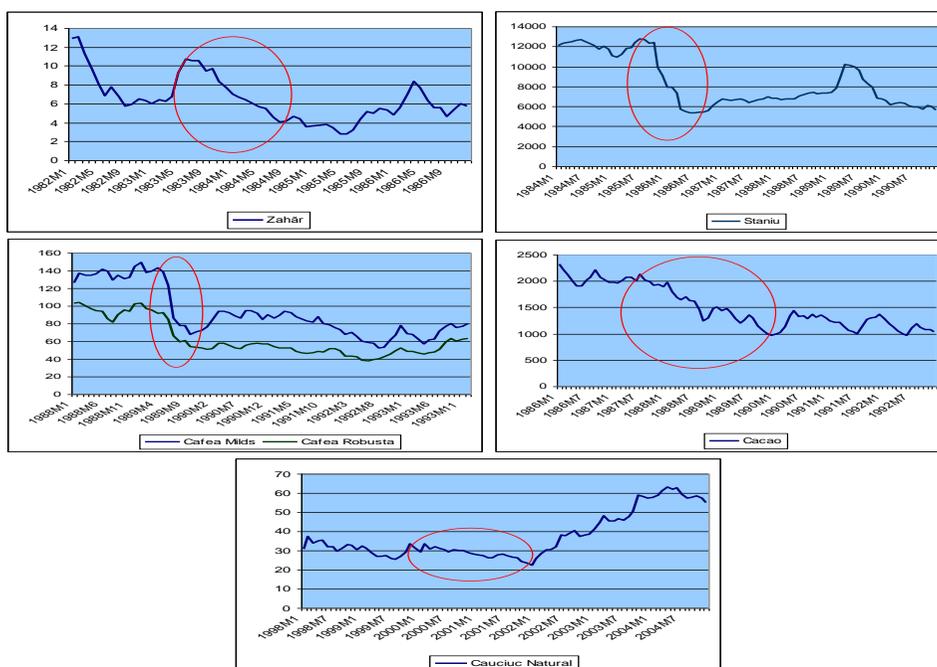
**Figure 1:** Price developments in the years following the agreements' termination.
Note: The order of the commodities in the graph is the following: (1) Sugar; (2) Tin; (3) Coffee; (4) Cocoa; (5) Natural Rubber.
Source: Author's elaboration based on data released by IMF.

In order to emphasize this aspect more clearly, Table 2 presents the levels recorded by price indices of the analyzed commodities in the years immediately following the termination of the agreements.

**Table 2:** Price indices in the years immediately following the suspension / collapse of the agreements

|  | Year -1 (prior to termination) | Year 0 (termination) | Year1 | Year2 | Year3 | Year4 | Year5 |
|---|---|---|---|---|---|---|---|
| Sugar | 100% | 54.9% | 63.5% | 33.8% | 42.1% | 56.2% | 58.0% |
| Tin | 100% | 61.2% | 57.3% | 50.2% | 59.7% | 49.1% | 44.0% |
| Coffee | 100% | 66.3% | 69.0% | 60.2% | 56.0% | 75.3% | 135.5% |
| Cocoa | 100% | 64.7% | 52.4% | 59.0% | 57.0% | 53.4% | 55.0% |
| Rubber | 100% | 88.0% | 92.5% | 79.6% | 106.0% | 141.4% | 170.3% |

Note: The price indices calculated based on the year preceding the termination of the last agreement that stipulated economic clauses.
Source: Gilbert (1995) and author's calculations based on data released by IMF.

As it can be seen from the graphs in Figure 1 and the numerical values in Table 2, for some products, the price collapses registered after the exits from the parameters imposed by the agreements were more substantial (as in the case of sugar and tin), while for others the drops were lower (as for natural rubber). But in all cases there has been registered a decrease in prices, and within a five years horizon, the prices did not return to the levels covered by the agreements, except for natural rubber. This aspect supports the rationale that the Agreements acted in the direction of increasing prices and managed to do that by a substantial amount. The investigation of the literature (Gilbert, 2011) shows that the price decline after the Agreements' failure may have been related to other market developments,

different from the ones that characterized the intervention period (increase of supply caused by the release of stocks previously held by the buffer stock or export controls, or increase of supply determined by the arrival of major new exporters in the international market arena). Still, with an average of about 30 percent lower post-intervention prices than under the Agreements' stipulations, there is empirical evidence to support the fact that the Agreements determined price increase.

With regard to price stabilization, an assessment of the past experience suggests that the Agreements had limited accomplishment in reducing price volatility, partly due to the fact that they did not have effective mechanisms for dealing with abrupt changes, as long as the producers were not interested in exporting beyond what was profitable, and buffer stocks sold only what it was previously bought. Consequently, the empirical analyses on the matter (Gilbert, 2011) brought limited evidence that the ending of the Agreements resulted in higher price instability.

## 2.3. The International Commodity Agreements – Motivations for Failure and Lessons Learned

A wide range of reasons for the failure or inability to further negotiate the Agreements were set, the most representative including the following central ideas (Anderson and Gilbert, 1988; Gilbert, 1995; Calo, 2005; Gilbert, 2011):

- difficulties with attempts to influence prices through output management methods in a context of increasing productivity and supply and emergence of new producers (e.g. Vietnam for coffee);
- difficulties in agreeing on the price oscillation interval considered fair to producers, as well as difficulties in accurately determining the long-term price trend around which stabilization should occur;
- problems in coordinating the interests of signatory parts: conflict between Southern producer states requiring price support and stability and Northern consumer states claiming simple price stabilization (divergence that led to the collapse of the Cocoa and Coffee Agreements);
- the principles of free market determined consumer states to act towards obstructing the negotiations and eventually to seek withdraw.

Opinions (Gilbert, 1996) were issued regarding the idea that all these obstacles could have been overcome if there was enough motivation at the political level, backed by sufficient financial resources to enable the implementation of these agreements. Examples of viable functional arrangements, such as OPEC for oil or DeBeers for diamonds, have managed, despite turmoil, to keep for long periods the price variation within certain limits. The lack of political support is also illustrated by the fact that in the Agreements' history, only that of tin collapsed in 1985 after a successful period of over twenty years, the others failing for various reasons:

- Sugar – adverse market conditions made unviable stabilization attempts;
- Cocoa – lack of funds to support effective intervention from the stabilizing authority; lack of support from the US and the main producer, Ivory Coast, who was not a member of the first three agreements;
- Coffee – though interventions were effective (they raised prices and reduced volatility), concerns appeared regarding the benefits distribution among states, as the high prices did not benefit the producers;
- Natural rubber – negotiation problems related to the necessity to update the band of price fluctuation downward.

A series of lessons can be learned from the experience of these agreements and the reasons that led to their termination / collapse:

- The producers' benefits are not distributed equally among the countries that synchronize their export policies. Big producers were often advantaged by the refusal to join an agreement (Brazil for the Tin Agreement, Ivory Coast in the third Cocoa Agreement, Vietnam for the Coffee Agreement etc.) (Akiyama and Larson, 1994).
- The agreements are outlined based on the market conditions of the time in which they are formulated; thus they are not sufficiently adaptable to the changing markets characteristic of a dynamic world (Gilbert, 1996).
- Precisely the agreements' success in raising prices is what often led to their collapse. Although the decision of negotiation is in the hands of Governments, the choice regarding production levels belongs to farmers, who in the case of high international prices often substantially increased production causing stockpiling and problems in providing financial resources to manage them (Plantos and Larson, 1996).

However, the commodity prices remained highly volatile, often registering levels below those considered fair by the producers from the less developed countries. Thus, after the failure of the Agreements, the producing states have tried to replace the active intervention through unilateral actions organized by associations of producer countries. A model for action was provided by the OPEC, on the structure of which was attempted the foundation of similar associations of producing countries: the Association of Tin Producing Countries in 1986, or the Association of Coffee Producing Countries in 1994. Studies (Gilbert, 1995) have shown, though, that only some of these groupings had significant effects on prices.

Nowadays, however, development policies promoted both by international institutions and democratic governments insist on matters related to production efficiency, marketing, or product quality, a radically different approach to the ideology which provided the framework for implementation of mechanisms designed to restrict supply or to impose production quotas. In a more competitive and less centralized global economy, commodity policies no longer represent a manner of income redistribution from consumers to producers.

### 3. The Change of the Paradigm of Addressing the Price Stabilization Problem

Yet, the problem of commodity price instability continues to cause severe difficulties both for private producers and governments. Therefore, the decision makers worldwide have always sought alternatives, formulated and tested various mechanisms whose central aim was to mitigate price fluctuations. Summarizing the instruments used over the years, we can say that the process of price stabilization has known approaches based on four categories of mechanisms that can be classified and characterized as shown in Table 3:

**Table 3:** Categories of mechanisms used to stabilize prices

| Objective Governance | Price Stabilization | Price risk management |
|---|---|---|
| **Market-based mechanisms** | **Type A Mechanisms** *Objective:* price stabilization through increased performance of markets. *Justification:* lower susceptibility to natural disasters, higher price elasticity of supply; compensation of deficits and surpluses among regions (trade tools) and years (storage mechanisms). *Examples:* storage infrastructure, quality standards, irrigation systems. | **Type B Mechanisms** *Objective:* Risk management through market mechanisms. *Justification:* better possibilities to hedge against price risk and yield risk. *Examples:* forward, futures, insurances. |
| **Public intervention mechanisms** | **Type C Mechanisms** *Objective:* price stabilization through market intervention. *Justification:* influencing supply and demand for price control. *Examples:* interventions in production, trade regulation, governmental stocks. | **Type D Mechanisms** *Objective:* households support during crises. *Justification:* transfer of money or property toward households. *Examples:* food aid. |

Source: Author's elaboration based on information from Galtier (2009).

Since the 1980s, after the failure of the agreements, the next step was the search for liberal solutions through risk management instruments. This new optimal strategy provided a mix of Type B and Type D mechanisms and had as justificatory support the failure of stabilization policies, doubled by theoretical arguments against price stabilization based on the role of price for market information. In practice, this strategy has faced a number of obstacles caused by the underdevelopment of type B instruments at the expected level and by the failure of type D instruments to prevent household capital decline.

In the context of the recent economic turmoil, market analysis determined the formulation of an alternative paradigm that provides a combination of all four categories of mechanisms, in order to take into account the different causes of price volatility. In order to manage the problem of natural price instability, actions for decreasing the supply's sensitivity to natural risks or the increasing of price elasticity must be undertaken. Thus, the answer resides in implementing effective supply structures. About imported instability, it is important to underline that international volatility is transmitted to domestic markets on a degree positively correlated with the country's dependency on imports. Market competitiveness also plays a major role, stressing the importance of governmental intervention through subsidies or trade barriers to shield domestic producers against foreign competition. Regarding endogenous instability, the price expectations of market actors are critical to their choices. Thus, incomplete information regarding market fundamentals can cause destabilizing speculative behaviors. In such a case, efficient futures markets and effective commodity exchanges able to provide sound price discovery mechanisms and proficient risk hedging strategies should be available to mitigate price volatility and its impact.

**4. Conclusions and Policy Implications**

After the assessment of the Commodity Agreements, their effects and their reasons for failure, it can be concluded that, in situations of political involvement and support from the international community, and a commitment of producers toward the common good, such agreements, properly implemented, would be able to achieve their stability objectives. Yet, this achievement is conditioned by the target prices to be set to reflect long term market

trends. Still, in the current environment when all actions and policies aim for market liberalization, there is no favorable context for the resuscitation of similar control practices.

In a globalized economy and a troubled environment, price volatility is rarely the result of a singular cause, thus combined solutions to tackle the problem must be formulated. Available approaches vary from governmental to market-based mechanisms, including instruments designed to reduce production fluctuation, to manage the supply deficit or surplus, to ensure viable risk transfer alternatives or to offer support through subsidies. The implementation of public or market-based tools is determined by the level of involvement of the public or private sector, and effective results require most of the times a joint intervention.

Consequently, the alternative paradigm that currently characterizes the international approach involves choosing the mechanisms in accordance with the causes of volatility. Thus, it requires a shift from risk management towards a structural transformation, from the use of a singular type of instruments to the implementation of a combination of mechanisms, from exclusion towards re-inclusion of public instruments, from using a mechanism in any situation toward a policy approach appropriate to each case of price volatility. Since price volatility represents a very complex phenomenon that can be moderated only up to some extent by adjusting market structures and specifying regulatory policies, each country should concentrate on strengthening its internal potential of production in order to reduce the level of imported volatility, while also dealing with the problem through price risk management strategies.

## 5. Acknowledgement

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**THE DEVELOPMENT AND DIVERSIFICATION OF SERVICES IN THE CULTURAL-RELIGIOUS DOMAIN BY TYPES OF EDUCATION**

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**Abstract:** *Lately, a sustainable development has been more and more discussed and, implicitly, the service sustainability in the context of globalization. This is why, with this approach, the role of the human and, naturally, of the society was observed in carrying out educational, religious and cultural activities.*
*By analogy with a new product's development steps, the phases necessary for the development of a new service concept were advanced. By means of qualitative and quantitative researches, the ideas necessary for the development of a new service were generated. From the great number of propositions, the most important ones were selected through qualitative researches. These were used in creating the new service.*
*The cultural-religious educational service is the result of these activities, being a concept of the lateral marketing, but also a concern for a sustainable development. This service merged three distinct concepts (education, culture and religion), taking into account that information and knowledge are central for the progress and sustainability of a society's development.*
*This service is a new concept by means of which one shall target how we may achieve the prevention of certain tendencies of school drop-out, new didactical methods and forms being tested this way, having as main purpose a better teacher-child, child-teacher, child-child, teacher-teacher communication.*

**Keywords:** strategy, sustainability, service, culture, religion, education.

**JEL classification: M31, I25, M14, O15, O21**


## 1. Introduction

Currently, marketing recognizes several directions: societal marketing, lateral marketing, cultural marketing, strategic marketing etc. Thus, the general theory covered the understanding and reflecting of the most relevant planning phases in the context of a sustainable development, with the supplement of approaches specific to culture, religion and education.

The phases preceding the set out of marketing strategies (generating ideas and creating and testing the concept of product) are problems settled with the help of qualitative and quantitative researches. The scope of these researches was to detect emergent needs of the children and obtaining ideas from respondents with the purpose of generating a new and sustainable service.

Pursuant to the latest approach regarding this discipline, corroborated with the principles of sustainability alongside the following chapters: *Methodology used for creating a new service, Cultural-religious educational service, results and importance for a sustainable development*, this approach shall facilitate laying the foundations of new horizons based on knowledge, on human and intellectual capital, in other words, a new children-effective service was created.

The main points of this article seize the most important aspects for shaping the cultural-religious educational service. In the same time, the development and supply of remedial teaching activities (validation of prior teaching, detection of gaps in training, recovery

hours, professional and psychological orientation, guidance etc.) should represent a very important aspect for the persons involved in this approach, either children, parents, teacher or priests.


## 2. Methodology used for creating a new service

With this research, the focus shall be placed on children with ages between 10 and 14 years as they represent the targeted segment of users; in the same time, the fact that they are very pretentious deserves regard. In elaborating the strategy, a series of request shall be considered, expressed directly by pupils and high school students or by their next of kin.

Taking into account that currently, in Romania and anywhere in the world, there is a very large number of people affiliated to a cult or another, the segment of users targeted by this approach shall take into account the following aspects:

- Necessity of development and of providing for remedial educational activities (Ministry of Labour, Family, Social Protection and Elderly, website) (SCG, 2008-2014) for children (validation of knowledge acquired previously, detection of gaps in training, recovery hours, professional and psychological orientation, guidance etc.) but also for "School after School" program specific activities (The Ministry of Research, Youth and Sports) (MECTS, 2011) also designed for children;
- Depending on the individual school performance, but also on the school year, children with ages between 10 and 14 years have knowledge of a certain level;
- The school drop-out rate in 2011/2012 in the Romanian middle school is of 1.9%.

The small service users (the children) are currently confronting with various issues. In what concerns the needs of middle school and high school students, the globalization brings into attention the following needs (The Civil Society Development Foundation, website) (FDSC, 2010: 5-13):

- conventional, intervening in the child's process of education and development; they can be identified with the needs appearing in Maslow's hierarchy (physiological, safety, belongingness and love, esteem, self-actualization and self-transcendence);
- hidden, with the purpose of being hard to notice; they can be identified only if certain behavioural aspects of children are taken into account. They are owed to negative social phenomena or to ways of reacting in certain circumstances in an abnormal manner;
- emergent, representing an important category of new challenges, issues to be analyzed and settled, but also favourable situations young people and children confront with, not experienced by previous generations.

A series of manifestations have been observed among children within the study "Emerging needs of children in Romania" (The Civil Society Development Foundation, website) (FDSC, 2010: 5-13):

- Because of the lack of proper examples, the children are disoriented, they are not aware of the standards and their values and role models are replaced;
- Children are influenced by role models promoted by mass-media;
- Mass-media shows values which contradict those explained by parents, teachers or books the children study.

For new ideas to be investigated, the accent was laid on the opinions and observations (recommendations) of the potential users' parents. This is why, in 2012, a survey was carried out including, among others, two questions relevant (Săvoiu, 2004: 37) for this study (direct research) (Ioncică, 2000: 177), respectively:

- Question at point 10: Do you see fit that the cultural services to include new

services based on the values accepted by the Church in the European context?

■ Question at point 11: Concerning the question at point 10 (previous question), what kind of services do you have in mind?

From 100 persons questioned, 73 think that the development of a new concept based on the values accepted by the Church in European context is relevant within the cultural service. The most significant recommendations are:

■ Services promoting peace and improvement of cooperation between nations;
■ Cultural services for young people;
■ Services promoting understanding and tolerance in relationships between people;
■ Services promoting peace and harmony in society;
■ Theatre with Byzantine art performances;
■ Services insuring the promotion by means of Church of intercultural cooperation;
■ Supporting young artists in all domains;
■ Services of cultural partnership for educational purposes;
■ TV shows centred on promoting less known religious places;
■ Services laying the stress on the development of the aesthetical aspect of churches;
■ Services based on ensuring vital aspects for society in general and children in particular;
■ Promoting church values (developing a civic spirit);
■ Services for cultural guidance and development of a greater number of religious values;
■ Services promoting tolerance between people;
■ Educational services for children;
■ Development of services able to contribute to creating new places of work;
■ Services promoting the orthodox culture;
■ Libraries with religious specificity;
■ Cultural services outlining the importance of marriage and of right to a religion;
■ Services making the teachers more conscientious about the responsibility of their activity;
■ A connection which might lead to better informing on the religious culture in the European Union;
■ Services concerning a better knowledge of history of religions and a better collaboration between churches;
■ Collaboration with military services regarding various cultural and educational aspects;
■ Services to promote religious tolerance;
■ Services to develop the concern for classical music and religious traditional art;
■ Services making the people aware of the negative influence of globalization regarding the people exploitation in different socio-cultural environments;
■ Services for people under-privileged in what concerns the culture and education;
■ Services laying more stress on moral, cultural, social and political aptitudes;
■ Services promoting the trust and the faith;
■ „School education" scientific services, „Honesty and friendship" moral services, „Close to church" religious services;
■ Intercultural exchanges, tolerance between religions, promoting the religion in a balanced way, without aggressiveness or importunity;
■ Education though faith, psychological therapy through faith, social assistance;
■ Balanced development between all faiths;
■ Promoting in media the cultural aspects of known cults;
■ Making the young people aware and attracting them towards faith by means of cultural activities;

- Services laying the accent on religious information within education;
- National and international art exhibits organized in Romania.

From this multitude of ideas, the ones having no interest have been eliminated. For this purpose, during the period of time 01.08.2013-15.08.2013, a semi-controlled deep interview (Cătoiu, 2009: 119-120) has been conducted to which nine Romanians took part, selected according to religion and family status. The approach targeted:

- Determining, with the help of respondents, a series of fundamental categories of values;
- Identifying the connections between the references of values mentioned by the respondents and their family status (if they have children/nephews or not);
- Establishing the role played by the religion and by the religious units in the family of the questioned persons;
- Determining the role of the religious units for communicating references of values and acknowledged life principles on certain formal and informal ways down to the new generations;
- Naming other legal or natural persons and the manner in which they may involve in the recommended activities;
- Determining the most important methods and forms of communicating down to children and teenagers with ages between 10 and 14 years of values and life principles, by means of religious units;
- Identifying a series of names for this type of service and the sum of money the family would pay for it;
- Identifying the period of the year and of the day when the children and parents would be willing to make time for this type of service.

The nine persons that have been interviewed stated that they are religious people, using the religious services in different ways, respectively each Sunday (two persons), only with the occasion of important holidays during the year (five persons), on certain events and occasions (two persons). All nine persons taking part in the interview are worried about the weak results in the 2013 Baccalaureate and consider that the most important values for educating a child include: culture, generosity, development of the winning spirit and exceeding this threshold, parents, Christian and moral education, responsibility, faith, work, family and correctness.

The methods considered by the respondents to be the most important for communicating certain values and life principles down to children with ages between 10 and 14 years are: thematic camps, catechism lessons, the sermon after the Divine Liturgy, positive examples of those around them, television, radio, press, theatre, museums, competitions.

This service is considered to be relevant by seven of the participants and could be named: Improvement, Religion for all, Meditations, Civic Education, Educational Culture and Religion. The most favourable period would be the summer holiday (8 to 24 hours per month) and the family members would pay on average 50 to 60 lei/hour, except for those who mentioned that they would use this service on a free basis.


**3. The cultural-religious educational service, results and significance for a sustainable development**

A planning and a short-term development program (two years) were carried out for the cultural-religious educational service. In order to introduce a certain novelty, each year this service shall be improved and shall also receive a new thematic approach. This way, the planned activities shall be carried out as thematic classes (Pană, 2011: 64-66) organized by the religious units. In conformity to the ideas expressed by the parents of the potential users, the most adequate thematic areas are introduced in the table below:

**Table 1:** Thematic approaches of the cultural-religious educational service

| No. | Project themes for the cultural-religious educational service | Project year | Thematic classes | Reasoning |
|---|---|---|---|---|
| 1 | Cultural-religious educational service and moral principles | N | Class 1: Educational and religious values | Two years were advanced for this service, taking into account that there are budget policies concerning the European funds that can be assigned during the period 2014-2020 (SCG, 2008 - 2014). During the two years of implementation, ESF (European Social Fund) non-reimbursable financing shall be considered. |
| | | | Class 2: Cultural and moral values | |
| 2 | Cultural-religious educational service and traditions | N+1 | Class 3: Traditional an real values | |
| | | | Class 4: Human and religious values | |

Source: drawn up by the author;

In the previous table, the cultural-religious educational service themes have been grouped on four types of thematic classes. They represent standard projects at the level of the management unit (Metropolis). The suggested themes shall be observed by all 10 units involved in implementing them.

The four thematic approaches shall address children with ages between 10 and 14 years, taking part in activities carried out by the Church and who may originate both from poor families, but also from families with high revenues, whose parents don't have enough time to check on their home assignments or don't have the field knowledge necessary to perform proper verifications.

The cultural-religious educational service has as general objective: *to encourage the transfer of information between generations and in the same time to contribute, during the summer holiday, to the improvement of knowledge in different disciplines, of children with ages between 10 and 14 years.*

On short term, the thematic classes (recommended under table no. 3) shall have a duration of 48 hours each year, during the summer holiday. The possibilities of approach in what concerns the period and the duration are showed below:

**Table 2:** Propositions concerning the manner in which the thematic activities suggested should be carried out

| No. | Period of development | No. of weeks | No. of days/week | No. of hours/day | Motivation |
|---|---|---|---|---|---|
| 1 | Summer holiday | 4 | 3 | 4 | In order to meet the conditions |

| | | | | | |
|---|---|---|---|---|---|
| 2 | Summer holiday | 4 | 4 | 3 | requested by the "School after School" program, 12 hours per week shall be recommended |
| 3 | Summer holiday | 4 | 6 | 2 | |
| 4 | Summer holiday | 4 | 2 | 6 | |

Source: drawn up by the author;

Regarding the manner in which the course of the program is organized, the activities of the thematic classes shall be scheduled during summer holidays, from Monday to Friday, in the following manner:

- between $10^{00}$ and $14^{00}$ hours (when organizers choose to carry out the activities during three days, for fours hours per day;
- between $10^{00}$ and $13^{00}$ hours (when organizers opt to carry out the activities during four days, for three hours per day);
- between $10^{00}$ and $12^{00}$ hours (when organizers choose to carry out the activities during six days, for two hours per day;
- between $10^{00}$ and $16^{00}$ hours (when organizers choose to carry out the activities during two days, for six hours per day.

Taking into consideration the qualitative research concerning the values and the reference system that should guide the children and teenagers (introduced previously), and, in the same time, the opinion of the nine persons taking part in the semi-controlled deep interview that has been conducted for this approach, two modules shall be suggested for each of the four themes (a mandatory - O and an optional module - o) (Suciu, 2000: 145) that could be carried out each year, for a period of four weeks (during the summer holiday), for 12 hours per week. Each religious carrying out activities recommended in these thematic classes shall adapt their time schedule according to one of the alternatives introduced in the previous table.

**Table 3:** Creating the Service – several alternatives

| Program Name | Constitutive activities | 1st Variant – Package component | | 2nd Variant - Package component | | 3rd Variant - Package component | |
|---|---|---|---|---|---|---|---|
| | | O | o | O | o | O | o |
| Educational and religious values | Mathematics | x | | x | | x | |
| | Romanian language | x | | x | | x | |
| | Physics | | x | x | | | x |
| | Chemistry | | x | x | | | x |
| | Biology | | | | x | x | |
| | Geography | | | | x | x | |
| | Visits | | x | | | | |
| | Excursions | | x | | | | |
| Cultural and moral values | English | x | | x | | x | |
| | French | x | | x | | x | |
| | German | | x | x | | | x |
| | Italian | | x | x | | | x |
| | History | | | | x | x | |
| | Religion | | | | x | x | |
| | Drawing | | x | | | | |

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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Music | | x | | | | |
| Real and traditional values | Mathematics | x | | x | | x | |
| | Physics | x | | x | | x | |
| | Geography | | x | x | | | x |
| | Information and communications technology | | x | x | | | x |
| | Informatics | | | | x | x | |
| | Chemistry | | | | x | x | |
| | Popular dances | | x | | | | |
| | Visiting objectives | | x | | | | |
| Human and religious values | English | x | | x | | x | |
| | French | x | | x | | x | |
| | German | | x | x | | | x |
| | Italian | | x | x | | | x |
| | History of religions | | | | x | x | |
| | Extraordinary people | | | | x | x | |
| | Organizing competitions | | x | | | | |
| | Excursions | | x | | | | |

Source: executed and drawn up by the author

The activities parts of each alternative have been grouped on mandatory and optional actions. Each alternative and absolutely each program include activities from the curricular field of already known, disciplines that shall be approached both from a theoretical and from a practical point of view.

*The four thematic classes, regardless of the chosen alternative, have as purpose the education of young generations in the spirit of true values, with the help of the generations and people who can represent authentic role models for the society.*

**4. Conclusions**

Through this service, certain activities targeting the prevention of school drop-out shall be carried out. In the same time, new didactical forms and methods shall be tested, with the main purpose of redefining new ways of approaching the child-teacher, child-child, teacher-teacher relationships.

With this approach, one has introduced a series of activities valuable for a harmonious development of pupils with ages between 10 and 14 years, whose parents don't have the time or knowledge necessary to get involved in their children school education.

The feedback for this service must have as reaction the school performances of students taking part in activities of the recommended thematic classes and the development of a partnership built on trust and cooperation between teachers-community-children and parents. Only this way one shall profit from the results of the remedial educational activities carried out for the benefit of the community and the society today and tomorrow.

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*SUB-SECTION: BUSINESS ADMINISTRATION*

# THE IMPACT OF THE EUROPEAN REGIONAL DEVELOPMENT FUND ON SMES – EVIDENCE FROM ROMANIA

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**Abstract:** *As the first programming period for Romania is reaching its end, more information becomes available regarding the effects of the European Union funds on the Romanian economy. Going beyond the mathematical absorption rate, it is important to analyse these effects, especially with regard to the small and medium-sized enterprises (SMEs), in order to improve the future implementation documents for 2014-2020. The purpose of this article is to measure the impact of the European Regional Development Fund (ERDF), granted within one of the 2007-2013 operational programmes, on the net turnover, number of staff and gross profit of the small and medium-sized enterprises from one Romanian county – Iasi. Overcoming the difficulties of gathering reliable data, the empirical research presented in this article tests three hypotheses. The first one is that the EU funding provided to an SME leads to an increase in its net turnover, number of staff and gross profit. The second hypothesis is that there is a direct relationship between the amount of the grant given to an SME and the evolution of the three previously mentioned parameters. The third and last tested hypothesis is that the SMEs that implemented more than one EU-funded project have a better evolution than the ones that implemented only one. The conclusions of our study include recommendations for the implementation guides that are currently being drafted by the responsible national authorities. They also include suggestions with regard to the availability of data concerning the EU-funded projects, especially in the context of the new requirements of the European Union regarding e-cohesion and information and communication. In this context, we also explore the potential benefits of implementing projects that complement each other instead of independent projects. As such, the research presented in this article aims to contribute to a better understanding of the impact of the EU regional development policy and to the improvement of the legislative and procedural framework of its implementation.*

## 1. Background

2007-2013 was Romania's first programming period as a member of the European Union. The nonreimbursable assistance that was provided to Romania by the EU was implemented under 7 operational programmes under the Convergence objective.

These programmes covered a wide range of investment areas, from the development of transport, environment and energy infrastructure, the development of human resources and administrative capacity to investments in competitiveness and innovation. One of these programmes is the 2007-2013 Sectoral Operational Programme Increase of Economic Competitiveness (SOPIEC), financed by the European Regional Development Fund (ERDF) and having a total budget of 11.2 bln. Lei (Ministry of European Funds, 2015).

SOPIEC was designed to support the increase of the Romanian enterprises productivity,

including SMEs, by investing in the productive equipment of the companies, supporting the adoption of the international standards and the internationalization of enterprises, providing access to finance, investing in research and development capabilities and Information and Communication Technologies etc. The programme comprises several priority axes, each focused on a specific field of intervention. The most relevant part of the programme for the SMEs is the first priority axis called "An innovative and eco-efficient productive system", which comprises three components ("Key Areas of Intervention"): one regarding the productive investments and also market preparation, one regarding the access to finance via a financial engineering instrument and one regarding the support of entrepreneurship (Ministry of Economy and Finance, 2012: 10-17).

Within the first component, the programme provides financial assistance for investments in equipment and technology, including production premises, acquisition of patents and licenses, under the operation 1.1.1 named "Support for strengthening and upgrading the productive sector by tangible and intangible investments". This operation is addressed both to SMEs (except microenterprises) and large companies.

## 2. Hypotheses

The empirical research presented in this article tests three hypotheses. The first one is that the EU funding provided to an SME leads to an increase in its net turnover, number of staff and gross profit. The second hypothesis is that there is a direct relationship between the amount of the grant given to an SME and the evolution of the net turnover, number of staff and gross profit. The third and last tested hypothesis is that the SMEs that implemented more than one EU-funded project have a better evolution than the SMEs that implemented only one, measured by the 3 financial indicators previously mentioned.

## 3. Methodology

The population on which the study was performed is made up of small and medium-sized enterprises that correspond to several criteria. The definition of an SME used in this paper is the one stipulated in Law 346/2004 with the subsequent modifications, according to which an enterprise is considered to be a small or a medium-sized enterprise if it has less than 250 employees, a turnover not higher than 50 million euros and a balance sheet total of less than 43 million euros.

The criteria were chosen in order to make the research manageable due to the large number of SMEs supported by the financial assistance provided by the European Union to Romania during 2007-2013 (1.928 projects only under the operation 1.1.1 of SOP IEC, according to the 2013 Annual Implementation Report of the programme).

The first criterion implies that the enterprise had actual expenditures reimbursed during 2009-2013 from SOP IEC, from the operation 1.1.1 described above. This criterion excludes the microenterprises (with under 9 persons employed) from the population, as these are not eligible under operation 1.1.1. We considered more relevant to take into consideration the amount of funds actually received by each enterprise and not the value of the initial financing contract as it is possible that not all the budget of the project is spent or financial corrections are applied due to deficiencies in implementation.

The second criterion refers to the geographical location of the enterprise. One county was chosen –Iasi, which belongs to the North-East region of Romania, which was the least developed region in 2006, in terms of GDP per capita, according to the Regional Operational Programme 2007-2013.

On the basis of the data available for 2011 and presented in the Development Plan of the NE Region for 2014-2020, out of the 6 counties of the North-East region, Iasi participates to the greatest extent to the GDP of the region with 28,77%. Iasi County has also the largest number of active enterprises compared to the other counties in the region (27,4%). The third criterion is that the SME has not cancelled the project. When a project is cancelled, the public contribution has to be reimbursed to the national authorities and as

such the enterprise does not receive any financial support in the end.

A fourth criterion regards the availability of data. In this respect, it is important to mention that the EU regulations ask the institution responsible for managing an operational programme (namely a managing authority) to publish the list of beneficiaries that receive financial assistance from the EU funds. Nevertheless, as this requirement involves only the publishing of the name of the beneficiary, the title of the project and the public contribution, the amount of information regarding the projects depends on how much the managing authority is willing to make available to the general public.

In the case of SOP IEC, the Ministry of European Funds, within which the managing authority is located, publishes a regularly updated list of contracted projects. This list includes the name of the beneficiary, the title and the detailed budget of the project and also the reference to the call of projects within which each project was submitted. The latest version of the list includes contracted projects up to 31.03.2015. The list does not include information regarding the geographical location of the enterprise or the amount of funds that were actually reimbursed to the enterprise (Ministry of European Funds, 2015).

Therefore, in order to identify the SMEs from the Iasi County, the online search option provided by the website of the Ministry of European Funds was used. This option allows the user to access the national database of contracted projects – SMIS-NSRF, in which information regarding the geographical location and the reimbursement claims is available. Nevertheless, the information provided by this facility does not allow the identification of the small and medium enterprises. The only SMEs included in the population were the ones for which information was available at the beginning of April 2015 regarding the reimbursement claims.

Following the above mentioned criteria, the first step was to generate the list of projects with the help of the searching tool from **www.fonduri-ue.ro**. The filters used were SOPIEC, operation 1.1.1, Iasi County and a list of 61 projects corresponded to them. The 61 projects belonged to 54 enterprises.

In order to identify which of these 54 enterprises are SMEs and which ones are large companies, a crosscheck was performed with the list published by the managing authority, mentioned above. The crosscheck revealed that out of the 54 enterprises 4 were large companies, 1 was wrongfully registered to the North-East region and 2 had cancelled projects. The population of 47 SMEs was verified using again the detailed information regarding the reimbursement claims. Out of the 47 SMEs, 14 had reimbursement claims between 2009-2013, 20 had the first claim paid in 2014 or 2015 and 13 have no reimbursement claim paid by the responsible authority.

For the 14 remaining SMEs, verification was made in order to identify if they also had other projects, not belonging to operation 1.1.1, for which they had reimbursement claims paid between 2009-2013. The result was that 4 SMEs had such projects.

For this verification, we used the list of contracted projects in the North-East region, published by the NE Regional Development Agency and which includes information for all operational programmes, including the programmes regarding rural development and fisheries. The latest available version of the list is from September 2013. The list includes a unique registration code of each project (SMIS code) which allows the verification of the reimbursement claims using the online search tool from **www.fonduri-ue.ro**.

To sum up, the population analyzed is made up of 14 SMEs, which have 18 projects. The population is not considered representative for Romania.

For this population, two types of data were collected. First, information about the reimbursed amounts between 2009-2013. When the enterprise had 2 projects, the amounts were added. Second, information about the net turnover, number of staff and gross profit for 2009 and 2013 was collected from the website of the Ministry of Public Finances.

## 4. Results

The first hypothesis tested was that the EU funding provided to an SME leads to an increase in its net turnover, number of staff and gross profit. This hypothesis has 3 components and the results are not consistent for all of them, as it is shown in the following figures. First, 57% of the SMEs showed an increase in the net turnover and 43% showed a decrease, as presented in Figure 1 below.
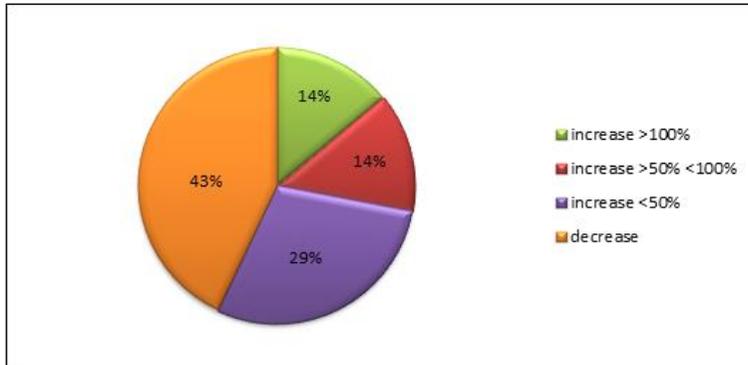


**Figure 1:** Evolution of net turnover 2009-2013
Source: adaptation of data from www.mfinante.ro

Second, 78% of the SMEs showed an increase in the number of staff during 2009-2013 and 22% showed a decrease, as presented in Figure 2 below. The increase in the number of staff could also be explained by the fact that a project proposal would receive more points during the appraisal process on the basis of the number of jobs created and maintained. For instance, a maximum of 8 points out of 100 were given for a project that would lead to the increase of 20% of the staff employed (Ministry of Economy, Trade and Business Environment, 2011:77).
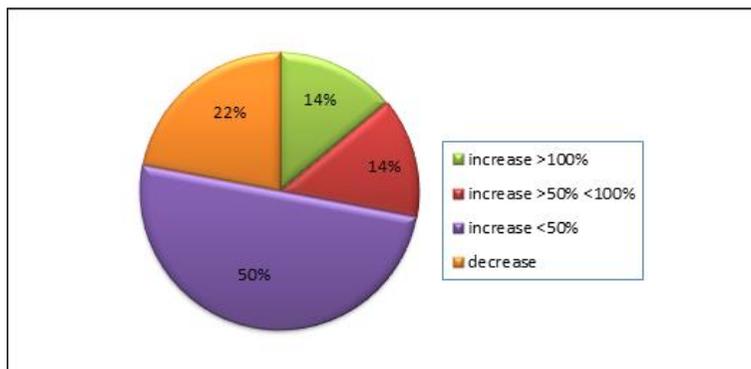


**Figure 2:** Evolution of number of staff 2009-2013
Source: adaptation of data from www.mfinante.ro

Finally, 57% of the SMEs showed an increase in the gross profit during 2009-2013 and 43% showed a decrease, as presented in Figure 3 below.
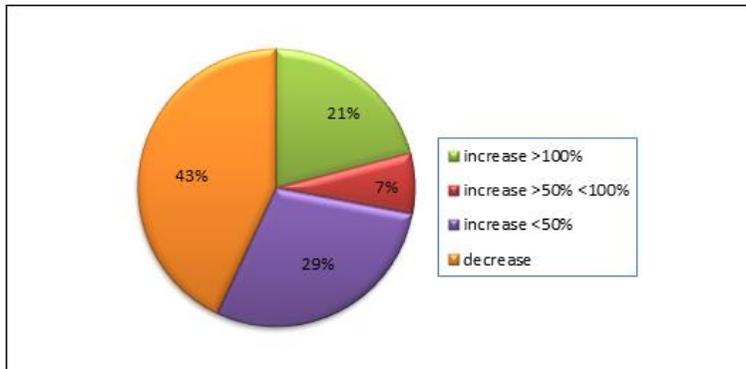
**Figure 3:** Evolution of gross profit 2009-2013
Source: adaptation of data from www.mfinante.ro

Considering the results obtained, the first tested hypothesis is confirmed, in the sense that the EU funding provided to an SME leads to an increase in its net turnover, number of staff and gross profit. The data indicate a strong relationship between the EU funding provided to an SME and the increase of its number of staff and a moderate link regarding the net turnover or gross profit.

The second hypothesis is that there is a direct relationship between the amount of the grant given to an SME and the evolution of the net turnover, number of staff and gross profit. The first correlation is presented in Figure 4 below.
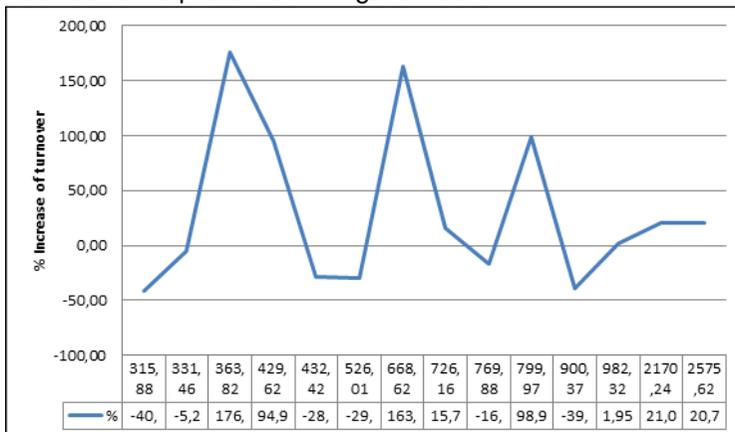


**Figure 4:** Variation of increase of net turnover in relation to the value of the grant (thousands lei)
Source: adaptation of data from **www.mfinante.ro** and **www.fonduri-ue.ro**

As the figure clearly illustrates, there is no identifiable link between an increasing value of the grant provided to an SME (nonreimbursable assistance comprising ERDF and national budget contribution) and the increase of net turnover. A similar situation can be observed with regard to the variation of increase in the number of staff in relation to the value of the grant, as presented in Figure 5.
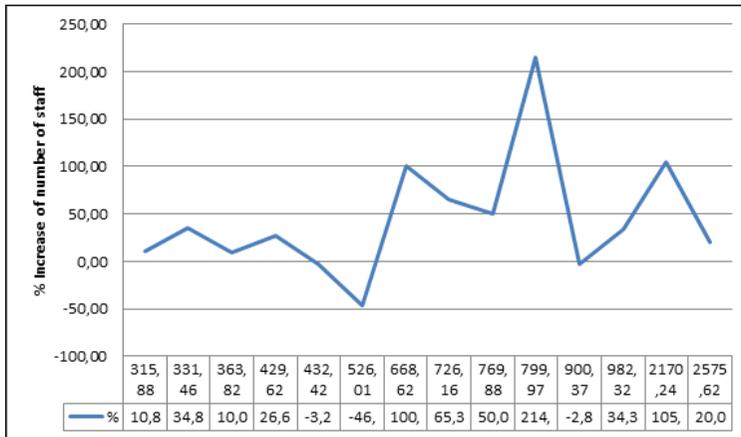
**Figure 5:** Variation of increase of number of staff in relation to the value of the grant (thousands lei)
Source: adaptation of data from **www.mfinante.ro** and **www.fonduri-ue.ro**

Finally, regarding the variation of increase in gross profit in relation to the value of the grant, one of the values that presented an abnormal increase in gross profit (over 10.000%) was eliminated from Figure 6 in order to better reflect the variation of the other values.
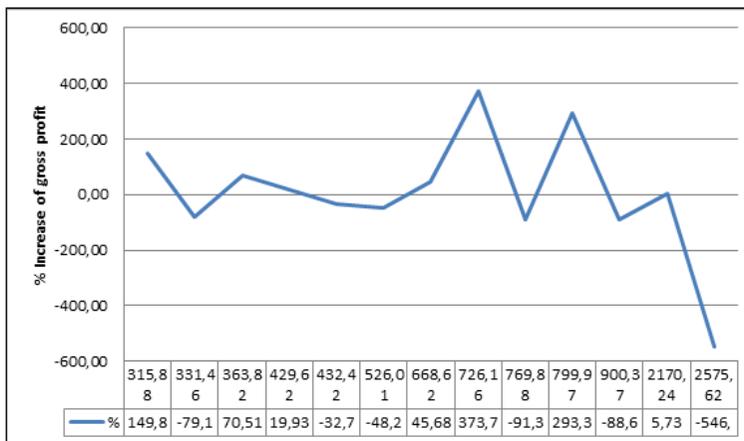


**Figure 6:** Variation of increase of gross profit in relation to the value of the grant (thousands lei)
Source: adaptation of data from **www.mfinante.ro** and **www.fonduri-ue.ro**

Considering the results obtained, the second tested hypothesis is not confirmed, in the sense that there is no clear relationship between the amount of the grant given to an SME and the evolution of its net turnover, number of staff and gross profit.

The third and last tested hypothesis is that the SMEs that implemented more than one EU-funded project have a better evolution than the ones that implemented only one. In order to identify if an enterprise had implemented other projects, for which it had received reimbursements during 2009-2013, a search was performed on a centralized document comprising all contracted projects in the North-East region (North-East Regional Development Agency, 2013). When another project was identified, it was verified for the status of the reimbursement claims with the online search tool from www.fonduri-ue.ro mentioned above.

The result was that 4 SMEs had another project, all of them financed under SOPIEC but not under operation 1.1.1. Out of the 4 projects, 3 regarded the access to the internet and one regarded the implementation of international standards.

The results of the analysis of the evolution of the net turnover, number of staff and gross profit for the two groups of SMEs, one with 1 project and one with 2 projects, is presented in Table 1.

**Table 1:** SMEs presenting an increase of the net turnover, number of staff and gross profit

| Indicator | SMEs with 1 project | SMEs with 2 projects |
| --- | --- | --- |
| Increase of net turnover | 50% | 75% |
| Increase of number of staff | 80% | 75% |
| Increase of gross profit | 50% | 75% |

Source: adaptation of data from www.mfinante.ro

Out of the 10 SMEs that had only 1 project, only half presented an increase in the net turnover and the gross profit, compared to the 4 SMEs with 2 projects, out of which 75% presented such an increase. In terms of the increase in the number of staff, more SMEs having 1 project presented an increase than the ones with 2 projects, probably because of the benefits of creating more jobs during the project appraisal process.

As a result, the third hypothesis is partially confirmed with regard to the net turnover and the gross profit.

### 5. Conclusions

According to the research performed at the level of the SMEs from Iasi County which had projects approved under operation 1.1.1 of SOPIEC and reimbursement claims paid in 2009-2013, there is a link between the EU funding provided to an SME and an increase in its net turnover, number of staff and gross profit. The data indicate a strong link in the case of the number of staff and a relatively weak link in the case of the net turnover and gross profit.

The data did not reflect any correlation between the increase in the net turnover and gross profit and the increase in the amount of the grant. Nevertheless, the data illustrated a greater number of SMEs that had an increase in these indicators in the case of the SMEs that had more than one project for which reimbursement claims were paid by the responsible authorities.

In other words, the data suggests that it is more important the number of projects, covering more types of investments, and not necessarily the value of the grant. This translates into the necessity of having a more strategic approach with regard to providing grants to the SMEs. This could be achieved by prioritizing in the appraisal process the projects that have an integrated vision regarding the investments and the development of the enterprise. Also, more attention could be paid to identifying and promoting complementarity links between projects, prioritizing the interventions that implemented together will have a greater impact than implemented separately.

All of these require access to information that has to be accurate and up to date. The research performed and presented in this paper reflects the fact that the available sources of data regarding the projects implemented under 2007-2013 programming period are not complete (different pieces of information can be found in several sources of information), are not entirely accurate (the location of an enterprise was not correct), are not up to date (the centralized list of contracted projects was updated only up to September 2013) and was not presented in a format easy to process (most documents are in .pdf format and the online search option does not allow the export to Excel).

More information should be made available to the general public, in a format that allows data processing and concentrated in a single, accessible source. This could be achieved in 2014-2020 due to two new requirements imposed by the EU regulations. One of these

requirements is the e-cohesion. According to art.122 of Regulation 1303/2013, member states must provide the beneficiaries with the possibility of exchanging information with the responsible authorities in electronic format. This requirement implies that an important amount of information will exist in electronic format, information that could be made available to the public.

The second requirement regards information and communication. According to art.115 of Regulation 1303/2013, member states must publicize the list of projects financed in a format which allows data processing and on a single website for all the operational programmes approved in the member state. This requirement will enable more in-depth analyses and research in the future.

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# CITIZENS' INVOLVEMENT IN PUBLIC DECISIONS: BETWEEN NORMATIVE FRAMEWORK AND ACTUAL FINDINGS (II – RESEARCH RESULTS)

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**Abstract:** *Local communities' needs must be addressed by an effective, loyal and transparent action of local institutions in the direction of ensuring participation of the citizens in undertaking decisions concerning that particular community. It is therefore necessary a good communication with the citizens of the local public institutions, and a proper and adequate information of citizens. After presenting in our previous research the main theoretical contributions in the theory of participatory democracy in local governance institutions, but also some practical considerations, including results and restrictions concerning how they are actually implemented in the Romanian public institutions, this paper focuses on presenting and analysing the results of our own researches. We present the results of the research carried out during 2014 on investigationg relevant concerning the public governance in local administration, and particularly in this paper how local administration facilitates the involvement of citizens in decision-making process and their participation in debating the main community issues.*

**Keywords:** local governance; citizens' participation; transparency; decision-making; own research

**JEL classification**: H41; L33.

## 1.Introduction

As required by a democratic society and an effective local public administration, local institutions must address local communities' needs in a transparent and open way, by involving citizens in public decisions. To ensure these elements and to enforce the principle of citizens' participation in the local governance, local public institutions must proceed from the proper and prompt information of citizens regarding the community's issues. This paper is based on the results of a research carried out by us during 2014, with the overall objective to identify issues relevant to public governance in local administration, in terms of understanding and applying modern management principles, reform and changes required in the management of these institutions and in relation to the criteria and requirements of a modern administration, efficient and honest in relation to final beneficiaries - local communities and society as a whole. Within the specific objectives, we try to understand how local administration facilitates the involvement of citizens in decision-making and participation in debating the main problems of the community, the sufficiency, variety and effectiveness of the actions taken in this respect, the extent to which these concerns affect good local governance.

## 2. Research methodology

For setting the sample it was used a sampling technique in two phases. In the first phase there were inventoried all local government institutions (municipalities, cities, municipalities, county councils and metropolitan areas) in two counties in Northwest Region of Romania (Bihor and Salaj), choice based in particular on the availability of respondents in these two counties to answer to the questionnaires sent to them.

The questionnaire was administered from February to May 2014. In the first phase, respondents were explained the purpose and methodology of the research and hoe to complete the questionnaires, there were made available the printed questionnaires and

subsequently there were collected in their original form (on paper). In the next phase, their content was compiled into a database in electronic form, from which we extract the key information that will be used in this paper.

We had received a number of 49 questionnaires completed by people in local government management in 38 municipalities, as follows: 37 maires, 6 secretaries of maire, 4 economic directors / chief accountants and 2 managers ofBudget and local taxes compartments. As geographical area, the municipalities are situated in the North-West Region of Romania, namely 24 towns in Bihor County (i.e. 4 towns and 20 villages) and respectively, 14 municipalities in Salaj (i.e. 2 towns and 12 villages). They represent 23.17% of the total population. The estimated error in the reference population is of 1%.

Concerning the type of municipality (urban / rural) and their size, most of the settlements are part of the municipalities (32 villages), followed by 5 towns and small cities (under 30,000 inhabitants) and a city / county seat with about 200,000 inhabitants.

The applied questionnaire consists of two parts. The first part (i.e. a structured interview) comprises of 7 questions refering to the identification, type, size and specific traits of the surveyed public institutions, respectively, a number of 6 questions with given answers refering to the services, infrastructure allocated and possibly introducing new, on line supported, services. The second part of the interview (i.e. the semi-structured interview) comprises of 25 questions, open questions and with alternative responses grouped under some guiding ideas - principles governing the professional conduct of civil servants (16 questions), public management reform and understanding change (5 questions) and finally 2 questions refering to personal options of the respondents on their own career in public administration. Although the questionnaire combines closed questions (Yes / No type), with the default multiole choice type, and open questions, it gives considerable freedom to respondents as to submit personal details and options, outspoken on the relevant issues on discussion.

## 3. Results and discussion

In this paper we focus on the results of the research concerning the principle of participation of citizens in making and implementing decisions, one of the six principles mentioned in literature, i.e. the principle of equality and inclusion (no discrimination), the transparency principle (clear and precise rules making and implementing decisions), the principle of the prompt response to citizens, the principle of the orientation towards consensus, the principle of effectiveness and efficiency orientation and spending of the public resources.

Returning to our research, we notice that citizens' participation in the decision-making process is, at least from the perspective of local institutions' managers, considered positive, i.e. qualified as positive „in a large extent" or „completely positive" by more than 60% of the respondents. „Neutral" or „satisfactory" is the opinion of 11 respondents (i.e. 22% of total) and 8 respondents (i.e. 16% of the total) have a reserved opinion (little) on such participation.

For a better understanding of that assessment we must, however, consider how, with what means and actions it is facilitated this involvement, and, above all, which is their frequency and the importance assigned to it by local representatives.

Being both about to promote and to make public the actions of the public administration, to remind the rights and obligations as members of the community while ensuring their involvement in the debate community problems, it is normal to witness a large number of modes of action and at the same time, simultaneous and combined use of several ways to achieve these goals. The question "By which  forms of communication do you ensure citizens' access to knowledge and debating community problems?" with 6 response options suggested, giving to respondents the opportunity to add other actions that they

have used during such activities and also can choose several answers if they properly describe the actions taken (Table no. 1).

**Table 1.** Distribution of responses / choices on forms of communication used to ensure citizens' access to knowledge and debating community's issues

| By which forms of communication do you ensure citizens' access to knowledge and debating community's issues? | Number of choices |
|---|---|
| Direct communication, face to face (meetings, workshops, public debates etc.) | 44 |
| By sending e-mails | 10 |
| By calling | 19 |
| Distribution of information materials by post mail | 19 |
| Advertisements in print media | 25 |
| Notices panels and boards | 48 |
| Others (list them): <br> - Distribution of materials by the employees on street <br> - Web page, <br> - Informal meetings, <br> - TV broadcasting | 8 <br> 3 <br> 3 <br> 1 <br> 1 |

Source: responses to questionnaires

As a result, to the 6 proposed variants there were added 4 more, which, even if repeat to some extent previous options, can catch, in a positive perspective, both authorities' interest to ensure both the contact and involvement of citizens in community issues, and highlighting of their own initiatives. Concerning the general considerations on the answers got to this question, we notice a large number of responses (i.e. 173 options), which is the largest participation in the responses so far. At first glance we see that dominating are the boards informing method (i.e. 48 options), followed by direct face to face communication (meetings, workshops, community debates etc.) with 44 options. At a considerable distance (25 options) there are advertisements in print media and then, on par in terms of the number of options (i.e. 19 options each), there are find telephonic approach and respectively, distribution of information materials by regular mail. All other variants accumulate a smaller number of options.

Although the analysis of the responses can generate criticism among specialists in public communication / public relations regarding amateurism and lack of coordination of actions, inefficient or even missmatching etc., our opinion is that the involvement of local representatives in providing information and as far as possible, and in involving citizens in community issues is real and significant. Obviously there is not an optimum situation, but it is a good start to develop the relations between public authority and citizens, and to enhance the means to obtain maximum involvement given the limited resources (human, materials, time) available to local government institutions. In this regard, of the relation between  undertaken actions and effective involvement can be understood the moderately optimistic answer to the previous question. It is possible that the public effects of personal and institutional efforts to be below the expectations of local representatives, and hence improving the quality (not necessarily quantitative) of these actions should be the next step of this process.

In a deeper analysis of this situation, we tried to capture the diversity of the actions undertaken by each institution by the number of actions used in informing and attracting the participation of citizens in the debating and solving community' problems.

The largest group are the 16 representatives (i.e. 32% of the total) declaring that they used four different actions, followed by the group of 10 representatives (i.e. 20% of the total) who declare they used 5 actions. Together, the two groups exceed half of the total number of respondents. They are followed by 9 respondents (i.e. 18% of the total) who admit the

use of 2 actions, 4 respondents (i.e. 8% of total) with 2 actions, 7 respondents (i.e. 14%) with one action, and 3 respondents (i.e. 6%) admitting they have used more than 5 different actions.

We note that almost two thirds of respondents had considered between 3 and 5 actions, which should ensure both adequate information to citizens, institutional obligations in this respect, but also to generate prerequisites for active involvement of citizens in debating and problem solving of the community's problems.

The many forms of communication which are mentioned – i.e. direct communication through meetings, roundtables, public debates, sending e-mails, phone contact, distribution of information materials by mail, print ads, information panels and boards, distributing materials by the employees and press announcements posted on the website of the institution, informal meetings and participating in TV-broadcasts and transmissions prints induce the variety of rhythms and procedures in which they operate. Sending emails ensures standardization and delivery of a message to a large number of people, but just the lack of customization reduces the chances of an immediate reaction. At the same time, round tables and public debates require prior training, have a lower frequency, their progress and conclusions are unpredictable, but they allow taking the pulse of the community (through its delegates) directly, unmediated. Typically, short messages and the ease of transmission / exposure of the institution (e.g. email messages, information on bulletin boards, or delivered by regular mail) generate a relatively low impact and little enthusiasm from the public, while others, which are more expensive – e.g. TV shows, public debates or interactive features of the electronic / virtual environment have a wider range of effects, are more modern and, in many cases alloe measuring citizens' interest. For this reason, our research tried to capture the way and the frequency of using these communication means, and on this basis outlining the effectiveness of those actions (Table no. 2).

**Table 2.** The distribution of the frequencies of using communication means to ensure citizens' access to knowledge and discussion of community issues

| Indicate, for each communication mean, the frequency of its use | At least monthly | Once at 1-3 months | Once at 3-6 months | Semi-annual or annual | Less than annual | Not at all |
|---|---|---|---|---|---|---|
| Direct face to face communication (meetings, workshops, debates etc.) | 15 | 10 | 9 | 12 | 3 | 0 |
| Sending emails | 7 | 6 | 1 | 3 | 27 | 5 |
| Phone contact | 19 | 1 | 0 | 1 | 25 | 3 |
| Sending informative materials by regular mail | 5 | 1 | 6 | 7 | 22 | 8 |
| Announces in print press | 10 | 5 | 6 | 7 | 20 | 1 |
| Information on boards | 29 | 9 | 6 | 2 | 1 | 1 |
| Others (indicate which): Distributing materials by employees, on street, web pages, informal meetings, TV broadcastings | 5<br>3<br>2<br>0<br>0 | 2<br>0<br>1<br>1<br>0 | 1<br>0<br>0<br>0<br>1 | 0 | 0 | 0 |

Source: responses to questionnaires

Direct face to face communication, through round tables, public debates etc., was achieved monthly or even more often by 15 respondents (i.e. 30% of the total), quarterly / every 1 to 3 months by 10 respondents (i.e. 20%) and every 3-6 months by nine respondents (i.e. 18%). We note that such a type of communication, not very easy to

achieve, time and resources consumer, has an increased frequency among respondents' declared options. A quarterly frequency appears quite high, especially among small towns, where the need for such meetings (the formal, prepared meetings, not those spontaneous or occasional) has not the same meaning and does not reflect an accelerated pace of change as in the case of major cities. We can explain this high frequency, perhaps, by the propensity of respondents to include in this category the majority group meetings organized with the citizens within the institution or by regular activities "on the ground". Another explanation for the case of large towns, where more managers of the institution were interviewed is that it should also refer to professional meetings, conducted over a period of time (month, quarter, year) by each direction or compartment of the institution which are thus combined with regular meetings, organised the by elected representatives of the institution.

The second form mentioned, sending e-mails, is not a preferred mean of comunication by local institutions. Only seven respondents (14% of total) declare that they use (for communication with citizens) monthly or more often, six representatives (12%) do it every 1-3 months, and one (representing 2% of total) makes every 3-6 months. 6 respondents use e-mail every six months or annually, and most of the 27 respondents stated that they did rarely less than annually. The first three categories cumulate less than a third (28% of total) of the number of representatives, and those who basically did not exceed 55% of the total! We say that basically they did not use emails sending The transmission of messages to citizens via e-mail less frequently than once a year is equivalent virtually with no use of this tool for communication! Of course, now we can not draw the conclusion that these representatives do not communicate with citizens, but simply thay do not like this way of communication.

A third form mentioned, i.e. telephone communication, has clearly biased results. First, we mention a number of 19 respondents (i.e. 38% of the total) who use phone calls monthly or more often, one respondent uses them every 1-3 months, and also one uses the phone on a semestrial basis or less. On the other side, a number of 25 respondents (i.e. 51% of the total) use the phone less frequently than annually, and three respondents declared that they have no used phone calls a means of communication with citizens. Such polarization of using this method is not easy to explain, especially given the widespread telephony, ease of use and speed make phone communication mid favorite of most people. It can be, in institutional terms, the difficulty of standardizing messages for communication and reduced control of networking between employee and citizen that can easily turn into conversations or debates ineffective and the impossibility of following their effectiveness. Finally, there may be fear of high costs (although today there are many alternatives that can reduce these costs) or lack of control in terms of time spent and the nature of the messages sent, especially if this method is used systematically on term.

The following means of communication mentioned, the distribution of information materials by post is part of fewer adhesions, the majority of respondents, 28 in number (ie 57% of the total) saying they use this method less frequently than annually (22 of them) or not at all (6 respondents). Otherwise, it is widely used - monthly or more often - 5 respondents (ie 10%) every 1-3 months by a respondent, every 3-6 months by six respondents, respectively, half or less than 7 respondents. As mentioned, the method is quite expensive (cost of printing, the distribution), carries a high risk of obsolescence of the information before it reaches the addressee and have fewer opportunities for verification the message reception and evaluation of public involvement. However, it is used because it allows focusing on certain messages and campaigns, achievements and projects of community and representatives.

In print advertisements seem to enjoy a greater trust: 10 respondents (20%) declaring they have used this method monthly or more often, 5 respondents (10% of total) uses every 1-3 months, and 6 of them (12% of total) - every 3-6 months. These first three categories cumulates 21 responses (ie 42% of the total), a significant percentage. Beyond the pros

and cons, we consider print ads significant, with better impact compared with information materials distributed by mail or on the streets.

Informative comunication through panels and boards is significantly frequent, 29 of the respondents (ie 59% of the total) declaring that they use method used monthly and more frequently. Further, we find that 9 respondents (18% of total) uses every 1-3 months, and 6 of them do it every 3-6 months. Overall, these three categories totaling 44 responses, ie 89% of the total. The explanation for this exceptional adherence to traditional means (we might say archaic compared to modern means of communication in the electronic world) consists only to a small extent in the absence of modernization of the state administration, or excessive prudence of local representatives to transparency and ubiquity posts virtual world. The explanation resides also in the ease of the procedure - printing and displaying an advertisement on the notice board located inside the institution or at the entrance are obviously easier than writing, sending and tracking of advertisements in the press, convening and moderating discussions at public meetings or making hundreds of phone calls. The explanation, much simplier, consists in the legal obligation of the administrative units bodies to make public the decisions, communications or announces at least by displaying them at the institution: e.g. sales announcements for agricultural land, foreclosures, minutes of City Council meetings, draft of local budget and annual accounts, decisions of the deliberative bodies, dates and agenda of public meetings etc. Finally, the number of 44 respondents (out of a total of 49) tells us not only that this method is preferred and not that it is better or more efficient than others, or that it has a better impact in ensuring citizens' involvement in community issues.

## 4.Conclusions and recomandations

The increasing quality of public services is the decision shows the effective functioning of the mechanism. Information, consultation on matters of local interest should not be confined to a small group of people with the same characteristics. The sample population should be characterized by diversity both in terms of age groups and in terms of social class, thus ensuring a high degree of coverage of the different needs of local community members. In the context of globalization, and strong growth needs considered essential members of society de-politicization of decision making, minimizing the influence of management structures and practices an increase active participation of citizens in decision-making interest.

We noticed that literature and, especially, research reports and conclusions made by various national and international organizations, on the conditions and the effectiveness of the application of this principle in Romania presents a rather contradictory picture. On the one hand specialists reveal a rather worrying phenomenon within the population, that shows little interest in matters involving political and administrative decisions. The deficiencies in information, the reduced flexibility of the system and the interactions with government, suspicions of group interests etc. make citizens participation in the decision-making process to be rather consultative than deliberative. On the other hand, in the last decade we have witnessed important progress in facilitating the access of citizens to debate key issues of the community, but also differences in the perceptions of local government in terms of intensity and added value of discussions with various social partners. In our research we found that citizens participation in the decision-making process is evaluated positively by local representatives, facilitated by a large number of modes of action and at the same time, simultaneous and combined use of several ways to achieve these goals.

As majority, preferences turn to traditional means, but there is availability for modern means also. The conclusion of our research is that the involvement of local representatives to provide information and, where possible, involve citizens in community issues is real and significant. There is of course not an optimal situation, but it is a good start to develop the

relations public authorities - citizens and to improve the means to obtain maximum involvement, given the limited resources available to local government institutions. We found that some of this is to be explained by other reasons than the principles of the access of citizens in decision-making, i.e. legal obligations regarding transparency, publicity of legal proceedings and documents, and the traditional character of the chosen methods is strictly fueled by these procedural obligations. Although the law enables the alternation between traditional and modern means, apparently traditional means are still preferred by local representatives.

The interest and good results in compliance with the principle of ensuring citizens access is explained by the benefits of the authorities, beyond the legal requirements and ensuring a good public image of the local representatives. Our recommendation to the authorities is to maintain and improve the institutional and organizational framework that ensures the access of citizens in decision-making process and the participation in the discussion of the main problems of the community, with a greater emphasis on their involvement in the debate of important community issues, e.g. decisions of the local council, local development plans, local draft budgets and financial statements etc., and obviously a greater emphasis on the use of modern means for information and access.

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# ACADEMICS' ASSESSMENT OF STUDENTS' WEB 2.0 ACTIVITIES. CASE STUDY OF THE ECONOMIC PROFILE

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**Abstract:** *The evaluation is the way through which the universities demonstrate their own value, but also that of their graduates. Our present paper suggests a debate regarding the evaluation of students in economics in a web 2.0 world. More precisely, we are trying to offer an answer to the question: Do the students of economics have the necessary computer science abilities to learn and to be evaluated in a 2.0 web environment? The paper starts off with the presentation of fundamental principles of assessment and teaching done with Web 2.0 means and methods. The exemplifications are added to this structure as they had been presented in the specialized works of this domain. The paper then goes on to present the results of our prospective study. Through this prospective study we wanted to identify the attributes based on which we could create the next phases of our research into elaborating the behavior of the students as it is observed during the process of evaluation. This evaluation takes place in a world that is bombarded with synchronic and a-synchronic means of communication called according to acronyms such as web 2.0, 3.0 and maybe even 4.0. It is in this context that we consider that the main purpose of the present paper is to determine the state of being prepared/ unprepared characterizing the student in the use (acceptance) of the evaluation and assessment of certain softs for socialization. In order to achieve our purpose, we have carried out a survey based on which we were intending to obtain the students' level of perception regarding the evaluation system they are subjected to through web 2.0 means as well as their reaction to the web type of evaluation. The result we obtained demonstrated that the students are willing to participate at a declarative level, but they are not actually willing to be evaluated through web 2.0 means when it comes to practice. The end of the study is where we identified the need for a better means of informing and counseling both the students and the professors or other teaching staff in order to take full advantage of the Web 2.0 evaluation potential.*

**Keywords:** higher education in web 2.0; assesment in web 2.0; association rules; student profile

**JEL classification:** A29; I21; I29

## 1. Generally Introduction

The demands of the global economy based on knowledge are extremely high and the discussions (Boix-Mansilla,2011),(Radcliffe,2012) of the last few years that were developed both at the level of university and at the level of the employer's activity are centered on the abilities that are necessary in order to obtain a better workplace and to become a productive citizen. At the same time, the Romanian educational system of today is marked by the phenomena resulted from the shift from an industrial economy (which

was in turn replaced by agrarian economy) to the economy based on knowledge. The unprecedented development of the digital world by means of the Internet was added to this enormous change, and this latter transformation resides in the motivation to learn.

It is in this context that we have considered necessary to carry out this study starting off from (Wagner,2008) propositions related to the abilities and skills that are demanded by the jobs of the future, these being professional occupations that we do not even know the name of for the time being (Prensky,2001). The abilities proposed by (Wagner,2008) are the critical thinking and problem-solving, collaboration across networks and leading by influence, agility and adaptability, initiative and entrepreneurialism, effective oral and written communication, accessing and analyzing information, curiosity and imagination. According to Bohn, the acquisition of abilities, whichever these might be, is possible only through learning. Bohn is the one to state that the notion of learning is as actual as possible, 'Learning is evolution of knowledge over time". Therefore, the conclusion we have reached from our posture of actors in the system of learning is the fact that in the process of learning and of teaching which is typical of the new context, the evaluation is becoming a central component of this process. What follows highlights the evaluation of performances based on a series of specific methods that are accepted by all the ones who are involved in the teaching-learning process - from the lowest levels to the academic one – current observation and the verbal evaluation, oral examination, written examination, checking the subjects' level of knowledge through practical works, the report, the portfolio, checking their level of expertise and knowledge through projects, which in turn might contain formalized instruments of evaluation – questionnaires, tests, tests assessing knowledge, etc. It is imposed that the process of evaluating students be done with the help of web 2.0 instruments, as they are no longer considered a latest technology, so that one might discuss the practice that stays at the basis of their utilization. According to (Gray,2012), using the web 2.0 instrument was aimed at the capitalization of collective intelligence: as the users add new content and pages, they connect by means of connections (hyperlinks) to such an extent that other users discover the content and get connected to it. Furthermore, (Gray,2012) reaches the conclusion that the web is developing and growing in an organic manner as a reflection of the collective activity of its users. In (Apostu,2011) we support the opinion that the rational use of web 2.0 technologies in education leads students to the development of new abilities. According to (Apostu,2011), the blogs, wikis, e-portfolios and social networks are very effective instruments which allow the clarification of concepts and which facilitate establishing relevant connections and relations, as well as testing mental models. (Apostu,2011) drew the conclusion that these offer a public forum in which the cumulative process of forming concepts, refining, applying and revising are transparent for colleagues and teachers as well as professors or other educators.

Starting off from the results obtained by (Gray,2012) (Prensky,2001) (Wagner,2008) we wished to add the effects of web 2.0 instruments in the process of evaluating students specializing in economy through our study, by determining the students' degree of acceptance/rejection of the new technologies. More precisely, we have focused our efforts on the attempt to establish the economics students' perception and standpoint on the involvement of web 2.0 means in their evaluation, considering the fact that this implementation is unanimously accepted in the teaching process, which involves the extensive use of web 2.0 (even more so since the web 3.0 has been used and since a web 4.0 is currently aimed at).

The paper is structured in two large parts: the presentation of the ideas that exist in specialized literature (the domain of economic education with a strong emphasis on using IT&C technologies of the 2.0 generation), which are also linked to the evaluation of the web 2.0 and the final part, which consists in the actual presentation of the study, passing from this presentation of the used methodology to the obtained results.

## 2. Literature review

The field of education has always been subjected to certain pressures of adopting the newest technologies with the purpose of improving it, of making it more accessible or of responding to more needs. It is in this context that we have studied the specialized literature provided by the domain of informatics-economics education; the study has enabled us to identify the following practices and directions which we consider to be the guiding principles in this domain, no matter what changes are brought over by the development of new technologies:

- According to (Krause & Coates,2008;Zepke & Leach,2010), teachers and educators of all kinds and levels of education must find methods and means of raising students' awareness and of determining them to get involved in the learning process. Therefore, educators must find the motivation that students need in order to learn, but they must also create an environment in which the interaction among students as well as the interaction with the educator proves beneficial to them all.
- According to (Berglund & Lister,2010;Thadani et all,2013), retaining and memorising informaion is essential in the process of applying knowledge, so it becomes important that the students get involved in programming and implementing projects in order for them to develop practical programming skills, which are essential in any learning situation.
- According to (Resnick M. et all,2009;Rusk et all,2008), the aim of the teacher/ educator is to assist students in implementing a functional program by providing the material with solved problems, therefore motivating the students in getting involved in the programming activity, doubled by the learning process.
- According to (Robins, Rountree & Rountree,2003), teaching programming languages imposes an approach in which the theoretical notions are combined with the practical ones, and it is in this context that the student learns and understands programming better.
- According to (Dolnicar et al,2009;McGarr,2009), a traditional course model is adequate to the knowledge transfer in that it provides a structured, standard manner.

(Chickering & Gamson,1987) have reformulated the principles for good practice in teachin by considering the fact that at present information technology is used in the learning-teaching process, the result of this fact being:

- "Encouraging the contact between students and faculty;
- Developing cooperation and reciprocity among students;
- Encouraging active learning; providing prompt feedback;
- Establishing deadlines for each task;
- Clearly presenting the minimum and maximum demands and expectations;
- Respecting the diverse talents and means of learning."

(Oblinger & Oblinger,2005),(Prensky,2001) also found in (Wagner,2015) talk about Millennials, the ones who were born starting with 1982, whose learning characteristics are defined as: "Abilities to fulfil more tasks; The preference for learning from photos, music and videos instead of the text; The preference for interactive and teamwork activities instead of individual study".

In (Gray,2012),(Malhiwsky,2010) and (Glenn,2008) we have a presentation of the impact and effect of web 2.0 technologies on the academic activity, offering detailed advice "on how to conduct assessment which comes to grips with the unique features of Web 2.0, its difference from previous forms of student writing and staff marking or its academic". There is much work to be done before we can be confident that using Web 2.0 for assessment is safe, fair, engaging and worthwhile for students and staff. Author's of this presentation might be considered supporters of the introduction of web 2.0 in academic education.

Starting from the so called classical concepts of the teaching-learning process and implicitly of the evaluation presented in the previous paragraphs, it is interesting to observe how these ideas were revisited and rephrased according to the latest technical evolutions as presented in (Bobby,2007) as follows:

- "Authentic: involving real-world knowledge and skills.
- Personalised: tailored to the knowledge, skills and interests of each student.
- Negotiated: agreed between the learner and the teacher.
- Problem oriented: original tasks requiring genuine problem solving skills.
- Socially constructed: using the student's social networks.
- Collaboratively produced: produced in partnership with fellow students.
- Recognise existing skills: willing to accredit the student's existing work."

"The type of evidence that best fits this type of assessment would be:

- naturally occurring: already in existence or generated out of personal interest
- multimedia: existing in text, audio and video format
- digital: such as e-mail, instant message logs, blog posts, wiki contributions, audio and videorecordings
- distributed: may be scattered across various sources (such as web sites, blogs, inbox, iPod)."

We are of the opinion that all these classical to modern theories can be reunited in order to create a powerful instrument that has the purpose of developing a holistic frame that would render both the teaching process and the learning environment more efficient. All these will allow the learning-teaching process to be adapted to all the technologies resulting from Web 2.0, Web 3,0 and why not 4.0? In this context, we decided to present how we determined the degree of preparation characterizing the students in the economy department regarding the way in which they adopted the web 2.0 instruments in their evaluation.


## 3. Research methodology

The starting point of the research was represented by the launch of a complex programme initiated by the Ministry of Education and Research in Romania, 2001, whose main objective was to support the learning and teaching process in undergraduate insititutions by providing them with the latest technologies. Therefore, we might draw the conclusion that the undergraduate Romaninan learning system made its first steps in the digital world in 2001.

The most important results obtained by SEI up to the present are: a.The fact that numerous high schools benefiting from Ael, the eLearning solution created by SIVECO Romania, which is aimed at transforming the didactic process in an interactive and attractive activity that is easy to browse through, ultimately leading to a higher level of involvement from the students and to a faster assimilation of knowledge that would also remain in the students' memories for a longer time; b. The didactic support provided for teaching includes interactive guidebooks, exercises, mock-exams, solving problems, educative games. The system is based on an electronic centre of knowledge using manuals and students' books that are presented in an electronic format and offering a content that is more complex than the regular textual input.

The research is based on the method of the structured interview, using the questionnaire as an instrument. The questionnaire was used in the present research in order to identify the profile of the student who fits the web 2.0 evaluation process to the greatest extent. The questionnaire was applied in the winter of 2015 to a sample-group of 61 people, out of which 35 were of the female gender and 26 were male. All the subjects were registered in the regular teaching programme, specialising in economic studies, undergraduate level as well as subjects doing a Master's Degree. During this research, the method of transmitting knowldge that would later be evaluated by means of web 2.0 devices consisted of PowerPoint presentations, YouTube short materials, transmitting content through wiki, blogs, facebook (mostly addressed to the students and less involving the educators-students' relationship), the moodle platform. The practical part consisted in solving problems, either individually or in a group, creating reports, again individually or in a team, posting the individuals' or the groups' findings on moodle, wiki or blogs. The evaluation process made use of the variant of the multiple choice type of test in order to check their level of theoretical knowledge, and these multiple choice tests were launched on the moodle platform (which does not represent the subject of our current research). Howerver, the feedback form of evaluation was also used (at least two feedback sessions for each of the solved assignment topics), offered by both the educator and the other colleagues. After the assignments were carried out according to the indications thus received, we were able to mark the work. Still, the mark in itself bore a reduced significance in our research.

The hypothesis to be researched are:

- Web 2.0 instruments are to be used in the evaluation process.
- The student accepts the use of web 2.0 instruments in the evaluation process.

After testing the above mentioned hypothesis, the study continued with determining the extent to which the students have both abilities to use Moodle as well as the necessary means to use it at any moment of time. This last result of the study was reached on basis of the findings in the questionnaire, which also helped us determine the instruments used by the student in order to access the Internet.

According to the answers provided by the students, over 89% of them have access to the Internet from home, so according to this information we considered that using the moodle platform as well as other web 2.0 instruments has all the premises to develop in good conditions. The study went on to determine the place and duration in classes, as the subjects were accessing the learning environment. This statistics was achieved based on statistics provided by the learning environment, and the results obtained are as follows:

- 30% of the students accessed the learning environment at the beginning of a study period, while 50% accessed the learning environment midway through the learning period.
- The time spent on solving assignments is of 11-20 hours (30%), followed by 1-10 (30%), hours 21-30 (15%) and by 31-40 hours (14%).
- The access to the platform was established to an extent of 26% from the university, 40% from home as well as from inside the university and the rest of 34% from other places.

According to previous behaviour and to the degree of knowledge regarding using the computer that characterised the subjects, two groups were formed:

- GR 1 – the students who HAD NOT used the moodle platform, nor wikis during high school, but have digital competences which are certified through ECDL diplomas or through the Baccalaureate certificate, HAVING NO knowledge of these concepts.
- GR 2 – students who HAD NOT used the moodle platform, nor wikis in high school, but who have digital competences that are certified by means of ECDL diplomas or by means of the Baccalaureate certificate, HAVING SOME notions regarding these concepts.

The profile which we have obtained for the two groups presents itself as follows:

| Subjects in Gr 1 possess no knowledge regarding Moodle or wiki | Subjects in Gr 2 have knowledge about Moodle and wiki |
|---|---|
| The profile of the high school they had graduated from is scientific, with an economic specialisation – 48%, respectively computer science/ informatics – 25% and 27 % of the participants coming from a different profile.<br>Out of these, 56% have access to the internet from their telephones and from home, and about 63% of them use Facebook around 4 hours a day from their mobiles; the rest of 44% only have internet at home, not on the mobiles, and 54% of them use Facebook less than 2 hours per day. | The profile they have graduated is realistic sciences with a specialization in economy – 63%, and with 37% of them having graduated from informatics.<br>Out of these, 76% have access to the internet from the mobile phones and from home, and 65% of them use Facebook for about 6 hours a day from their mobile phones; the rest of 24% have internet access only from home and about 54% use Facebook for less than 3 hours daily. |
| 62% of the members of this group use the computer in order to communicate with friends and the rest use it not only for this purpose, but also in order to find information that is required for their further scientific research, such information being necessary in the understanding of the concepts that are required from them in courses, lectures and during laboratories or practical courses. | 51% of the members of this group use the computer for communicative purposes, 40% for both communicating and accessing information that is required in courses, lectures and laboratories, while 9% provided inconclusive answers. |
| In this group, only 27% have heard of Moodle and wikis, while the others are only familiarised with Facebook and other socialising networks. However, one can notice that the reason for the orientation of 72% of the interviewed persons towards web 2.0 evaluation consists in obtaining feedback before receiving a mark from the educator or even from colleagues. Their choice is also motivated by self-evaluation through online courses provided by the Moodle platform or by wiki – given the fact that the assignments and tasks are posted weekly, at the requested time and date (unless they respect the deadlines, no feedback is provided, only the direct evaluation). The 28% who do not want to be evaluated through web 2.0 give the explanation that they wish to learn according to their own rhythm, without having to cope with weekly deadlines and fixed terms | In this group, the percentage of persons who have heard of Moodle and wiki during the learning process of high school is of 62%, while the rest have never heard of it or have answered inconclusively. However, 81% of the interviewees stated that they wish to be evaluated by means of the web 2.0 because this alternative offers the possibility of combining learning with receiving feedback. 19% wish to be evaluated this way because a constant rhythm of going through the material is imposed this way (a certain number of problems to be solved individually or in groups has to be posted on a weekly basis). |
| 17% of the members of this group are supporters of classical/ traditional means of teaching, while 62% prefer computer-assisted learning and the rest wish for a | 21% of this group's members are supporters of classical learning, while 45% are more interested in computer based learning and the rest wish for a combination of traditional |

| Subjects in Gr 1 possess no knowledge regarding Moodle or wiki | Subjects in Gr 2 have knowledge about Moodle and wiki |
|---|---|
| combination of traditional teaching with computer assisted one. That is to say, 28% would like courses to take place exclusively based on a 2.0 web system and want the exam to be organised in the traditional way, and 34% want to attend classroom courses and want the exam to be organised by web 2.0 means. | and computer based learning. 26% want the courses / lectures to be created and presented exclusively by web 2.0 means, with a traditional exam, and 45% want to attend classroom lectures and eventually sit a web 2.0 exam. |
| The profile of the student who has identified the web 2.0 evaluation as a means of applying the learning-evaluating process to their own learning rhythm is the following: The high school they graduated is a scientific, realistic one, with a specialization in computer science. They have access to the internet from their phones and from home; 35% of them have used the Moodle platforms, YouTube, Facebook and wikis in their learning process before and they prefer both the courses and the evaluations to be carried out by web 2.0 means. | The profile of the student who perceives the web 2.0 form of evaluation as a means of adjusting the learning–teaching process to their own learning rhythm is as follows: The high school these students come from is of the realistic profile, with a specialization in computer science, having internet access from their phones and from home and having used Moodle, wikis, Facebook and YouTube in the learning process before (a minimum of 45% and a maximum of 72%). This type prefers both the courses and the evaluations to be done in a web 2.0 context. |

Source: own composition

The study went on with creating and presenting an analysis correlating the number of hours dedicated to using the study support provided through web 2.0 (offered by Moodle, wikis, blogs and YouTube), accessing pages according to basic principles of the teaching-evaluating-learning act and results of more than 7 at the web 2.0 evaluation. Here are the conclusions we reached:

- In the group of students who are supporters of traditional learning, we calculated the Bavaris-Pearson correlation coefficient and obtained r=0.58, which indicated a moderate correlation, with an acceptable degree of association that was interpreted according to the interpretation provided by Colton (1974). The determination coefficient we obtained is of 0,35, which means that only 35 out of the 100 students of this group can be identified by the hours spent on the web 2.0 support.
- In the group of the students who prefer learning through web 2.0 we calculated the Bavaris-Pearson correlation coefficient and obtained r=0.58, which indicated a good correlation, with an average degree of association that is interpreted according to the interpretation provided by Colton (1974). The determination coefficient we obtained is of 0,27, which means that only 27 out of the 100 students of this group can be identified by the hours spent on the web 2.0 support.

The results of the study need to be interpreted by considering the fact that efforts are made at the European level in order to (Connolly, 2009):

- Create a network that would include education and the labor market with the purpose of improving the use of Web 2.0 domains in both areas,
- Create an empirical template with a view to evaluating the efficiency of Web 2.0 instruments,
- Analyse the needs of the ones who are interested, examine the case when Web 2.0 was used in the domain of education and of the labour market and, finally, in order to create a data basis that would comprise research, good practice guides and case studies in the domain.

According to the obtained results, WE CANNOT affirm that all the students are prepared (either factually or conceptually) to successfully respond to an evaluation that would be done by using web 2.0 methods. According to the results obtained by our study, the research hypothesis are fulfilled. To be more precise, the students are prepatred to use the web 2.0 instruments in evaluation and they accept the use of these instruments in the evaluation process. The attribuites of the student who will successfully face a web 2.0 evaluation are the following:

- The use of a touch screen mobile phone starting with the age of 15
- Digital competences that were evaluated with excellent or very good marks at the end of high school
- The fact that the use of facebook started around the age of 15 or more determines individuals to choose web 2.0 learning systems, or web 3.0

We are of the opinion that these attributes can be used in further research in order to enable us to generate the profile and behaviour of the student throughout the evaluation process done with web 2.0 means. Moreover, we consider that the research can be extended through the realization of a study refering to the rections and results of the students who are evaluated by means of 2.0 web instruments, as well as to the degree of acceptance and preparation of the educator to create an adequate evaluation of the web 2.0 environment.

## 4. In conclusion

The European educational policies admit the importance of adopting the latest technological evolutions in education. Therefore, the abilities of using web 2.0 and 3.0 instruments receive an important dimension and it is implicitly believed that these have a considerable influence on numerous aspects of daily life. H. Gardner maintains the fact that the population has accepted the idea according to which the 2.0 education must respond to the following objectives and desideratum: "Development of new abilities, stimulating the multiple cognitive potential of the educated subject (The Theory of Multiplre Intelligences, H. Gardner); developing the cognitive abilities at a superior level (Bloom's improved taxonomy)". Using Web 2.0 means allows the construction of contents through grouping individual knowledge, but it also involves looking for, selecting and filtering information, as well as structuring and presenting knowledge, which all represent just as many essential abilities for learning throughout one's entire life. Any web 2.0 learning environment contains a feedback component in the monitoring/ evaluation part. This component is transmitted to each participant who is taking part in the training. Moreover, there is an extra component containing clearly structured and transparent content that would allow for the progress of the trained subject and for the optimal evaluation to take place. In (Sadler, 2009) it is stated that "at the same time, there is pressure to uphold academic standards, for example by assessing essential learning outcomes rather than processes, based on optimal evidence of student achievement and reflected in grades that can be related to set standards". Therefore, if education is the best form leading to change, then change must be imposed by the evaluation system, and it is modern e-evaluation

systems that can do this thing best. After the study, we are of the opinion that "in spite of their fantastic potential, of their infinite possibilities to apply interactive methodologies and to transform education into a much more attractive form of learning, most of the suppliers of education (Europeans, Americans, Australians and more) do not sufficiently exploit this learning environment (SMART,2014).

The limits of the subject that we are studying are also caused by the criticism addressed to the method through which the users are the ones to re-create content. They state that there is a rupture between expertise, authority and quality contributions. These express the worries concerning trust, authenticity and credibility related to the passage from the written world to a digital world that is more ephemeral. The Web contains a considerable quantity of unfiltered information and many students fall in the trap of this undifferentiated mass. Not too much time will pass until the moment when the traditional sense of the notion of quality in superior learning will be abandoned with the transition towards web 2.0 learning (Apostu, 2011). Given this context, we consider that ours is one of the few papers addressing the academic practices that are adequate to evaluating the students' learning, being demonstrated by the use of web 2.0 technologies.

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# TRADEMARK APPLICATIONS IN A SECTORAL APPROACH

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*The economic roles of the Intellectual Property Rights (IPRs) are one of the key mysteries of the economic theories. At the beginning of the 1760s a sustained and rapid growth in per capita income occurred all over the word and since then the broad history of economic institutions has still quite important. This research paper relies on the conceptual framework of IPRs. However, the academic literature has claimed that the presences of these institutions are essential elements of a well-functioning economy, but intellectual property has come to mean not only the right to own and sell, but also the right to regulate its use. Moreover several unexploited dilemmas have still remained in practice. In order to support the theoretical insights we inspect to overview the trademarks growth tendencies in various OECD countries. In this perspective we followed a specific taxonomy of the traditional Nice Classes (NCL) to identify the distribution and the growth changes of these property right applications in a specific sectoral approach. Besides determining the differences with some comparative statistics in the branches, we could also demonstrate the economic importance of trademark applicants that place on the protection of brands in the service-oriented industries. However, there was falls in due to the last economic crisis; it seemed to follow a persistent and substantial growth path again. In this sense, we could also suggest the better valorization of IPRs that must be considered in a context to facilitate SMEs' access to the benefits of globalised markets in these industries.*

*Keywords: property rights, sectoral approach, trademarks*

*JEL Codes: D23, I23, O34*

1.  Introduction to the economic role of property rights

One of the essential facts in the history of economic growth was the Industrial Revolution in Britain. At the beginning of the 1760s a sustained and rapid growth in per capita income occurred all over the word. Although Adam Smith (1759) was the first pioneers to analyse how i.e. norms, beliefs and culture etc. affect this economic performance, the role of institutions has only developed in recent decades. Recently some institutional economists, such as the Nobel-prize winner Douglas C. North in 1993, claimed that "institutions matter" and since then the broad history of economic institutions has still quite important (North, 1990).

The economic roles of the Intellectual Property Rights (IPRs) are one of the key mysteries of the theories. Basically, the innovation (R&D) without transaction costs might not be sustained by inventors after they have created their inventions, unless they have some expectation of being able to capture the gains of efficient allocation in the form of profit (Coase, 1960). Patents and copyrights are legal form of these mechanisms which "… grant investors monopoly power in order to allow them to obtain a return from their inventions." (Jones, 2001:86). These IPRs attempt to use legal systems to influence the degree of excludability of ideas. Essentially, it might be quite easy for someone to "copy" an invention without any trademarks and the competition arising from this imitation eliminates the incentive for investors to create new ideas in the first place.

However, while the mainstream academic literature has earlier claimed that the presence of IPRs leads to better economic growth and they are essential elements of well-functioning economies, others such as Boldrin and Levine (2002) argued that new ideas should be protected and available for sale. Hence "intellectual property" has come to mean not only the right to own and sell, but also the right to regulate its use. In this view, these

institutions create socially inefficient markets and they might be better defined as "intellectual monopolies".

However, outside these theoretical debates, scholars are commonly interested in examining the impact of these formal institutions on economic performance. Nevertheless, there is currently still some disagreement about whether strengthening trademarks enhances the international competitiveness of industries. Since now, little evidences have been presented because of the limited measurement opportunities and empirical studies have not been able to evaluate the impact of IPRs on economies, such as trademarks, copyrights etc. Gould and Gruben (1996) focused on how the effect of trademarks depends on the degree of trade openness of different countries; while Ginarte and Park (1997) emphasized that patent rights could stimulate factor accumulation and directly influences economic growth. In a related study, focusing on manufacturing industries in the OECD countries, Park (2003) found that both labour productivity and R&D expenditure increased with IPRs. In a larger sample of countries Kanwar and Evenson (2003) claimed that stronger patent rights were associated with higher R&D intensity (the ratio of R&D expenditure to GDP). Hu and Png (2012) demonstrated that more patent-intensive industries responded to stronger patent laws with higher growth, which resulted in increased GDP per capita.

The main purpose of this working paper is to support the theoretical insights to the economic role of IPRs and also overview the growth tendencies of trademarks in various OECD countries. In our estimations we follow a specific taxonomy to identify the changes of applicants' distribution in different branches over the previous decades.

2. Trademark applications in a sectoral approach

According to the definition of the OECD trademark may be registered under intellectual property legislation, such as the Patent or the Trademark Act that may be applicable. The trademarks may often become equated with the product itself and may be one of the main sources of the competitive market advantages (OECD, 2015).
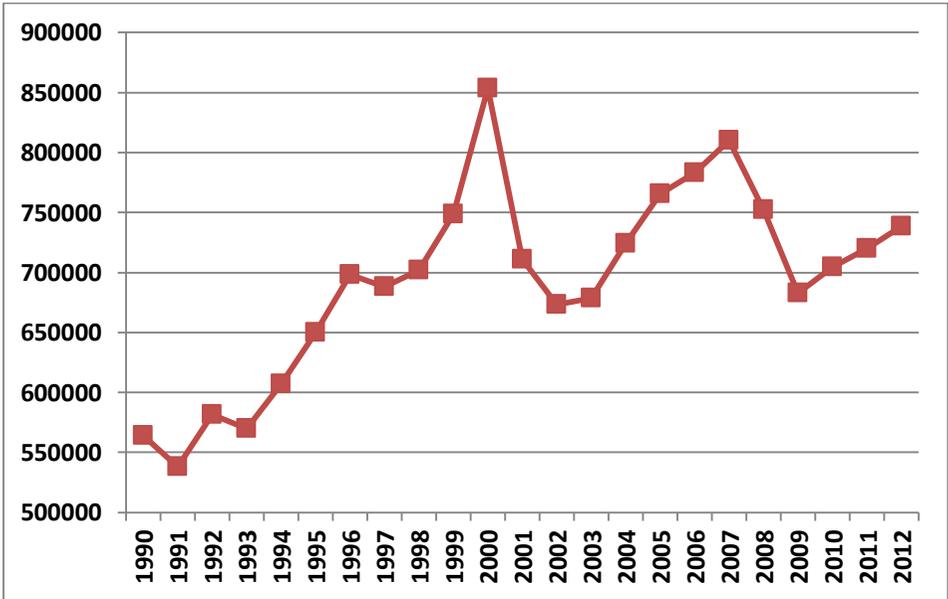


**Figure 1: The amount of trademark applicants in the OECD countries, 1990-2012**
**Source: own calculations based on WIPO (2015)**

The total number of classes specified in trademark applications in the examined 14 OECD

countries[12] grew by 23% from 1990 to 2012. However, in 2000 was the largest amount of trademark applicant, the strong growth in applications worldwide was stopped. After the falls in due to the crisis of 2000 and 2007 the trademark applicants seemed to follow a persistent and substantial growth path again (see Figure 1.).

Many offices use the Nice Classification (NCL) to classify trademark applications. This international form of classification for the purposes of registering marks was established under the Nice Agreement and divided into 45 classes for goods and services. The breakdown of applications by class offers insights into the relative importance of trademarks for different industries.

**Table 1:** The distribution of trademark applications by top 10 Nice Classes, 2012

| Rank | Class | Description | Share(%) |
|------|-------|-------------|----------|
| 1 | 35 | Advertising and business management | 9.4 |
| 2 | 25 | Clothing | 7.0 |
| 3 | 9 | Scientific, photographic, measuring instruments; recording equipment; computers and software | 6.7 |
| 4 | 41 | Education, entertainment, and sporting activities | 5.6 |
| 5 | 5 | Pharmaceutical preparations, baby food, dietary supplements for humans and animals, disinfectants, fungicides and herbicides | 4.6 |
| 6 | 30 | Coffee, tea, cocoa, rice, flour, bread, pastry and confectionery, sugar, honey, yeast, salt, mustard; vinegar, sauces and spices | 4.1 |
| 7 | 42 | Scientific and technological services, design and development of computer hardware and software | 4.0 |
| 8 | 3 | Bleaching preparations and other substances for laundry use; cleaning and abrasive preparations; soaps, perfumery and cosmetics | 3.5 |
| 9 | 16 | Paper, cardboard and goods made from these materials; printed matter, photographs, artists' materials, typewriters, and plastic materials for packaging | 3.2 |
| 10 | 43 | Services for providing food and drink; temporary accommodation | 3.0 |
|  |  | Remaining classes | 48.7 |

*Source:* own calculations based on WIPO (2015)

The first 34 of the 45 classes indicate goods and the remaining 11 refer to services and the first top 10 classes accounted for just over half (51.3%) of all classes specified in trademark applications (Table 1.). Four of the top 10 classes related to services and the Service Class 35 of advertising, business management, business administration, and office functions etc. has occupied or shared the number one position since 2004 (Wipo, 2015). The highest ranked classes of goods were Class 25 (clothing, footwear, and headgear etc.) and Class 9 (scientific, photographic, measuring instruments, recording equipment, computers and software etc.).

The results of our analyses relating to the NCL classes by industries show that 11 service-

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[12] AUR, AUS, DEN, CZE, FIN, GER, ITA, JPY, NED, SLO, SPA, SWE, UK and the USA.

related classes accounted for slightly more than one-third (34.2%) of all classes specified in applications in 2012. This is approximately equal to the service class share for 2007 (see Figure 2.), thus demonstrating the continuous importance of applicants that place on protection of brands in service-oriented industries.

**Table 2:** The trademark applications by industries

| Industry sector | Share (%) | | |
|---|---|---|---|
| | 2007 | 2012 | Change |
| *Agricultural products and services* | 14.5 | 16.0 | 1.6 |
| *Textiles - Clothing and Accessories* | 12.9 | 14.1 | 1.2 |
| *Scientific research, Information technology, Communications* | 14.6 | 13.8 | -0.8 |
| *Management, Communications, Real estate and Financial Services* | 11.4 | 11.8 | 0.4 |
| *Pharmaceuticals, Health, Cosmetics* | 11.4 | 11.1 | -0.3 |
| *Leisure, Education, Training* | 12.3 | 11.0 | -1.3 |
| *Construction, Infrastructure* | 7.6 | 6.9 | -0.6 |
| *Household equipment* | 6.3 | 6.5 | 0.3 |
| *Transportation and Logistics* | 6.0 | 5.6 | -0.3 |
| *Chemicals* | 3.1 | 2.9 | -0.2 |

*Source:* own calculations based on WIPO Statistics Database (2015)

This table also represents the distribution of trademark applications across various industries of the OECD economies. No specific categories seem to mostly dominate for trademark applications. Six of the ten groups each include more than 10 per cent of the total share of NCL classes, with agricultural products and services accounting for the highest share (16%) of the aggregated total as well as the highest percentage point change between 2007 and 2012. After five years than the last financial crisis of the world economy the distribution of trademark applications across industries has remained stable between 2004 and 2012.


3. Conclusions

According to the institutional economics the role of IPRs is one of the relevant determinants of economies. Although recently there have been serious theoretical debates, no clear consensus has yet emerged and several unanswered problems remained to explain the impact of these institutions.

The total number of classes specified in trademark applications in the examined 14 OECD countries increased from 1990 to 2012. However, there was falls in due to the economic crisis; it seemed to follow a persistent and substantial growth path again.

In this paper we had two objectives. The results of our analyses relating to the NCL classes by industries demonstrating the continuous importance of applicants that place on protection of brands in service-oriented industries and the distribution of trademark applications across industries has remained stable till 2012.

As a consequence, the better valorisation of trademarks must be considered in a global context to ease the access of SMEs to knowledge markets. We can advise SMEs to enhance and protect the value of their intellectual assets. The economic benefits of IPRs are only gained through actions that enterprises take to ensure trademarks for their inventions of good or services (EC, 2012).

An additional research direction has also emerged in this study. We argue that, such as (Herczeg, 2009) and (Tóth, 2014) suggested, the changing financial and accounting environment might impact on the optimal capital structure and critical to enhance production ability in the competitive markets. Moreover, further researches, in accordance with the greatening role of the SMEs' venture capital in a sectoral approach (see Becsky-

Nagy–Fazekas, 2015), could be more fruitful.

4. Acknowledgement

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# THE ROLE OF STUDENT-CENTERED EDUCATION IN STIMULATING THE ENTREPRENEURIAL SPIRIT OF UNIVERSITY GRADUATES

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**Abstract:** *Entrepreneurship plays a major role in the economic growth and development of most modern economies. Measures are being taken by most governments in order to stimulate entrepreneurship, however even more can be done by promoting entrepreneurship in the educational context. According to the Global Entrepreneurship Monitor Global Report (2013) Romania is performing slightly under the average of similar countries when it comes to entrepreneurial activity, is above the average at necessity-driven entrepreneurship and low at innovation driven entrepreneurship. Under these circumstances, a focus on entrepreneurship in higher education is required in order to help Romania bridge the gap to the other efficiency-driven economies. Our study aims to assess the impact of the university level education on the career choices of present entrepreneurs in the Bihor county of Romania. 30 university graduates that are currently running a business have been interviewed regarding the reasons for starting their companies as well as the relationship that they had and have with the university from which they graduated. While some of the entrepreneurs claim that their education had little impact on the decision to become an entrepreneur, most of them believe that it played a big role on their performance and it prepared them somewhat for the challenges they faced once they opened their businesses. Also a large portion of them report being involved in the activity of the university. The participants offered valuable feedback regarding their experience with the university. They also provided considerable information regarding the improvement that they would like to see in the future and how a more student-centered education process could positively impact the development of entrepreneurial spirit and better prepare future graduates to start and run a business. We further discuss the means through which this could be achieved in the context of our institution and other learning institutions that have similar goals and face similar challenges.*

**Keywords:** Entrepreneurship, student-centered education

**JEL classification:** L26; A23

## 1. Background

### 1.1. Defining entrepreneurship

Entrepreneurship research has been a prolific field in the last decades, having benefited from the public interest into the topic. Even so it remains somewhat conceptually divided, as a unitary definition of what entrepreneurship is has yet to be achieved. Within the different schools of thought of entrepreneurship (Cunningham & Lischeron, 1991) several definitions have been proposed, starting with very narrow definitions, like the classic one of Schumpeter „the doing of new things or the doing of things that are already being done in a new way" (Schumpeter, 1947, p. 151) and moving towards broad definitions like starting a business (Rocha & Sternberg, 2005), that sometimes can include self-employed

individuals (Van Der Sluis, Van Praag, & Vijverberg, 2008) and even those that are running unregistered businesses (Webb, Bruton, Tihanyi, & Ireland, 2012).

For the purposes of our article we decided to use a more broad definition so we included in our study individuals that had started a registered organization, including those self-employed and not-for-profit organizations.

This inclusion of not-for-profit organizations is in accordance with the growing interest in the social entrepreneurship field. Social entrepreneurship is viewed a complex, multi-dimensional construct that includes "innovativeness, proactiveness and risk management under the constraints of environment, sustainability and social mission" (Weerawardena & Mort, 2006, p. 33).

Under the Global Entrepreneurship Monitor (GEM) methodology social entrepreneurship is viewed as a spectrum (Lepoutre, Justo, Terjesen, & Bosma, 2013) that spans from explicit enterprises that are socially committed to traditional non-governmental organizations (NGOs). The criterion used by the GEM classification are financial (self-sustaining), innovation and company mission (social / environmental versus economic in nature) and we use the same criteria further in our study to classify our participants.

## 1.2. Entrepreneurship in Romania

The Global Entrepreneurship Monitor (GEM) provides comparable data regarding the entrepreneurial activities of a large number of national economies. According to the 2013 GEM report Romania is included in the efficiency driven economies and it's total early stage entrepreneurship is below the average for this category (Romania 10.1% versus 14.4% on average). At the same time the established business ownership rate is also bellow average (Romania 5.3% versus 8% on average). When it comes to the reasons for starting a business, Romania is also doing worse than the average for its category, with more necessity driven (Romania 31.6% versus 28.8% on average) and less improvement driven entrepreneurship (Romania 31.6% versus 42% on average).

When it comes to entrepreneurial activity, as measured by GEM, Romania is therefore falling behind other comparable economies. One could argue on the relevance on comparing countries based on this criteria, however there is an assumed connection between entrepreneurial activity and economic growth (Cumming, Johan, & Zhang, 2014; Matejovsky, Mohapatra, & Steiner, 2014; Stel, Carree, & Thurik, 2005; Wennekers & Thurik, 1999) and entrepreneurship is assumed to have a negative impact on unemployment (Cumming et al., 2014; Șipoș-Gug & Bădulescu, 2013; Thurik, Carree, van Stel, & Audretsch, 2008). Based on these theories we believe that entrepreneurial activity should be encouraged. Furthermore, the type of entrepreneurial activity is also relevant (Wong, Ho, & Autio, 2005), and so we propose that efforts should be directed to innovative and high growth potential entrepreneurship.

Regarding the evolution of entrepreneurial activity in Romania in the past decade, after a steady increase untill 2005, the number of newly registered companies at the National Commerce Registry Office (ONRC) has been on a overall downwards trend, although the GEM data suggest a recovery in 2011, it can be seen in Figure 1.
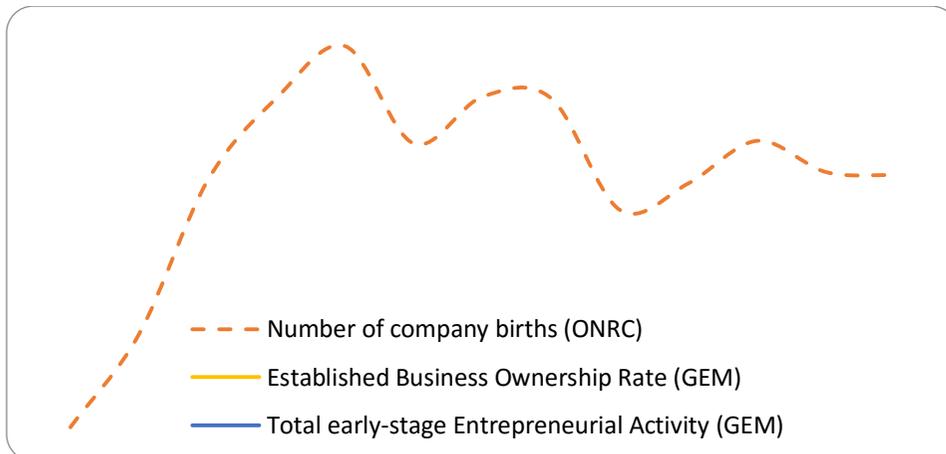
Figure 1. Entrepreneurial activity in Romania in 2001-2013
Source: National Commerce Registry Office (ONRC), number of enterprises, left axis. http://www.onrc.ro/index.php/ro/statistici
Global Entrepreneurship Monitor (GEM), % of population, right axis http://www.gemconsortium.org/key-indicators

### 1.3. The University, student centered education and entrepreneurship

One doesn't have to be a marketing specialist to notice that the high educational system in Romania is considerably suffering from a marketing myopia. For too long the managerial teams of the universities haven't understood the meaning of playing an active role in the high educational system and the socio-economical, cultural development of the society, managing them as isolated closed entities. Even though the optic changes have been obvious in the last years, also caused by the lack of resources, the pace of the progress is way too slow.

In this context we need a profound understanding, a redefinition of the mission that the universities must fulfill in the actual Romanian society. For this, Michael Porter's statement is a good starting point: *„People's motivation to work and develop their skills is also important for gaining the competitive advantage. Highly skilled people represent a rare resource in any country. ... The objectives that the institutions and the values of a nation impose to individuals and companies, as well as the prestige they give to some domains, offer a certain orientation to the human resources and capital flux – which influences directly the competitiveness of certain domains*" (Porter, 2008, p. 166).

Analyzing the first part of the quote, we consider that *the existence of skilled and motivated people to develop their aptitudes* as a premise to a competitive economy, is considerably conditioned by the quality of the educational services in a society. Also, *the objectives that the institutions and values of a nation impose to individuals and companies* will be decisive for the national competitiveness, an important value, objective and standard provider being the same educational system previously mentioned. In other words, the quality of the educational services in a country marks decisively its economic competitiveness and the quality of life in the society.

Under these circumstances, we underline the fact that the Romanian educational system in general and the academic one especially, should choose as mission to offer students values and skills which could facilitate their socio-professional success and the increase of the national economy competitiveness. Therefore, cultivating the spirit and developing the entrepreneurship skills of the new generations is a priority. The chances of success are small in the traditional teacher-centered educational system, where the student is simply an information receiver. If in the traditional system education was revolving around the teacher, now we witness the tendency to switch to a student centered education where

education revolves around the student. There is an authority and responsibility transfer from the teacher to the student. The former is not the absolute owner of the truth and the only source of authority in the educational system, becoming a kind of coach, a facilitator of the knowledge and of the skill development by the student and opportunity creator to this effect. *In the ideal circumstances, the teacher is a mentor to the student.* Student's role changed dramatically. This is not only the customer of an educational system anymore but an active part of the service providing process, significantly influencing its quality. As a consequence: „*In the student-centered education, the student participates in his own development, becoming the subject of education instead of an object, an active participant responsible for acquiring his own knowledge.*" (Student-centered education practice guide, p. 3). This is a fundamental premise for the development of the entrepreneurship spirit of the new generations.

If we understand the mission of a university starting with the necessity of cultivating the entrepreneurship spirit and the development of the specific competences, we will easily realize the importance and the opportunity of promoting the student centered education. This is not an option anymore in the Romanian academic system but an obligation, in order to face successfully the new socio-economical reality.

## 2. Research methodology and results

### 2.1. Research objectives

The main goal of the current paper to provide insight into the relation between university education and entrepreneurial activity in the county of Bihor. As an exploratory study we decided to involve a small sample of entrepreneurs, and use qualitative rather than quantitative analyses, so as to extract valuable information and directions for further research.

### 2.2. Participants

The participants were selected from graduates that are currently engaged in entrepreneurial activity in the Bihor county of Romania. A number of 30 entrepreneurs responded to our invitation and agreed to participated in the study. 8 of them (27%) were women and the average age of respondents was of 30 years. 18 of the participants had finished graduate programs and 12 of them had obtained a masters degree. The average graduation year was 2010.

In order to avoid biases we decided to ensure confidentiality and anonymity by collecting the data online, without recording the identity of the respondent.

### 2.3. Entrepreneurial activity

We used the criteria proposed by Lepoutre et. al (2013) for the Global Entrepreneurship Monitor (GEM) in order to classify companies into the various categories of entrepreneurial activity. Figure 2 shows the results of this process, based on the reports of owners.
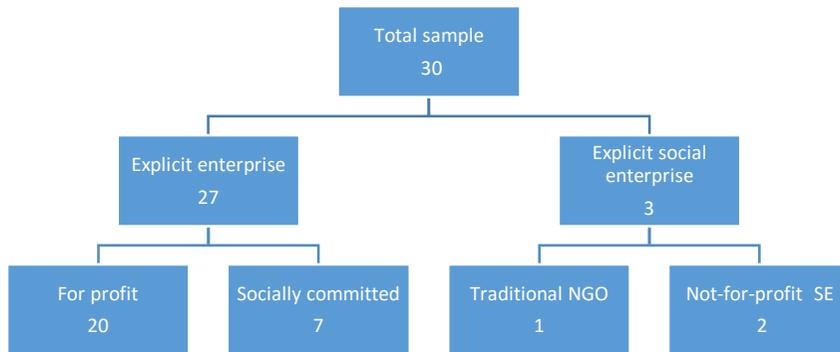
Figure 2. Classification chart of enterprises owned by the respondents

The innovation factor was also assessed, as the narrow definition of entrepreneurship includes only those companies that are innovative. Based on self reports of owners, 22 companies had at least one innovative aspect and 2 companies had at least 1 highly innovative aspect. While a few (9) companies did report on having a novel product, half of them reported on using a novel manufacturing or delivery process.

## 2.4. Entrepreneurial motivation

We next followed the issue of entrepreneurial motivation in order to assess the impact education could play in the process of choosing to start a business. According to our sample the main positive factors are family, friends and school, with mass-media having little to no influence and the state policy having a negative impact (Figure 3).
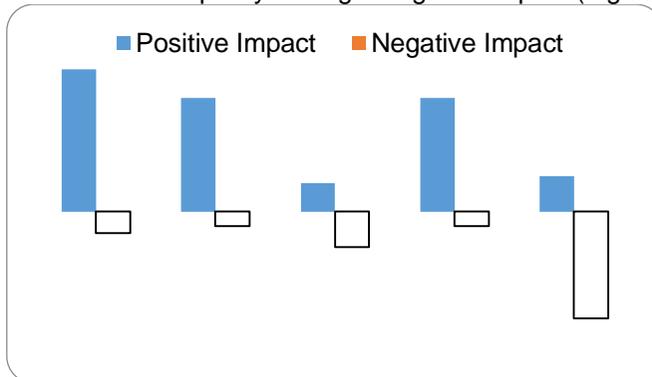


Figure 3. The factors impacting the choice of starting a business

A more detailed analisys is presented in Table 1, showing that in the case of education half of the entrepreneurs rate it as having a positive impact, however a rather large proportion of them rate is as having no significant influence on their choice to become an entrepreneur.

It would seem that while educational instututions are not detrimental to entrepreneurial activity, they are not doing all that they could to encourage high potential entrepreneurs to start a business.

Table 1. The influence of several factors on the choice of starting a business

| Influence \ Factor | Family | School | Mass-media | Friends | The state policies |
|---|---|---|---|---|---|
| Strongly positive | 11 | 3 | 1 | 3 | 1 |
| Positive | 9 | 13 | 3 | 13 | 4 |
| No influence | 7 | 12 | 21 | 11 | 9 |
| Negative | 3 | 2 | 4 | 2 | 4 |

| Strongly Negative | 0 | 0 | 1 | 0 | 11 |

These results highlight the necessity to focus the teachers' universitary study programs and teaching methods on the stimulation and encouragement of the entrepreneurship spirit. The main measures for this are:

- The inclusion of the entrepreneurship discipline in all the faculties.
- The development of a business incubator at the university level where students can test their business ideas and receive the necessary support to implement it.
- Organizing business plans competitions where the participating teams consult mentors from the business environment, managers or entrepreneurs.
- Organizing numerous internship stages where students can get a better understanding of the market's realities and what an entrepreneur means.

Table 2 presents the responses to the open ended question "What were the reasons that lead to you choosing to become an entrepreneur?". The responses were coded by two different persons that achieved agreement in all cases. The most often invoked reasons are freedom, the potential for a higher income and personal development. These motivating factors are strongly linked to personal values and attitudes and so education could play a role in modeling them.

Table 2. Entrepreneurial motivation - coded answers

| Reason for becoming an entrepreneur | Responses |
|---|---|
| Freedom | 7 |
| High income perspective | 7 |
| Personal development | 6 |
| Context / necessity | 5 |
| Need for performance / ambition | 4 |
| Sense of ownership | 3 |
| Family business | 2 |
| Passion | 2 |
| Innovative idea | 2 |
| To create change | 1 |

Considering motivations like freedom, self development, the need for performance and property feeling, the teaching system role would be to cultivate these values but also to offer specific opportunities to manifest them in case of the students who own them. This objective can only be fulfilled only through practicing a student centered education. Freedom, self development and property feeling can be experimented by a student when the teacher puts him into specific learning by doing situations and not when he/she is a simple information receiver. The Student Centered Education system develops the property feeling very much because it facilitates a superior responsibility of the student regarding his own career. All these involve the necessity for the teacher to assume the mentor role.

Unfortunately the passion, an innovative idea and the wish to generate a change take a marginal place among the entrepreneurship graduate motivations. From our point of view, the three motivations betray the profound quality of the practiced entrepreneurship type. *Passion* because it mobilizes the creative energies and the work capacity of the entrepreneur. Presenting the model of some enthusiast entrepreneurs, inviting them to different activities/events organized at the university would represent an opportunity to cultivate the students' passion. *An innovative idea* can be born in an environment that encourages creativity. Student centered education promotes the idea of uniqueness of every student, encouraging them to manifest on this way. The lecture is not only a

unilateral information transfer, it becomes learning experience for the students who express and test their ideas. *The wish to generate a change* represents one of the most mobilizing forces which can act on a person. Student centered education promotes the idea of involving the students in the planning, control and improvement of the processes in the organization where they study, offering them a certain decisional power. In this way the students become aware that they can and must assume the role of a changing agent in the organization and the community in which they activate.

## 2.5. Relation with the University

The overall opinion of our respondents is that their studies prepared them at least in some portion for running their business (62%) with only 2 entrepreneurs believing that their studies did not help them at all (Fig. 4). On a related question 18 of the entrepreneurs report that their overall experience with the university has been positive, and only 4 describe it as negative.
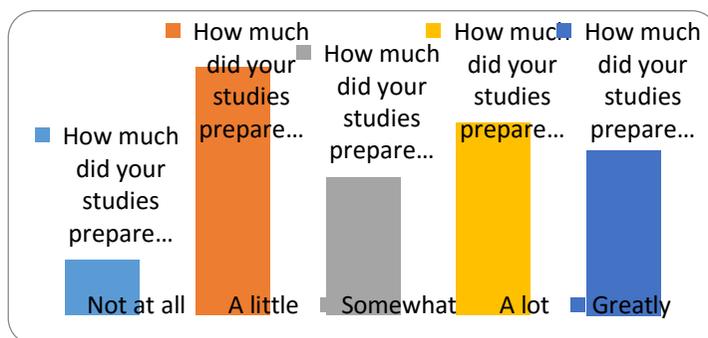


Figure 4. The level of prepardness to run a business due to formal study experiences

The role of university teachers and managerial teams is to adequately harness the graduates that are entrepreneurs by involving and integrating then both in the educational process as well as in the management of the institution.

The fact that 38% of the interviewed entrepreneurs answered that universitary studies prepared them insignificantly or at all for running a company in comparison with 45% who considered that studies had a very high importance, shows a relatively positive situation but also one that can be improved .Different opportunities for the students in the partnerships with the business environment represent an excellent source of improving. The participation in an internship programme, in a business plan competition in which the student benefits from the mentoring of an entrepreneur or manager are very relevant examples.

This is probably the reason why a great deal of them still retain some contact with the university. Only 9 of our respondents claimed they do not keep in touch at all with the university, while most had retained at least one connection to it, detailed in Figure 5.

Entrepreneurs are a vital resource in student-centered education. Only 30% of those interviewed are not involved in any way with the university they graduated.

Analyzing fig. 5 we notice that the most common ways to involve the entrepreneurship graduates are the participation in the events organized by the university and the delivery of some speeches in different lectures. Unfortunately opportunities like running group projects, offering donations and recruiting with the help of the university are very low represented. One of the base characteristics of the Student Centered Education is exactly the high capitalization of the stakeholder represented by the business environment through the development of partnerships with it.
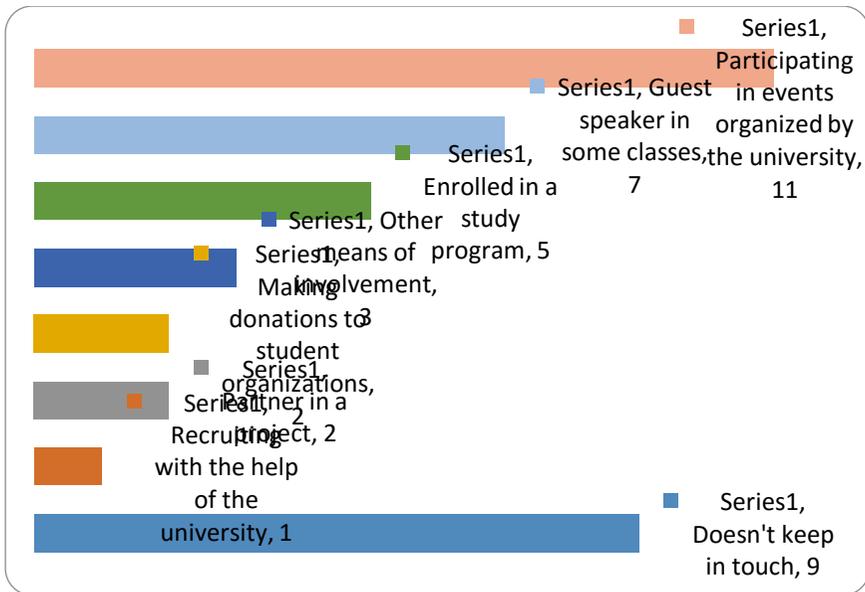
Figure 5. Relation between the entrepreneur alumni and the university

## 2.6. Stimulating the entrepreneurial spirit of university graduates

In the following section of our questionnaire we posed some open-ended questions regarding what the universities are doing and what they could improve in order to better develop an entrepreneurial spirit in their graduates.

The answers to the open questions have been coded into categories in order to make the data easier to understand, by two different coders that achieved agreement in all cases.

Most entrepreneurs think that their education provided them with basic theoretical knowledge (Table 3), and some practical experiences. In practical knowledge most entrepreneurs referred to case studies (6 answers) and some to practical assignments in companies (2 answers).

Table 3. Benefits of educational experiences

| Studies provided … | Responses |
|---|---|
| Basic theoretical knowledge | 14 |
| Practical knowledge | 8 |
| Networking opportunities | 3 |
| Professional development | 2 |
| Personal development | 2 |
| No help | 1 |
| Opportunities for business | 1 |

When it comes to what they would have expected to gain from their education, the majority of entrepreneurs expected a more practical approach and a more up to date curriculum, better adapted to market demands (Table 4).

Table 4. Unfulfilled expectations regarding formal education

| Studies could have provided … | Responses |
|---|---|
| A more practical approach | 15 |
| Curriculum adapted to market demands | 8 |
| Mentoring and networking with managers | 5 |

| | |
|---|---|
| Legal information | 4 |
| Entrepreneurship education | 3 |
| Internships | 2 |
| Continuing education programs | 1 |
| Career counseling | 1 |
| They were adequate | 1 |

The necessity of a more practical approach is one of the most frequent demands of our students. This would involve a special attention paid to the opportunities presented in Table 5.

Regarding to what opportunities universities should provide for their students in order to stimulate their entrepreneurial spirit, most of the respondents rated higher practical stages, work visits and a more active involvement of students during classes. Volunteering opportunities and classes held by private professionals also achieved high rating, but only for a subsample of the entrepreneurs and so their overall rating was average.

Table 5. Means of stimulating the entrepreneurial spirit in formal higher education

| Opportunities universities should provide … | Mandatory | Necessary |
|---|---|---|
| Practical stages | 18 | 10 |
| Work visits | 14 | 10 |
| Volunteering opportunities | 12 | 3 |
| Active involvement in classes | 10 | 13 |
| Classes held by private professionals | 10 | 5 |
| Research projects with local companies | 8 | 10 |
| Trainings provided by companies | 7 | 15 |
| Services rendered by students for private companies | 7 | 12 |
| Mentorship programs | 6 | 11 |
| Scholarships | 5 | 10 |
| Graduation papers in local companies | 5 | 7 |
| Business plan competitions | 1 | 7 |

When it comes to values that should be promoted by the universities self-confidence ranked first, with risk propensity rated the lowest. This can also be seen in Table 6, where risk tolerance is one of the lowest rated competencies that entrepreneurs think should be developed in the university program. As risk propensity and tolerance are generally considered to be critical factors of entrepreneurship their low ratings are surprising. The most likely explanation for these results is a cultural factor. As shown in international comparisons (Littrell & Nicolae Valentin, 2005) Romania has a relatively high level of avoidance of uncertainty. In a cultural context of a high risk perception it would follow that entrepreneurs feel that risk tolerance and risk propensity might be detrimental for business and actually encourage caution instead. This assumption will need to be further analyzed as well as it's implication on university programs and public policy.

Table 6. Values that should be promoted by universities

| Value | Responses |
|---|---|
| Self-confidence | 25 |
| Work culture | 19 |
| Courage | 16 |
| Work ethics | 16 |
| Risk propensity | 10 |

Regarding the competencies universities should develop in their students to stimulate entrepreneurial activity the most important, in the opinion of our participants, communication, flexibility and adaptability. This has been expected, however we did not anticipate the low ratings for risk tolerance, as explained previously, and sales abilities.

Table 7. Competencies that should be developed by universities

| Competencies | Responses |
|---|---|
| Communication | 25 |
| Flexibility and adaptability | 23 |
| Time management | 18 |
| Sales abilities | 15 |
| Stress management | 14 |
| Computer skills | 10 |
| Risk tolerance | 10 |
| Critical spirit | 9 |

## 3. Conclusions and proposals

Universities in Romania must intensify their efforts to promote the entrepreneurship spirit of the new generations and to develop the specific competences in order to reduce the rate gaps of the entrepreneurship and also of the economical development compared to the European developed countries. The main way is to promote the student-centered education at the level of the organizational culture and specific practices in the universities, which is pretty difficult as people are reluctant to change. The student must be seen as an active part of the process not as learning object. The teacher must turn from information provider into learning opportunity provider for the student.

- Teachers must vary the portfolio of learning activities/opportunities offered to students within the subjects they teach. Students will choose then what is in their own interest.
- Teachers must intensify their efforts to know each student and to adjust their approach accordingly, including some mentoring programs. When the number of students makes this difficult, they can ask for mentors from older students or the employers.
- Teachers must initiate and manage the partnerships with the students and the employers. This is an important premise of the student centered education.
- Teachers must promote a reduced distance towards power in the relationships with the students, meaning they have to be closer to them, to have an open communication, to listen to their suggestions and critics and even encourage such an attitude.

The promotion of the student centred education would bring the increase of the competitiveness of the universities in Romania, which activates in a more and more competitive environment, the increase of the content degree of the involved stakeholders (students, teachers, employers), the development of the entrepreneurship spirit in the Romanian society and of the national economy implicitly.

## 4. Acknowledgements

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# DETERMINANTS OF SOCIAL RESPONSIBILITY EXPENDITURES OF SMALL AND MEDIUM ENTERPRISES FROM BIHOR COUNTY

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## Abstract
*This paper investigates the social responsibility expenditures of small and medium enterprises (SME) in Bihor County. In line with the literature we consider donations and sponsorship the expression of philanthropic behavior of companies. Positioned at the top of the CSR pyramid such actions are some of the few on which there is consensus in considering forms of CSR. Explaining the factors that drive such expenditures at the level of small and medium enterprises fills in a gap in the scientific knowledge both at international and national level. Particularly in Romania, the CSR processes are less studied and seem developed mimetically by large companies from the example of multinational companies. However the data provided in this paper reveals that a significant number of small and medium enterprises are engaged in CSR actions, as almost 20% of SME with registered profit donate money. The factors explaining this orientation are in line with the literature as the size of the enterprise influences both the decision to donate and the amounts donated. The larger a company in terms of profit, turnover and number of employees the bigger the chances it donates money and the amounts donated are larger. The data was extracted from the National Agency of Fiscal Administration regarding expenditures of small and medium enterprises in 2013. Future studies should include information regarding the destination of these expenditures. More, in order to fully explain CSR at SMEs level qualitative data is needed regarding the motivations of managers for such actions and the reasons behind the choice for a specific area or action.*

**Key words:** corporate social responsibility, social involvement, small and medium enterprises
**JEL classification:** M 14, A13, L21

## 1. Introduction
Social involvement of organizations is traditionally linked with attributing responsibilities of businesses which go beyond their economic function. The debates regarding such actions are derived from several theoretical lines: social-business relationship and business ethics, stakeholder management, sustainable development with the contribution of the economic sector. These topics reached high levels in the last fifty years, though from a research standpoint the benefits can be contested (McWilliams et al. 2005). While practitioners focus mainly in the effects of such actions for the companies, policy makers reflect on the community level effects. Surpassing the many controversies regarding to the relevance of each form of involvement, there seems to be a general agreement that enterprises can contribute positively to development.
Philanthropy is considered at the top of social responsibility actions beyond the existence of different level policies (environmental protection, human resources, customer relations, etc.) as well as actions towards the satisfaction of requests of different stakeholders. Social responsibility is traditionally associated to large companies, especially multinational

corporations. Nonetheless research emphasize that this attitude may characterize all type of organizations: large and small, public and private, governmental and non-governmental. In this paper we focus on philanthropy of small and medium enterprises (SME) in Oradea - Bihor County as one of the classical forms of social responsibility of firms. Namely the data investigated covers the expenditures for social causes as deducted from taxes. The study is covered by a postdoctoral study regarding the social involvement of Romanian organizations, in which we try to identify both the forms of such actions, as well as their drivers and obstacles. In previous analyses we have found significant evidence that in the case of Romania it is important to analyze these processes for small and medium companies. Identifying mechanisms that trigger social involvement for these firms can hinder ways to promote such attitude from all companies.

Consequently the main scope of this study was to determine whether there enough evidence of social activity of SMEs? Due to the availability of data we restricted our analysis to Oradea as we expect that in this regard the differences between counties should not be very large. More, knowing the fiscal facility regarding the deduction of taxes for donations or sponsorship we limited the search for evidence of social involvement of small and medium enterprises in Oradea, Bihor County to this form of action. We are aware that there are other ways SMEs may get involved in their community; however donating is one of the key forms considering CSR theory, and thus defining for this phenomenon. The first question this paper is answering is *to what extent SMEs from Bihor county donate money as social involvement actions?* More, aiming at the characterization of this process we answered to the second question: *which are the firm level characteristics that determine such actions?*

## 2. Social responsibility: discourse or reality?

### 2.1. General framework

The topic of social responsibility has gained high notoriety in the last two decades both from theoretical and practical perspectives. Nonetheless theoreticians did not yet reach full consensus regarding different related concepts (corporate social responsibility or performance, corporate citizenship, corporate sustainability and the list can continue) as well as regarding what constitutes social behavior on behalf of organizations (Aguinis and Glavas, 2012). The most widely used concept remains corporate social responsibility (CSR) yet the distinctions between it and other terms are not that clear-cut. In this paper we will refer to CSR, acknowledging that such social attitude can be observed generally in organizations private as well as public, large as well as small. Nonetheless, the interest in economic objectives surpasses the social ones for private economic organizations (Acar et. al. 2001). Social responsibility of organizations can be considered a new paradigm regarding business-society relationship (Saveanu et. al. 2014).

We have adopted a narrow definition of CSR as "actions that appear to further some social good, beyond the interests of the firm and that which is required by law" (McWilliams et. al. 2005, p. 3). The broad classical approach was developed by Carroll (1979, 1991) for whom CSR comprises all economical, legal, ethical and discretionary responsibilities of a company. We consider that the first two levels are mandatory to all firms and, as such, should not be considered as criteria  when deciding if a company is socially responsible or not.

Still following a narrow approach, CSR can be contested as being purely a discourse of PR propaganda (Sahinis and Kamoura, 2014) or another form of symbolic domination of large companies (Banerjee, 2007). Smaller companies or companies in less developed countries are copy CSR related behaviors from large companies with no real interest in the impact of such behavior. The difficulties in assessing the external impact (Barth et. al. 2007) rise also questions regarding which actions are relevant in considering social responsibility and also which are the more profitable investments for companies as well as for society as a whole

(Knox şi Maklan, 2004). More, in assessing the contribution of the business area for development it is hard to distinguish from the fundamental role played by governments and the political level (Moon, 2007).

Measuring CSR is one of the core problems and a requiring source of critics. It starts with deciding which actions can be considered socially responsible ranging from mission statements to direct involvement in community programs. Some theoreticians argue that the motivations behind each action are the ones that make the difference between opportunists and "true" CSR, however practitioners consider that it should be a win-win context. If we disregard the reasons behind such actions one of the areas which does not raise questions is represented by offering money to charities or social campaigns. Donations and sponsorships represent corporate philanthropy and are at the top of CSR pyramid (Carroll, 1991). This is the level of CSR we focus on in this paper: the donations offered by small and medium enterprises in Bihor County. Information regarding the destination of this money was not available and consequently it is impossible to discuss the impact of these payments.

Regarding the factors that stimulate social responsibility the literature highlights both subjective (manager level factors such as motivations and attitudes) and objective factors (Aguinis and Glavas, 2012). Lindgreen (2009) shows that the interests regarding different stakeholders changes depending on the level of development of the firm. At the begging companies will focus on the satisfaction of primary stakeholders' needs (such as clients), while as the company grows it develops social objectives into its strategy and invests systematically in these actions (see also Roberts, 1992 CSR disclosure is determined by company performance). Consequently we expect this trend when analyzing small and medium enterprises (up to 250 employees), and we will investigate the relationship between the decision to donate money and the size of the firm.

### 2.2. CSR in Romania: policy and practices

International studies reveal the fundamental role of policies in shaping the way CSR is manifested in different countries or cultures. The variability of practices at international level is greatly explained by such policies (Albareda et.al., 2007) as well as by the impact of culture (Matten and Moon, 2005). As Albareda and colleagues show (2007), the European countries are more focused on CSR, and implicitly the CSR related policies, compared to US counties.

At the European level there is strong emphasis on promoting social involvement through policies promoting social responsibility of enterprises in Europe (Green papers and Strategies of CSR), standards and performance parameters (ISO 26000 Guidance Standard on Social Responsibility), evaluations and comparisons of achievement of these standards and the objectives set in the strategies. It is important to note that the social responsibility of small and medium enterprises was considered a priority of the European Alliance on CSR (COM (2006) 136), as these were considered to have a great role in sustaining a responsible business environment and as promoters of such an attitude. We consider that the European focus on SMEs' CSR provide enough context for furthering research on this topic. Consequently we reflect in our study some of the efforts made in this regard by SMEs in Oradea, namely in the form of donations or sponsorship.

Through the European level studies and assessments of CSR impact, some conclusions regarding Romania can be drawn. Up to last year, comparative studies reveal the lack of maturity mostly by Romanian agencies in fostering CSR initiatives but also by Romanian business in engaging in such actions. Even if several steps were undertaken with the elaboration of a national strategy and the initiation of specific actions, these are fragmented, lack transparency, are dependent on external funding and are insufficiently monitored and reported (Williamson et. al. 2014). As such, the National strategy for promoting social responsibility (2011, based on the latest European CSR policy: COM

(2011) 186) has little visibility and was not translated into concrete action plans and steps towards its implementation.

If one considers the narrow view of CSR, the legal aspects are relevant if considered as facilities meant to stimulate such actions and not the mere obedience to the law. As such, in Romania there are several fiscal initiatives for enterprises meant to stimulate social actions. There are also more targeted initiatives regarding employment/human capital or the environment but these are not the object of the current analysis. We refer mostly to the Fiscal Code by which people can direct 2% of their taxes to a specific NGO (art. 84 (2)-(3)) or the deduction of 20% of the due tax by companies of amounts offered as sponsorship or donations (art. 21, lit. p). These mechanisms stimulate directly enterprise philanthropy – the top of Carroll's pyramid (1991). The promotion of these mechanisms in Romania is conducted mainly by the beneficiaries of such initiatives / NGOs whose activities can be financially supported with these sums.

In our analysis we focus on the latter instrument, the deduction of 20% of taxes for donations, aiming at the assessing the impact at small and medium enterprises in Oradea. More, we will also analyze the profile of the enterprises undertaking such investments.

Generally in Romania CSR is considered to be less developed, mainly imported by multinational companies (Ilies, 2011). There are several steps undertaken by small and large companies operating in Romania, however these activities are not very visible, and integrated in a strategic approach (Baleanu et. al. 2011). Studies on the Romanian CSR highlight that in this case it still seems more discourse than reality (Badulescu and Petria, 2013) even the theoretical approaches are highly normative (Obrad et. al., 2011). Romanian studies focus on a diversity of aspects, and are conducted on too small samples (Saveanu and Abrudan, 2014) Our study fills in this gap as it focuses on a single aspect of CSR - philanthropy and highlights practices of all SMEs in this area from Bihor county.

## 3. Social responsibility of small and medium enterprises in Oradea

### 3.1. Research methodology

The objectives of this paper, were both to assess the extent to which small and medium enterprises use the fiscal facility of deducting up to 20% of taxes as donations or sponsorship, and also to analyze the profile of the SMEs which declare such costs. In order to achieve these objectives we analyzed data provided by the National Agency of Fiscal Administration regarding expenditures of small enterprises in 2013. We considered companies which registered profit as only these can deduct taxes as donations. The available data in order to have a homogenous sample included the whole population of small and medium enterprises with registered profit. As presented in table no. 1 the structure of this sample – profit making SMEs is comparable to the structure of SMEs in general. There are less micro enterprises (0-9 employees) and more small (10-49 employees) than in the general group, indicating that micro firms are less developed (considering registering profit an indication of development) then small firms. We acknowledge that the subgroups of SMEs are defined on number of employees and turnover; however at the Institute of Statistics there were no data available to make an aggregate index, consequently we referred solely to employees as good proxy for enterprise size.

*Table no. 1. The description of small and medium enterprises with profit in our sample in comparison with the total number of SMEs active in Bihor county, author's calculations*

| Size on no. of employees | SMEs in Bihor in 2013 – National Institute of Statistics | | SMEs with profit in 2013 | |
|---|---|---|---|---|
| | Number | Percentage | Number | Percentage |
| Micro | 14562 | 87,15 | 1929 | 78,76 |
| Small | 1839 | 11,01 | 491 | 20,05 |
| Medium | 308 | 1,84 | 29 | 1,18 |
| | 16709 | 100 | 2449 | 100 |

The main data reflects the amount of money offered as donation or sponsorship. In order to create the profile of companies which have social investments, we collected also data regarding the size of the enterprise: number of employees, profit and turnover. Unfortunately there was no data available regarding the destination of donated money, data that would shape the profile of social investments of small companies.

### 3.2. Main conclusions

Out of the total 16.709 active SMEs registered in Bihor county in 2013 (according to the National Institute of Statistics: http://statistici.insse.ro/shop/), there are 2782 which declared profit to the Agency of Fiscal Administration. As presented in Figure no. 18,11% of firms with profit offer different amounts as sponsorship or donations.
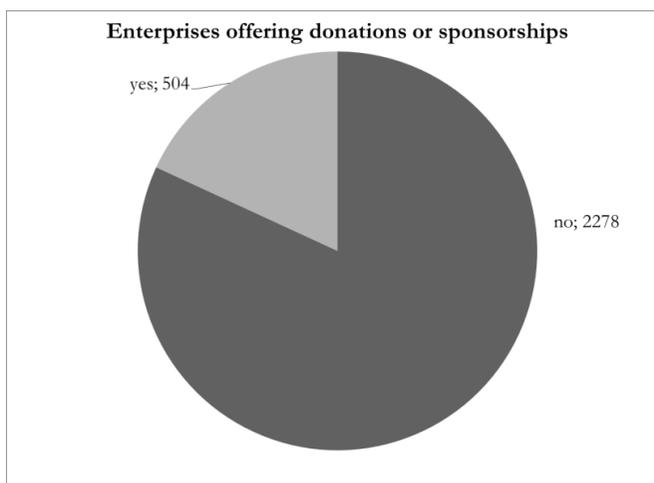


*Figure no.1. Number of small enterprises from Bihor County offering donations, Agency of Fiscal Administration, own calculations*

Even if this percentage seems rather small (representing 3,4% when reported to the total number of SMEs in Bihor county), we consider that it is significant for social responsibility of these enterprises. This finding supports previous conclusions regarding the openness of micro and small enterprises in Romania towards social responsibility actions (Saveanu et.al. 2014). We thus reinforce the conclusion that CSR of SMEs is an understudied phenomenon that should gain more attention by researchers.

The average money donated is 2685 lei, about 600 euros. The minimum reported amount was 10 lei and the maximum 37814 lei. The data referring to the profile of donations and the normal distribution of the sums offered as donations can be observed in figure no. 2.

Unfortunately there was no data regarding the destination of this money: NGO's, campaigns, or individuals. This type of information would be fundamental in creating a complete picture of social actions supported by these firms.
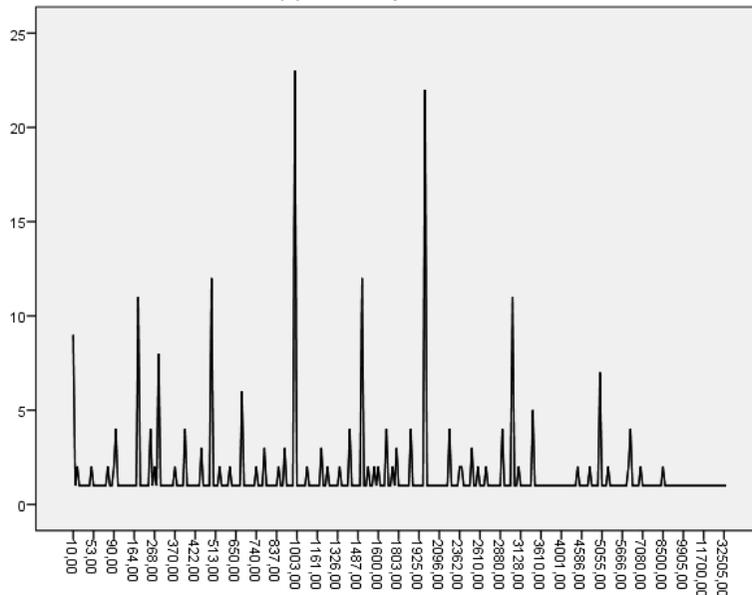


*Figure no. 2. The distribution of donations offered by small enterprises from Bihor County offering donations, Agency of Fiscal Administration, own calculation*

Turning to the profile of the enterprises which financially support social actions, we investigated one of the classical determinants of CSR: size of the enterprise (Lindgreen et. al. 2009). Consequently we tested the relationship between the donated amounts and number of employees, profit, and turnover.

All three independent variables considered in our analysis significantly correlate with the donations and sponsorship: turnover (p=0.681, sig=0.00), profit on reference year (p=0.586, sig=0.00) and number of employees during the reference year (p=0.139, sig=0.00). These data support the conclusion that the amounts donated by companies increase along with the increase in profit, turnover and number of employees: as a firm is growing so are the chances it will display this form of social responsibility.

More, regarding the influence of profit we could investigate also if there are differences between the firms that donate and those that do not. Again, through T-test we can highlight a positive relation: the average profit is significantly higher for the companies who donate money than those that do not (F=1.74; equal variances not assumed; sig.=0.00).

We need to compare the group of SMEs to large companies, and to make comparative analysis between the groups of small vs. medium enterprises in order to generalize this conclusion. At this point we have found important evidence that within the small enterprises the social responsibility actions are influence by the level of development of the firms.

The regression analysis, as presented in table no 2, show that these factors influence the variability of the donated sums in a proportion of more than 80%, R=.875, R square=.0766.

| dependent variable – Donations | Unstandardized Coefficients | | Standardized Coefficients | Sig. |
|---|---|---|---|---|
| | B | Std. Error | Beta | |
| (Constant) | 325,910 | 110,611 | | ,003 |
| profit | ,041 | ,002 | ,585 | ,000 |
| cifra_afaceri | ,000 | ,000 | ,449 | ,000 |
| nr_mediu_salariati | 14,701 | 5,517 | ,058 | ,008 |

## 4. Conclusions

We can say that the incidence of the fiscal facility regarding tax deduction for donations and sponsorship is of 18% among the profit gaining small and medium enterprises in Bihor County. The factors facilitating such actions on behalf of enterprises are the profit, turnover and number of employees. Both the existence of donations, and the amount spent in this manner are influenced by these aspects related to the size of the firm – the richer and larger a small firm chances increase to donate, and the sums increase along with the level of development of firms.

As mentioned above, this conclusion was validated solely for the small and medium enterprises and further analysis should extend the comparison with large enterprises. Nonetheless there is evidence to suggest the same pattern in general. Another limit is the result of the lack of information regarding the destination of this money. In order to complete the image regarding social responsibility actions at the top of Carroll's CSR pyramid we need information regarding the actions that are actually funded through these donations and more information on how where these social actions chosen.

This paper fills in an important gap in the knowledge regarding CSR in Romania, as well as CSR within SMEs. The main conclusion is that within these enterprises there is an important orientation towards social actions which needs to be understood better. More, understanding the mechanisms that stimulate the investment in social actions at the level of small enterprises would improve our knowledge regarding these processes and consequently would highlight methods for promoting social involvement of companies.

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# THE PROFILE OF CSR DISCLOSURE AS PRESENTED ON ROMANIAN COMPANIES' WEBSITES

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**Abstract**
*In this paper we present the main findings of a study on CSR disclosure by companies operating in Romania. Starting with the statement that an important incentive for social responsibility actions is represented by creating a good reputation for the company, we would expect high online visibility of these initiatives. More, based on the information available on companies' websites we aimed at creating a typology for the CSR actions in Romania. Consequently we investigated websites of all large companies in Bihor County and the top 100 largest companies in Romania based on turnover. The analysis was systematized on the following information: concepts used, types of actions organized, reference stakeholders, elements of reporting. The conclusions are rather contradictory to the starting argument: for Romania the main driver for CSR actions seems to be the example and standards set by multinational companies not a PR strategy. Consequently such actions are less visible online and are not systematically reported. More, in many cases the lack of promotion or link between a company to a social cause indicates that CSR is the result of a social orientation of the owners or managers of companies. The concept most used in practice is sustainability, in some cases devided between environment and social components. The areas in which companies are most active are the environmental protection, sports and generally community development projects.*

**Keywords:** corporate social responsibility, sustainable corporation, social philanthropy, CSR disclosure

**JEL classification:** M 14

## Introduction

This paper reflects the efforts of a larger study regarding the social involvement of organizations in Romania. It is a work in progress study aimed at identifying factors stimulating or hindering such involvement of companies in Romania. We define social involvement as the contribution of businesses to the production of social goods, mainly as a response to stakeholder expectations. Under this concept we focus on concrete actions conducted by organizations, and not the general social orientations or the public display of social objectives if these are not followed by actions. In this study only firms were considered, however a socially responsible stand can be observed in the case of public institutions as well.

This paper is the result of an exploration of the analysis of web pages of companies in order to analyze the way social actions are reported (Baleanu et- al. 2011). We chose to investigate the web sites of all 54 large companies with activity in Bihor County, and also the largest 50 companies in Romania based on their turnover. This analysis reveals the

high diversity of the way social actions are seen at the level of companies, confirming the conclusion of previous research regarding the lack of maturity of Romanian firms referring to CSR (Ilies, 2011). As we will argue, CSR is a phenomenon focused upon mainly by multinational companies, the disclosure of related aspects can be found solely on the mother company with little visibility of the actions in Romania.

More, some of the information that can be gathered from the companies' websites is proven in some cases insufficient. In the case of large companies from Bihor county, due to the direct information of the researchers the CSR related information on the websites was inconclusive. We knew about social actions of some of these firms, information that is not presented online. Consequently we considered that it is possible for other enterprises be socially involved without disclosing such information online. In order to fill in this gap we chose to investigate also the local press searching for articles presenting such actions. Due to time limitations this content analysis focused on one newspaper from Oradea, articles published in 2013. This analysis is reflected in the second part of this article.

## 1. CSR and CSR disclosure

Social responsibility and largely the business-society relationship has gained more and more attention in the past 50 years. It is considered that businesses have a duty towards society and their contribution is viewed as significant for the wellbeing of society. The definitions of the CSR consider it a phenomenon by which companies act beyond their economic and legal attributions towards achieving social and environmental aims, associated to sustainable development (Dahlsrud, 2006). Nonetheless, several studies revealed the inconsistency in utilization of the related concepts (Garriga and Mele, 2004) as well as the identification of the concrete actions which should be considered when one defines a socially responsible company (Dahlsrud, 2006).

As argued before (Saveanu and Abrudan, 2014), corporate social responsibility (CSR) is in many aspects a too broad concept with little empirical clarity. Social involvement is more grounded as it reflects concrete actions, nonetheless social remains a broad area. We refer broadly to social involvement, covering all terms as corporate social responsibility, corporate social performance, sustainability, sustainable organization, and corporate citizenship. We define social involvement as the contribution of organizations at the production of collective goods as a response to stakeholders' expectations. Due to the time frame it is often hard to measure the long term impact of such involvement (Barth et. al., 2007).

The main limit in the analysis of these aspects resides in the impact assessment. As some of practitioners and theoreticians consider there are direct benefits for the company making such investments. Some studies claims that social investments would improve the companies economic performance, however the link is far from being proven by data (McWilliams et.al., 2005).

More, as a consequence of the fact that the positive outcomes are hardly to be revealed, critiques to the idea of social involvement of companies claim that these actions are purely PR strategies (Banerjee, 2004). Such actions are initiated in order to satisfy some expectations of clients or stakeholders, however again the effect of such pressure of stakeholders is far from being proven. Even if both practitioners and theoreticians expect that consumers may amend companies that are socially irresponsible and more, would chose products or services from companies which display some form of social involvement, studies are not conclusive in this direction (McWilliams & Siegel, 2001; Aguinis and Galvas, 2012).

Given the contradictions and critiques of what social responsibility on behalf of companies' means, some scholars refer directly to CSR disclosure and avoid all pro and con discussions, looking at the core of the problem. However these are defined social actions are initiated or funded by companies and looking solely to the way these are presented to the public sheds a different light on these aspects. By CSR disclosure we refer to the

public presentation of information regarding CSR actions or policies (Gamerschlag et. al., 2010).

We expect that companies promote social actions or the philanthropy online, especially on their own websites. Based on this information we aimed at creating a typology of concrete actions undertaken or financed by companies with activity on Romania. This typology would reveal both the domains of involvement (sports, health, education etc.) and the forms this involvement takes (direct action, sponsorship, partnerships etc). Based on this analysis we expect to distinguish profiles of companies in terms of their interests in CSR, and consequently we may identify factors stimulating such involvement for each type. However, as shown in the analysis section this could be only partly be done, and solely regarding the patterns of CSR disclosure. The information available on CSR action is fragmented and incomplete.

Our investigation was based on conclusions of previous studies on Romanian CSR which attest the lack of maturity in this regard. This phenomenon is mimetically taken from other countries, starting with multinational companies (Ilies, 2011; Baleanu el. al., 2011). However, there is significant evidence that there are particularities of this phenomenon and that the motivations of managers would shed light in this manner. The fact that small and medium enterprises in Romania display a significant interest in social involvement (Saveanu and Abrudan, 2015) support the idea that there are genuine social actions, besides the ones initiated by copying the international examples. This is the underlying argument for conducting the analysis of the profile of CSR actions of Romanian companies.

## 2. The exploration of CSR disclosure of large companies in Romania

### 2.1. Methodological aspects

The investigation of CSR disclosure started with the search of online available information on companies' websites. The criteria for selecting the companies were opportunistic: first I analyzed all the 54 large companies from Bihor County in 2013. The list was available at the National Agency for Fiscal Administration and was accessed on February 2015 (http://static.anaf.ro/static/10/Anaf/listesubunitati/mari2014.pdf). To complete the information we chose to analyze also the websites of large companies at the level of the country. Consequently we analyzed the first 50 largest companies based on their turnover in 2013, as presented on the www.doingbusiness.ro. The search for information was systematized following a data grid which was filled in for each visited website. We looked for information using all concepts related to CSR: social responsibility, sustainability, citizenship and so on. The data was searched in the main menu of each website and also at the sections regarding news/events/PR or related.

This data was then completed with a content analysis on the CSR related articles published in mostly read local newspaper. As a conclusion of the investigation of CSR disclosure on companies' websites we have noted that there are actions which are not presented online. Due to the partnership of our institution with some of the companies in the county, we have knowledge of more CSR action then the one presented on companies website. We investigated the news in order to reveal other actions, completing the image of social responsibility of companies. In this article we present first the results of CSR disclosure on companies own websites and then the analysis of the indirect information relating to these aspects.

## 2.2. ANALYSIS OF CSR RELATED INFORMATION POSTED ON COMPANIES' WEBSITES

As presented in figure no. 1, most companies (41 out of 104 analyzed) do not have information regarding social responsibility on their websites. Nevertheless an important number of firms promote such information on the international or original company. Among the largest Romanian companies by turnover only 11 have this information posted. However the low rate of promotion of this information shows reluctance regarding this field, which may originate either from lack of such shares or poor integration into corporate strategy.
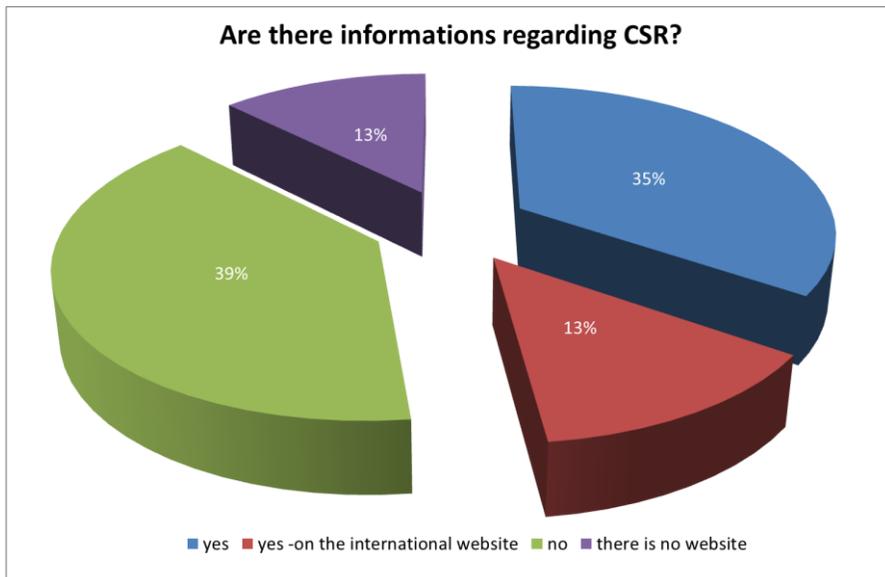


*Figure no. 1. The distribution of firms depending on the disclosure of CSR on their own websites*

Among large firms in Bihor only 3 have this information posted (Benvenutti, Selina and Bihar roads - these last two having common sites as they are part of the same group). Other 8 companies from Bihor present information about social responsibility on the parent company's site. Even so, the visibility of the company's social involvement has a quite low incidence among these firms.

If we look at how this information is promoted, even where companies have social responsibility button/section they post general information like goals or courses of action. The way it is structured such information varies greatly: some structure it on lines of action (sport, culture, environment, community development, etc.), others on stakeholders (employees, customers, community, etc.) while others have a mixture of the two types. Most of the times there are presented direct actions organized as lists of articles describing the action. Big companies have separate sections from the main menu, quite different for CSR, but often the information is presented in the description of the company (sections about, the company, who we are etc.).

Analyzing only the companies that have websites we note that if there is information about social responsibility it is grouped in a section devoted to these issues - see Figure no. 2. The degree of structuring this type of information on these sections differ, as mentioned above, but are found either in the section *responsibility,* either *sustainability* or *CSR*. Some companies call these sections with a name adapted to their company, such as *sustainable mobility* in the case of Michenin, or *Ford and the community*. Others show this type of information in sections on PR or marketing. There are several companies that do not have

a specific section or part for the description of social actions undertaken, yet these are listed in the *events* or *media* sections.

In the case of the studied firms the most often used is the concept of sustainability, followed by the generic responsibility. In most cases both responsibility and sustainability are divided in separate sections between the environmental and social component.
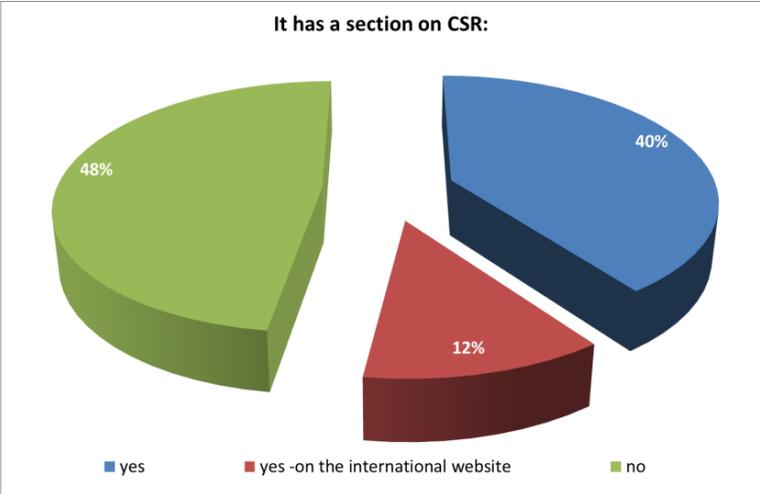


*Figure no. 2. Distribution of firms depending on the existence of a CSR section on their websites*

Regarding stating concrete actions to create a typology CSR we must note that they are presented in a lesser extent. Only 30 webpages lists the actions, including sponsorships offered to various social causes considered (providing supplies, equipment for schools or hospitals) etc. This information can be found partly also in CSR or GRI reports, but it also may be about smaller local initiatives that are not officially reported. For example Celestica (an IT equipment factory, one of the large companies activating near Oradea) does not present any CSR actions for Romania (in the CSR report Romania is mentioned 3 times for 2013) but in Bihor County were several activities organized by them. Consequently, we decided to complement this information with content analysis of appearances in local media to see activities are promoted in addition to what has been identified on the websites.
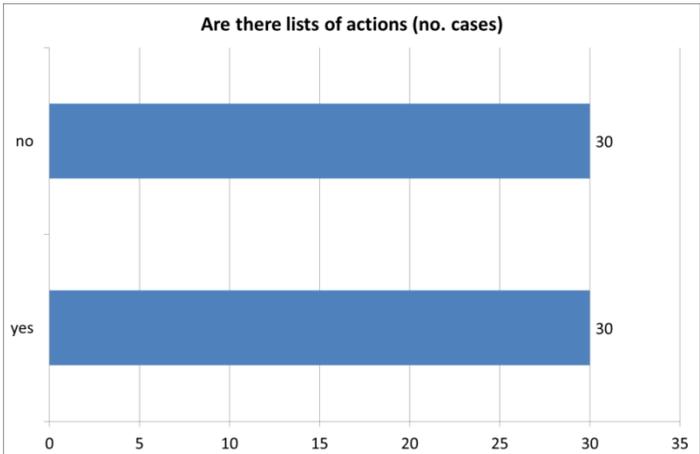


*Figure no. 3. Distribution of firms on lists of CSR activities presented on their websites*

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It is also interesting to note that CSR reports could be found in very few cases, especially referring to Romanian companies - only five posted such reports. Most (74) of surveyed companies which have websites, do not have access to such reports, which support the conclusions of previous studies about the lack of maturity of social responsibility processes in the companies in Romania. Even considering the "mother company" website there are only 9% of the investigated firms which post such reports.
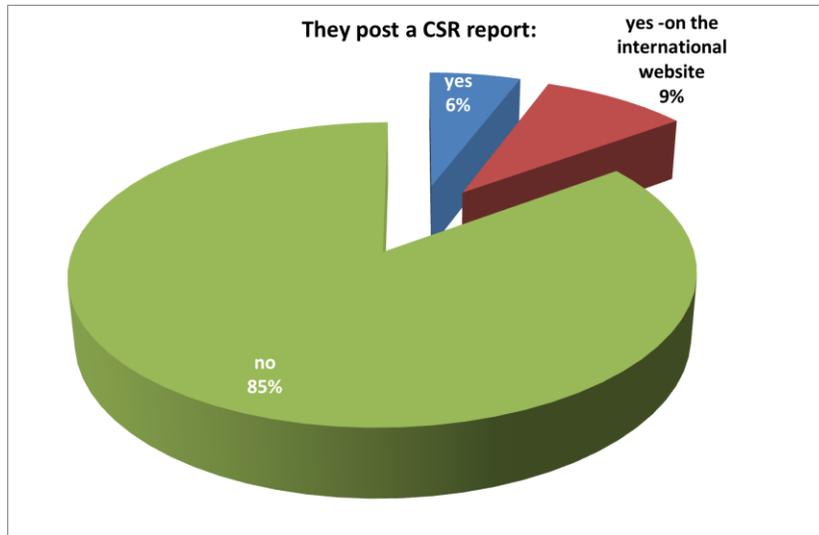


*Figure no. 4. Distribution of firms on the existence of a CSR report on their websites*

## 2. CONTENT ANALYSIS ON CSR RELATED ARTICLES IN THE LOCAL PRESS

The analysis of the websites of large companies active in Bihor County has proved that not all the information on these actions is available. For example Celestica company with factory in Oradea, has numerous actions with impact in the community (which is also demonstrated by the presence on the CSR map developed on the csrmedia.ro platform) but the company itself does not have a page Romanian and on the website of the main large they do not described local actions (Romania is mentioned twice in the report CSR, in a rather general manner). Therefore we decided to complete the picture created on the social involvement of organizations in Bihor County with information on the subject advertised in the local press.

With this goal we have analyzed all articles published in the most important newspaper in Oradea - Bihorean Journal online edition. We chose as the reference year 2013 because we wanted to control this data on sponsorships and donations are for this year. Data posted on the websites were not selected by period, but the reference year for CSR reporting, where the case was still 2013. Few companies have already posted 2014 report. There is a total of 45 articles on social involvement throughout 2013, which would indicate disinterest at least to promote such initiatives. Considering the domains covered by the activities reflected in the news the most frequent was sports (20 articles about different sports cups) supported or sponsored by companies in Bihar. The following are articles on charity (8), their number being higher in December. The articles on health and culture are of 5 respectively, reflecting sponsorships offered for such goals. The less articles are related to highlighting internships or organizing training by firms.

It should be noted that those articles were selected that focus on business involvement in the community. There may be other sponsored activities organized by NGOs, but if no sponsors were mentioned in the article we did not count it as relevant information.

However, first the relatively small number of information on these issues reveals the low importance given to it by journalists. More, the fact that there are actions that are not promoted nor on their websites or in local media indicate firstly that these actions are undertaken for purposes other than simple advertising. We will require more detailed information on social involvement of large firms in order to see how many actions are actually without being promoted through regular channels in this regard. We believe, based on the data presented here, that firms socially involved do not respond to a need to promote the company. The motivations of this involvement, as discussed in previous reports must be sought elsewhere, especially in the explanations of the managers of these companies' explanations.

## Conclusion

The data on social responsibility of the studied companies' active in Romania is incomplete in order to make a typology of such actions. The main conclusion that can be stated based on this social disclosure analysis is that companies in Oradea do not aim these actions to gain the public approval, as their advertising is rather limited. There are important forms of social involvement actions on behalf of companies which are not describe on their websites, both at the level of Bihor county large firms, as well as considering the largest companies in Romania on turnout. More, as it was studied for companies in Oradea, these actions are not promoted in the local press.

There are several possible explanations for this lack of information. First, it is possible that these actions are targeted towards the satisfaction of needs or expectations of specific stakeholders and the disclosure of these actions is targeted towards them. This explanation is in line with some other conclusion which proved that in the Romanian case measures of CSR is categorized on stakeholders groups rather than on the levels of CSR pyramid (Saveanu et. al., 2014). However targeting CSR disclosure to specific groups does not rule out its presentation on the company's website, so this is only partly possible. A second explanation is the lack of maturity regarding these processes: firms get socially involved sporadically, with no strategic aims and consequently they do not promote these actions as its not a priority for the company. More, they may not have personnel dealing with such issues, organizing CSR actions may fall into somebodies job however reporting may not. More, the motives may be purely altruistic and out of modesty or disinterest such actions are not promoted.

Understanding why CSR disclosure is so limited for Romanian companies, we must focus on the explanations of managers of these companies. More, identifying the motivations for this involvement may also provide insight in the patterns of CSR disclosure.

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# THE INFLUENCE OF HOME COUNTRY MACROECONOMIC FACTORS ON INWARD CROSS-BORDER MERGERS AND ACQUISITIONS: THE CASE OF ROMANIA

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**Abstract:** *Expanding abroad and entering on foreign markets is a natural step in the process of growth and development of firms. Cross-border mergers and acquisitions represent, currently, an important tool in the competitive struggle, which is increasingly intense due to the globalization of economies, and also the driving force behind the growth of Foreign Direct Investments (FDI) flows globally. In Romania, the share of cross-border mergers and acquisitions inflows in the total FDI inflows increased progressively, reaching 46,6% in 2006, when the highest value of these transactions was registered (5.308 million dollars, according to UNCTAD). The aim of this empirical research is to study the correlation between the number of inward cross-border mergers acquisitions and a series of other variables, considered factors of influence, over the period 1992-2013. Using simple regression models, the study reveals that economic factors such as Gross domestic product (GDP), stock market capitalization (as a percentage of GDP), interest rate, exchange rate, M2 monetary aggregate and inflation have an important role in explaining cross-border mergers and acquisitions inflows. Between the number of inward cross-border mergers and acquisitions and GDP, M2 monetary aggregate, market capitalization, respectively the exchange rate, there is a direct and linear correlation and between the number of inward mergers and acquisitions and the interest rate, respectively the inflation, there is an inverse linear correlation. The research conducted reveals the important role played by macroeconomic factors with regard to the cross-border mergers and acquisitions inflows, as an entry mode of FDI in Romania.*

**Keywords:** cross-border mergers and acquisitions; macroeconomic determinants; Romania.

**JEL classification:** G34.

## 1. Introduction

Expanding abroad and entering on foreign markets is a natural step in the process of growth and development of firms. This can be made either by greenfield investments or by cross-border mergers and acquisitions (M&As), which represent, in fact, the two entry modes of Foreign Direct Investments (FDI) in an economy. Cross-border mergers and acquisitions represent, currently, an important tool in the competitive struggle, which is increasingly intense due to the globalization of economies, and also the driving force behind the growth of FDI flows globally.

In Romania, the share of cross-border M&A inflows in the total FDI inflows increased progressively, reaching 46,6% in 2006, when the highest value of these transactions was registered *(5.308 million dollars, according to UNCTAD)*. In our country, as well as in other countries, the privatization programs have contributed to an increase in the number of cross-border mergers and acquisitions throughout the 1990s.

We can say that a feature of merger and acquisition activity in Romania is represented by the presence of foreign investors. Figure 1 shows the evolution of the number and value of cross-border mergers and acquisitions inflows carried out during 1992-2013, as shown by

UNCTAD statistics.
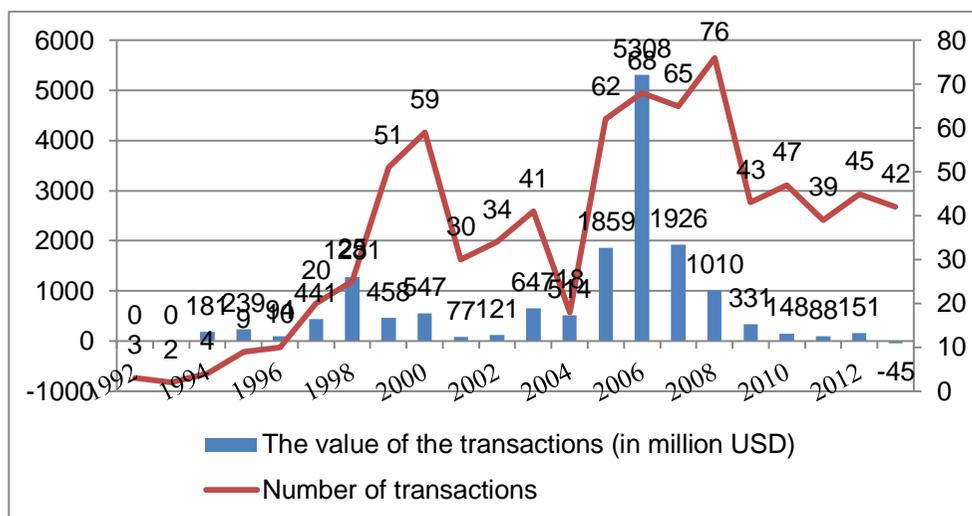


**Figure 1:** The evolution of the number and value of cross-border mergers and acquisitions inflows during 1992-2013
Source: realized by the author based on data from UNCTAD statistics

The main objective of this study is to analyze the influence of economic and financial factors on cross-border mergers and acquisitions inflows carried out during 1992-2013. Taking into consideration previous research in the literature, we selected the following factors of influence: market size, measured by gross domestic product (GDP) nominal value, market capitalization (as a percentage of GDP), monetary policy interest rate, exchange rate, money supply (M2 monetary aggregate specifically) and inflation. The next section of the paper includes a literature review on macroeconomic factors influencing M&A operations, section 3 provides information on the data and methodology used, section 4 presents the results of the study and the last section of the paper provides the conclusions of the study.


## 2. Literature review
The field literature revealed a vast range of studies that analyze the macroeconomic determinants of FDI, but also the fact that few of these studies examined the determinants of the two specific entry modes of FDI. Globerman and Shapiro (2005) analyzed simultaneously the factors affecting cross-border mergers and acquisitions, respectively FDI, and concluded that there are some differences regarding their determinants. Although most important variables affecting cross-border operations or FDI are the same, their research shows that, for example, the rate of GDP growth is a determinant of FDI but not of cross-border mergers and acquisitions. Neto et al. (2010) extended the analysis previously performed by Globerman and Shapiro (2005), by including greenfield investments as a distinct entry mode of FDI. Researchers have identified a group of variables that are common influence factors to each entry mode of FDI, such as the size of the economy, openness, governance and human development index, but also factors specific to each entry mode of FDI. They also showed that investor protection explains cross-border mergers and acquisitions and cultural variables are important in achieving greenfield investments.
The research carried out so far, which focused on the subject of the determinants of M&A transactions, revealed a number of influencing factors, including gross domestic product,

stock prices, interest rates, money supply, exchange rate or inflation.

GDP reflects the size of the economy, and in the literature there are several studies which have demonstrated that M&A activity increases during periods of GDP growth (Crook, 1995; Ali-Yrkko, 2002; Nakamura, 2004; Resende, 2008). Boateng et al. (2011) or Uddin and Boateng (2011) indicates the same thing, namely, the fact that a higher GDP in the host country will attract companies from other countries in pursuit of M&As, due to a possible increase in aggregate demand and profitability.

A large number of studies in the literature have focused on analyzing the correlation between M&A activity and stock prices (Nelson, 1959; Kish and Vasconcellos, 1993; Crook, 1995; Shleifer and Vishny, 2003; Boateng et al., 2011; Uddin and Boateng, 2011; Boateng et al., 2014). Thus, stock market capitalization is considered to be a factor that reflects financial market size and influences significantly cross-border M&A activity. Researchers such as di Giovanni (2005), Globerman and Shapiro (2005) have shown a positive correlation between market capitalization and capital inflows, related to cross-border mergers and acquisitions. On the other hand, Neto et al. (2010), which extended the previous analysis performed by Globerman and Shapiro (2005), couldn't prove empirically that this variable is specific to cross-border mergers and acquisitions transactions.

Regarding the influence of interest rates on M&A activity, several researchers (Melicher et al., 1983; Becketti, 1986; Yagil, 1996) have argued that lower interest rates stimulate corporate transactions by reducing the cost of financing. Regarding cross-border operations, the results of Kish and Vasconcellos (1993) indicate that an increase in interest rates in the host country determines the reduction of the capital inflows through cross-border M&As. On the other hand, the results obtained by Boateng et al. (2011) indicate an insignificant impact of interest rates on cross-border mergers and acquisitions inflows in the UK.

The importance of the exchange rate in the activity of cross-border mergers and acquisitions is revealed in most studies that have analyzed the determinants of these transactions. Harris and Ravenscraft (1991), Kang (1993), Vasconcellos and Kish (1996) or Goergen and Renneboog (2004) support the importance of the exchange rate in explaining cross-border operations and the fact that companies from countries that have a strong currency will be tempted to engage in operations targeting firms in countries with a depreciated currency, because in this case the companies' assets will be cheaper. Vasconcellos and Kish (1998) revealed that the share prices and exchange rates influence both the number and geographical spread of cross-border transactions. Kamaly (2007) also argues that currency depreciation affects, significantly and in a positive way, M&A activity carried out in developing countries which he analyzed in the research. According to Erel et al. (2012), firms from countries where there is an increase in the stock market, whose national currency has appreciated and have a relatively high value of market to book ratio, tend to be purchasers, while firms coming from countries whose economy underperforms tend to be targeted in cross-border transactions.

Another stimulating factor of merger and acquisition activity is money supply. Researchers such as Clarke and Ioannidis (1994) or Resende (2008) emphasized the role of liquidity in the economy, in terms of stimulating the M&A activity, by identifying a direct correlation between money supply and corporate takeover activity. As regards the inward cross-border operations, Uddin and Boateng (2011) also revealed that money supply (liquidity) is an important determinant. The increase in liquidity in the host country stimulates economic activities, which should reduce the cost of financing and thus should attract foreign investment through mergers and acquisitions.

Studies that analyze the macroeconomic determinants of cross-border transactions, included the variable inflation rate as an influencing factor of these operations (Boateng et al., 2011; Boateng et al., 2014). A low rate of inflation attracts foreign direct investment in the form of mergers and acquisitions, whereas a high rate of inflation will direct foreign

investors to other countries where lower inflation makes targets less expensive.

Regarding our country, as far as we know, only Jurcău et al. (2011) have analyzed the macroeconomic determinants of Romanian cross-border mergers and acquisitions. Unlike them, we introduced other variables in the analysis and used the number of inward transactions as a dependent variable instead of their value. Other differences concern the methodological aspects.

On the basis of existing research literature on macroeconomic determinants of cross-border mergers and acquisitions, we intend further to study their impact on Romanian inward transactions.


## 3. Data and research methodology

The aim of this research is to study the correlation between the number of inward cross-border mergers acquisitions, using simple regression models, and a series of other variables, selected in accordance with the most recent and relevant studies from the field literature.

In the first stage of the research, annual data have been collected with respect to Romania, over the period 1992 – 2013, regarding the following variables, considered factors of influence for the number of inward cross-border mergers and acquisitions:
- Market size, measured by nominal GDP value expressed in millions of lei, current prices;
- Stock market capitalization, expressed as a percentage of GDP;
- National Bank interest rate (monetary policy interest rate, from 1 September 2011);
- Average exchange rate, RON/ USD;
- Money supply, M2 monetary aggregate specifically, expressed in millions of lei;
- Inflation.

As researchers Boateng et al. (2011) or Uddin and Boateng (2011), we used in our study, the endogenous variable represented by the number of cross-border M&A transactions concluded annually.

Data regarding the number of inward cross-border mergers and acquisitions was collected from UNCTAD statistics, the GDP annual value was collected from Eurostat. Data regarding BNR monetary policy interest rate, exchange rate and M2 monetary aggregate were collected from the website of the National Bank of Romania, the Interactive Database, respectively from the monthly and annual reports. Data regarding the market capitalization (as a % of GDP) was collected from the website of World Bank, the World Development Indicators (it covered the period 1994-2012). For the years 1992 and 1993 data were collected from Bucharest Stock Exchange and the National Bank of Romania reports. For the year 2013, data were collected from the annual report of the Financial Supervisory Authority. Data regarding the inflation rate were collected from the Romanian National Institute of Statistics, TEMPO Online Database.

Based on these data we will investigate and validate or invalidate the following hypotheses:

H1: Gross domestic product positively influences the number of cross-border mergers and acquisitions inflows.

H2: Market capitalization positively influences the number of cross-border mergers and acquisitions inflows.

H3: The decrease in interest rates positively influences the number of cross-border mergers and acquisitions inflows.

H4: The number of mergers and acquisitions of Romanian companies by foreign investors increases when the domestic currency depreciates.

H5: The number of cross-border mergers and acquisitions inflows increases when money supply increases.

H6: The decrease in the inflation rate positively affects the number of mergers and

acquisitions of Romanian companies by foreign investors.

The validation of these hypotheses will be based on the results of simple regression models between the endogenous factor, the number of inward cross-border M&As, and the exogenous factors, mentioned in the previous paragraphs. Based on these models, we will identify the strength of the correlation between the two variables and its statistical significance. We will also validate or invalidate the research hypotheses stated. The data will be processed using the Eviews software.

## 4. Results

The purpose of simple regression models consists in identifying the existence of the correlation between variables, determining the intensity of the correlation between them, analysing its shape, determining the model parameters and testing the hypotheses in order to establish their validity.

Given the exponential evolution of the variables considered, the numerical values were transformed by logarithm and the influence of seasonal factors was eliminated using Tramo-Seats method. The new variables were further symbolized according to the table below:

**Table 1:** Variables used in the modelling and their symbol

| Name of the initial variable | Symbol for the initial data series | Symbol for the transformed variable |
|---|---|---|
| The number of inward cross-border mergers acquisitions | TRANZ | LOG_TRANZ |
| GDP | GDP | LOG_GDP |
| Market capitalization | MC | LOG_MC |
| Exchange rate RON/USD | ER | LOG_ER |
| M2 monetary aggregate | M2 | LOG_M2 |
| BNR monetary policy interest rate | IR | LOG_IR |
| Inflation | I | LOG_I |

Source: realized by the author

By using the scatterplot between LOG_TRANZ and the exogenous variables, we will be able to describe the correlation the latter have on the number of inward cross-border mergers and aquisitions.
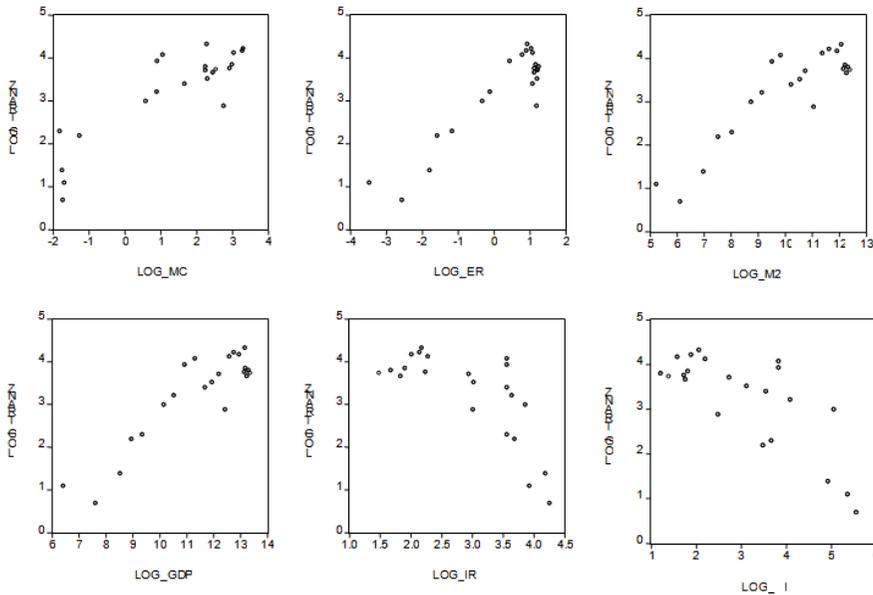
**Figure 2:** Scatterplot between the number of cross-border mergers and acquisitions and exogenous variables
Source: author calculus using Eviews

From the analysis of the graphical representations using the scatterplot, we can conclude that between the number of inward cross-border mergers and acquisitions and GDP, M2 monetary aggregate, market capitalization, respectively the exchange rate, there is a direct and linear correlation and between the number of inward cross-border mergers and acquisitions and the interest rate, respectively the inflation, there is an inverse linear correlation.

The hypothesis mentioned above will be confirmed using econometric modelling. Therefore, we will develop simple linear regression models between the variable number of inward cross-border M&As, which is considered in the logarithmic form, and the influence factors. We continue to estimate the regression equations parameters. The estimation results using Eviews are presented in the table below:

**Table 2:** Estimation results of linear simple regression model between the number of cross-border mergers and acquisitions inflows and exogenous variables

| Exogenous variable | R-squared $\hat{R}^2$ | Fisher statistic $F_{calc}$ | P | Coefficient of exogenous variable | t Statistic | P |
|---|---|---|---|---|---|---|
| LOG_GDP | 0,81 | 85,85 | 0,00 | 0,46 | 9,26 | 0,00 |
| LOG_MC | 0,76 | 64,51 | 0,00 | 0,5 | 8,03 | 0,00 |
| LOG_ER | 0,84 | 105,33 | 0,00 | 0,68 | 10,26 | 0,00 |
| LOG_M2 | 0,79 | 76,40 | 0,00 | 0,43 | 8,74 | 0,00 |
| LOG_IR | 0,52 | 21,88 | 0,00 | -0,85 | -4,76 | 0,00 |
| LOG_I | 0,59 | 28,87 | 0,00 | -0,59 | -5,37 | 0,00 |

Source: author calculus using Eviews

The correlation coefficient (R-squared) expresses the intensity of the influence that each exogenous variable has on the variable LOG_TRANZ. The closer the value is to 1, the stronger the correlation between variables. The correlation reports are statistically significant, because the P value associated with Fisher statistics is 0,00 in each case.

As shown in Table 2, the intensity of the correlation regarding the sample of 22 observations is strong and statistically significant between LOG_TRANZ and all the selected variables. It is a direct correlation from the LOG_GDP, LOG_MC, LOG_ER, LOG_M2 and reverse from LOG_IR and LOG_I.

By analyzing the significance of the coefficients, we can observe that all of them are significantly different from 0, the probability that they are null featuring in the last column of the table 2 (it can be seen that it is zero in each case).

The tests relating to residual variable $\varepsilon_t$ confirm the validity of the models: White test confirmed the homoscedasticity of the errors, Durbin Watson - the independence and Jarque Berra - the normality of errors.

Whereas all the hypotheses are verified, the models are valid, so we can take the following decisions regarding the research hypotheses:

**Table 3:** Research propositions and related decisions using linear models

| Research propositions | Decision |
|---|---|
| H1: Gross domestic product positively influences the number of cross-border mergers and acquisitions inflows. | Validated |
| H2: Market capitalization positively influences the number of cross-border mergers and acquisitions inflows. | Validated |
| H3: The decrease in interest rates positively influences the number of cross-border mergers and acquisitions inflows. | Validated |
| H4: The number of mergers and acquisitions of Romanian companies by foreign investors increases when the domestic currency depreciates. | Validated |
| H5: The number of cross-border mergers and acquisitions inflows increases when money supply increases. | Validated. |
| H6: The decrease in the inflation rate positively affects the number of mergers and acquisitions of Romanian companies by foreign investors. | Validated |

Source: author results using Eviews

## 5. Conclusions

The research conducted reveals the important role played by macroeconomic factors with regard to the cross-border mergers and acquisitions inflows, as an entry mode of FDI in Romania. The study reveals that economic factors such as GDP, stock market capitalization (as a percentage of GDP), interest rate, exchange rate, M2 monetary aggregate and inflation have an important role in explaining cross-border mergers and acquisitions inflows. Between the number of inward cross-border mergers and acquisitions and GDP, M2 monetary aggregate, market capitalization, respectively the exchange rate, there is a direct and linear correlation and between the number of inward mergers and acquisitions and the interest rate, respectively the inflation, there is an inverse linear correlation.

These results reinforce the idea that macroeconomic factors in Romania, as a host country, creates competitive advantages on the basis of which foreign companies shall take decisions subordinated to the investment policy. These factors are key elements related to the advantages of choosing a specific location for mergers and acquisitions as an entry mode of FDI in Romania. Thus, we emphasized the significance and impact of these factors on economic concentration by mergers and acquisitions operations, which allowed us to provide an overview of the dynamics and specificities of the cross-border merger and acquisition activity in Romania.

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# CREATING OR DESTROYING VALUE THROUGH MERGERS AND ACQUISITIONS?

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**Abstract:** *The avalanche of operations performed and their specificities revealed several motivations for mergers and acquisitions However, although they are concluded with the purpose of value creation, reality has shown that in many cases it was exactly the opposite, these transactions led to value destruction. The paper aims to analyze the operations of mergers and acquisitions starting from the value theories, emphasizing their motivations and consequences regarding value creation. This is a theoretical research and we have used as a research method the qualitative approach in order to identify the motivations and the generating factors of mergers and acquisitions. Mergers and acquisitions can contribute to the creation of value, the main motivation being represented by the improvement of the economic performance of the new entity formed, by achievement of synergies, by increasing market power or by replacing inefficient management teams. However, the reality showed that these operations haven't always a beneficial role for the "health" of a company that wishes to adopt an external growth strategy. Analyzing from an opposite perspective, we emphasized the motivations underlying value destruction by mergers and acquisitions. The existence of conflicts of interest between managers and shareholders, of a free cash flow, the managers' desire to strengthen their position in the company to built an "empire" or even the pride and overconfidence of the managers regarding their abilities to create value are other reasons that underlie the occurrence of these operations.*

## 1. Introduction

The research into the theories that represent the foundation of the operations of mergers and acquisitions reveals their multitude, but also the increased interest shown by the researchers in the field. The avalanche of operations performed and their specificities revealed several motivations for mergers and acquisitions However, although they are concluded with the purpose of value creation, reality has shown that in many cases it was exactly the opposite, these transactions led to value destruction. The paper aims to analyze the operations of mergers and acquisitions starting from the value theories, emphasizing their motivations and consequences. This is a theoretical research and we have used as a research method the qualitative approach in order to identify the motivations and the generating factors of mergers and acquisitions. The paper is organized as follows: in second section we analyze the motivations of mergers and acquisitions that are subordinated to the objective of creating value, in the third section we analyze the motivations that are based on subjectivity, the exacerbated ego of managers, the desire to maximize their own interests, and which, as a rule, have the effect of destroying value. In the final part of the paper we present the conclusions.

## 2. Creating value through mergers and acquisitions

Explanatory theories of mergers and acquisitions are numerous, but usually management teams of initiating corporations justify the opportunity of the operations by improving economic efficiency by various means. Thus, mergers and acquisitions can contribute to the creation of value, as the main motivation is represented by the improvement of the economic performance of the new entity formed.

### 2.1. Efficiency gains

According to efficiency theory, the operation of economic concentrations through mergers and acquisitions lead to increases in enterprises' economic efficiency through synergies as a result of the pooling of all tangible and intangible assets of the acquirer and of the target company. Mergers and acquisitions are made aiming to increase shareholder value by exploiting synergies between the entities participating in the operation. Regarding the definition of this concept, it can be noted that although the literature contains several definitions, all subscribe to the same view. Synergies correspond to an additional creation of value resulting from the combination of the companies targeted and which would not have been achieved without the actual realization of this combination (DePamphilis, 2010:6). The term "synergy" reflects the creation of an additional value through a process of cooperation between two entities, superior to the value existing prior to performing this process. According to many researchers, as Chatterjee (1986) and Trautwein (1990), synergies represent the fundamental reason for mergers and acquisitions.

The general sense is that mergers and acquisitions operations can generate three types of synergies: operational, financial and managerial.

Operational synergies are generated as a result of the grouping of companies and as a result of an efficient activity in the new company formed. These refer mainly to achieving economies of scale and scope, eliminating duplicate activities, renegotiating contracts with suppliers, reducing transaction costs. The gains of the new entity formed may result from revenue enhancing synergies or cost reduction synergies. Empirical studies have shown that operational synergies generate the biggest gains. Devos et al. (2009), analyzing a sample of 264 large mergers, estimated an average gain from the synergies generated of 10.3% from the combined value of the shares of the merged companies, of which 8.3% represent gains obtained through the operational synergies achieved.

Other studies have focused on the correlation between the type of operation (horizontal, vertical or conglomerate) and the type of synergies generated. Thus, Fee and Thomas (2004) and Shahrur (2005) showed that the most important synergies are generated within horizontal operations, the results of their studies showing that the operations record a positive value creation.

The financial synergies can also be generated from mergers or acquisitions and they can take many forms, such as, for example, increasing the indebtedness capacity of the new entity, reducing the level of risk to which the company is exposed, which can lead to greater stability of cash-flow (Lewellen, 1971), decreasing the probability of bankruptcy, minimizing the cost of access to capital markets or reducing the capital cost with increasing the size of the company (Luypaert and Huyghebaert, 2008; DePamphilis, 2010:7-8, Gaughan, 2011:143). Following the merger or the purchase, the new entity may stabilize its results and the offsetting of gains and losses can result in reduced losses and lowered risk of entering into default and bankruptcy.

The managerial synergies correspond to the transfer of knowledge, know-how or skills from the management team of the purchaser to that of the target company and vice versa. Managerial synergies are generated particularly when it is necessary to solve problems of strategic or organizational nature and the experience of the partner management team can help in this regard.

### 2.2. Market power

Along with the efficiency theory that propose synergies as the main motivation for mergers and acquisitions, the market power theory propose, as a motivator factor for these operations, the strengthening or enhancing the market power of the companies, which is reflected in the ability of a company to set the selling price of products and/or to increase its profit margin and benefits.

Market power theory suggests that firms merge or acquire other entities in order to increase the monopoly power and thus to set the products and services' prices at an unsustainable level in a competitive market (DePamphilis, 2010:12). Horizontal operations lead to an increase in market power due to the increase of industry concentration. Thus, horizontal operations can lead to a limitation of outputs and an increase of the products and services' prices or a decrease of the input' prices (Rau, 2008:235). The costs in terms of social welfare resulting from an increase in the concentration can not be ignored. If the market structure approaches to a form of monopoly, they can be significant (Gaughan, 2011:158).

The empirical studies focused on this topic provide information that are quite divergent. Thus, while some studies provide empirical support for the hypothesis of the increase in market power as a motivation and consequence of performing the transactions of mergers and acquisitions, many studies challenge this hypothesis. Some research shows that mergers and acquisitions transactions determine an improvement of the operational efficiency rather than an increase in market power. The empirical studies of Eckbo (1983) or Sharma and Thistle (1996) reject the hypothesis of an increase in market power after mergers and acquisitions. The ideas promoted by these researchers are supported by the findings of Shahrur (2005), which concluded that the motivations of the horizontal operations are related rather to efficiency, rather than to an increase in market power. On the other hand, the study by Kim and Singal (1993) found that market power led to certain efficiency gains. Snyder (1998) argues that horizontal operations increase the bargaining power of firms in relation to suppliers, which, if the supplier's market is relatively concentrated, can lead to lower purchase price of inputs. The same idea is supported by the Fee and Thomas (2004) after analyzing a large number of horizontal operations carried out during 1980-1997.

A variety of operations aim to improve the competitive position of the company initiating the merger or acquisition by exploiting or capitalizing the strengths of the target company, which will allow changing the rules of the game in its favor.

## 2.3. Disciplinary takeovers: the market for corporate control

Another motivation for conducting mergers and acquisitions in order to create value is related to managerial discipline reasons and argues that the most efficient actors of a sector tend to acquire the less performant. The theory suggests that if a firm is undervalued due to inefficient management, a management team from another company will take over the business, which has not reached the desired performance parameters, and will replace the managers. Moreover, Manne (1965), who proposed this theory, argued that mergers and acquisitions promote competition between different management teams in terms of competences and results obtained. Managers who create the most value for shareholders will take the lead of a business until a new management team will be able to create a greater value for shareholders, to further improve the performance of the assets and to maximize the profits of the enterprise.

By takeovers, managers who pursue their own interests or are incompetent will be removed and replaced with more competent and efficient teams. Manne (1965) finds that mergers are a way to transfer resources (reallocation of assets) in the hands of those who can best manage them in order to improve the performance of assets. According to Manne (1965) the share price of a company run by an inefficient management team will be lower, which makes it an attractive target for those who are able to manage it more effectively under the principles of profitable growth.

According to this theory, synergies arise from the use of the skills and competences of the management team of the purchaser in managing the tangible and intangible assets of the target company. Also, if a company performs badly, it requires a reallocation of assets, which are obviously underutilized, to the management teams that have proven their effectiveness. Jensen and Ruback (1983) expressed metaphorically the takeover motivations, claiming that the market for corporate control can be seen as an arena in which managerial teams compete for the right to manage corporate resources.

## 3. Destroying value through mergers and acquisitions
The study of the literature highlights the complexity of mergers and acquisitions transactions with consideration to the multitude of issues that we have identified as a result of their being studied within international research. Although the main motivation for mergers and acquisitions is represented by the improvement of the firms' economic performance, the reality showed that these operations did not achieve the desired performance and they were rather utter failures. In the following we will try to understand why we are witnessing at many failures of these operations. Are there unrealistic or subjective motivations that lead to a deviation from the goal of creating value?

### 3.1. Agency costs
This theory focuses on the need for business owners to monitor managers in order to prevent and limit potential opportunistic behavior of the management team (Jensen and Meckling, 1976; Fama, 1980; Nicholson and Kiel, 2007). In the view of the agency theory the enterprise is perceived as an actual "nexus of contracts" in which individuals act rationally, have diverging interests, detain distinct pieces of information and seek to maximize their own interests. Basically, this theory focuses on the relationship shareholders - managers, relationship which is considered the generating factor of conflicts of interest because, as a rule, problems occur in the context of separation between ownership and control. Jensen and Meckling (1976) studied the managers' opportunistic behavior and also their tendency to maximize their own interests at the expense of the owners'. This behavior reflects the lack of managerial ethics, i.e. a situation when managers knowingly cheat.
Agency theory explains the relationships between the principal (shareholders) and agent (managers) and it is based on the assumption that every individual seeks to maximize his/her own utility. As a result, between principal and agent a conflict of interest can arise which may develop if the decisions made by the agent (managers) in order to maximize their own utility, does not at the same time maximize the utility for the principal (shareholders).
According to agency theory the mergers and acquisitions transactions can be a result of the conflict between shareholders and managers, the latter wishing to increase the organization and minimize risk, while the former, the shareholders, wish to maximize gains (Jensen, 1986). Mergers and acquisitions operations whose main motivation is the desire of managers to meet their own interests do not create value but, on the contrary, by increasing the company beyond its optimal size, they lead to the destruction of the firm's value.

### 3.2. Free cash flow
This theory is originated in the agency theory and it promotes the idea that at the origin of mergers and acquisitions transactions there are the agency costs related to conflict of interest between shareholders and managers regarding the free cash flow. This theory was stated by Jensen (1986), who defined the concept of free cash flow as being the surplus of cash existing in the company after all projects with a positive net present value have been financed. Martynova and Renneboog (2008) state that the existence of a large amount of

liquidity makes managers bolder with respect to their actions and more likely to undertake value-destroying operations at the expense of those creating value. From this perspective, managers of an enterprise that has a significant cash flow may be tempted to use these resources to make various irrational expenses or to initiate operations of mergers and acquisitions, some of which prove economically unprofitable. Assuming the existence of significant cash flows, this theory claims that managers are more likely to use them to finance mergers and acquisitions operations that will not create value or will lead to the destruction of shareholder value. Again, we are talking about the same conflictual situation when managers do not pursue the maximization of shareholder wealth.

In the literature we find other studies that confirm the hypotheses of the theory of the free cash flow. Thus, Lang et al. (1991), Harford (1999) or Lin et al. (2013) showed that purchasers who have significant cash flow make transactions which destroy value, a fact that is reflected by the decrease in business performance and in shareholders' earnings. As seen in each motivational theory of mergers and acquisitions, there are also researchers that found no evidence to support the hypothesis of the free cash flow claimed by Jensen (1986). In this regard, we mention the empirical studies of Gregory (2005), Luypaert and Huyghebaert (2008) or Gao (2011).

### 3.3. Management entrenchment

Management entrenchment theory is also based on the conflicts of interest between shareholders and managers who, contrary to the purpose for which they were appointed to these positions, namely maximizing shareholder value, use company resources for personal purposes. This theory was proposed by Shleifer and Vishny (1989) as being the process which enables managers to challenge the authority of the board of shareholders, in order to manage their company towards maximizing their own utility function and in a direction quite opposite to the maximization of shareholder value. The entrenchment of managers occurs due to specific investments that make it difficult and expensive to replace them and make it possible for them to obtain greater benefits.

The link between this theory and the operations of mergers and acquisitions is easy to guess given that these operations are actually investments that companies make on long-term, in order to create value. The financial benefits of the managers, and those with respect to power and prestige, are correlated with the company's size (Masulis et al., 2006), and from this perspective, the managers can consider mergers and acquisitions as perfect instruments that can allow them to achieve this goal and thus, by which they may enjoy all these benefits, even with the risk of making investments that will prove unprofitable (Morck et al., 1990).

Mergers and acquisitions correspond to the view of management entrenchment and to the minimization of the risk of managers' replacement from their position, but, as demonstrated in the literature, the transactions based on this reason (and which often involve acquisitions that were much too expensive) fail to create value. Bebchuk et al. (2009) analyzed the correlation between shares returns and the management entrenchment and found that they are negatively correlated, shares yields of the companies decreased significantly when their managers' positions strengthened.

### 3.4. Managerial discretion

This theory states that managers are concerned about increasing the size of the company they run in order to build real "empires". In many cases managers' compensations are directly related to the size of the company, so they are ambitious to increase it, and a quick way is represented by mergers and acquisitions.

Contrary to the objective of making investments that shall maximize shareholder value, we speak rather of a management of the company in an opposite sense, subordinate to the desire of increasing the "empire" (Morck et al., 1990) even with a view to prevent own companies from becoming themselves acquired (Gorton et al., 2005), of an increase in

remuneration or an increase in the prestige and a strengthening of the status.

Masulis et al. (2006) also argue that managers are sometimes motivated to acquire other businesses to strengthen their influence, convinced that it depends on the size of the company they run.

## 3.5. Managerial hubris

The managerial hubris theory proposes another explanation for mergers and acquisitions. The theory was proposed by Richard Roll (1986) and fit the idea that these operations have as a motivation a too great pride and confidence of managers in their abilities to perform operations that generate synergies and create shareholder value. The theory is validated and supported also by empirical studies performed by Berkovitch and Narayanan (1993); Seth et al. (2000); Goergen and Renneboog (2004) or Billet and Qian (2007).

The teory refers to those managers who are affected by the so-called hubris or ego syndrome and who have a truncated vision of reality. Thus, although the managers' intentions would coincide with the shareholders' desire to maximize wealth, their pride can lead to an overestimation of the target company (Hayward and Hambrick, 1997; Malmendier and Tate, 2008), and the main beneficiaries will be the shareholders of the latter. The payment of too high acquisition premiums may be associated with the ego syndrome, as demonstrated by Hayward and Hambrick (1997), while Morck et al. (1990) shows that strong companies whose managers are likely to be affected by this syndrome, perform the most inefficient operations.

The ego syndrome is a contributor to the so-called "winner's curse". Multiple bids for the same target company can result in a purchaser finding himself not in the winning position but, rather, in that of a loser. The existence of several bidders may compel the actual purchaser to pay a purchase premium that is too large and thus the value created can be annihilated, leading to the destruction of shareholder value.

## 4. Conclusions

An important aspect regarding the mergers and acquisitions operations, on which we focused in this paper, is represented by the identification of the motivations underlying these operations, especially since many of the empirical studies on the performance of the operations challenge their beneficial role for the "health" of a company that wishes to adopt an external growth strategy.

The research into the literature enabled us to identify multiple theories that underpin the achievement of mergers and acquisitions in order to explain why such operations take place. According to the theories that support the contribution of mergers and acquisitions to value creation, the main reason is the increase in the economic performance of the newly formed entity. However, the results of the empirical studies show that these operations are rather well-known failures. Thus, other theories that justify the implementation of such operations were outlined. The existence of conflicts of interest between managers and shareholders, of a free cash flow, the managers' desire to strengthen their position in the company to built an "empire" or even the pride and overconfidence of the managers regarding their abilities to create value are other reasons that underlie the occurrence of these operations.

In light of the value destruction theories, after mergers and acquisitions, a transfer of wealth may result, from shareholders towards managers, or, according to the hypothesis of the free cash flow theory or of the managerial hubris theory, the transfer of wealth is done from the shareholders of the acquirer towards the shareholders of the target company.

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# MACROECONOMIC FACTORS OF ENTREPRENEURSHIP IN THE EUROPEAN UNION

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**Abstract:** *Entrepreneurship has been traditionally related to several economic factors, including economy growth, inflation, unemployment, interest rates. The causal relation between these variables however has been the topic of several hypothesises. Our goal is to assess these relations in the case of the European Union. While several similar studies have been pursued in the field, we aim to bring further evidence to the potential of impacting entrepreneurship through changes in economic factors at the country level Our analysis used panel regression to estimate the relation between macroeconomic factors and entrepreneurial density. Results indicate that Gross Domestic Product is positively related to entrepreneurial activity, and further more in the case of the European Union we bring evidence to the fact that the relation might be quadratic, as opposed to linear as it is generally suggested. In the case of the European Union this results in a reversed U shape of the distribution. More specifically, in the case of the investigated period only the upward half of the reversed U was observed, so on this specific interval the overall effect was positive. Regarding inflation we have observed a positive, but weak, relationship between it and entrepreneurial activity. The direction of the relation was not expected, however we provide a potential explanation in the specifics of inflation in the European Union (relative stability). Ease of starting a business, measured as the cost, time and procedures required is negatively related to entrepreneurial activity, as is the lending interest rate. Unemployment could not be significantly related to entrepreneurial density, however we believe that this is due to the fact that the lagged effect that we expected to find might either have a unit lower than 1 year, might have different values in different countries, or both. We conclude that these relations could provide a means to better understand the impact of economic changes on the entrepreneurial supply and demand.*

**Keywords:** entrepreneurship, GDP, inflation, unemployment, ease of starting a business, lending rate

**JEL classification:** L26

## 1. Background

The study of entrepreneurial activity has gained momentum in the last decades, as more and more governmental focus is being directed to its encouragement. This focus is generated by a series of assumptions, namely that increasing entrepreneurial activity will have a positive impact on the economy and society.

These measures, beyond the more general assumption of efficiency and efficacy (Acs, Morck, & Yeung, 2001; Lundström et al., 2014), require a good understanding of the relations between policy, economic indicators and entrepreneurial activity.

Our study aims to address the latter two terms. We propose that several key economic indicators, such as inflation, unemployment, gross domestic product, have a significant impact on the entrepreneurial activity in the European Union, and we postulate that, if this is the case, any policy changes that aim to change one of these indicators will have an indirect effect on entrepreneurship as well.

## 1.1 Entrepreneurship

Research in the field is rich, however relatively fragmented as a consensus on the meaning of several key terms has yet to be achieved. Who is the entrepreneur, what is entrepreneurship and what functions does it play in the economy are still debated topics (Alam & Mohiuddin, 2014; Carland & Hoy, 1984; Cuervo, Ribeiro, & Roig, 2007; Cunningham & Lischeron, 1991; Jonsson, 2014; Veciana, 2007).

However from the general empirical approaches one can notice that the operational definition of entrepreneurship tends to be similar, and the indicator of entrepreneurial activity is most frequently the number of economic entities that are newly registered in a certain time frame and / or the number of self-employed individuals (Van Der Sluis, Van Praag, & Vijverberg, 2008).

In our case we decided to use the same operational definition and include in our study the number of newly registered entities as a proxy indicator of entrepreneurial activity. While we support the idea that this only a segment of the entrepreneurial phenomenon, in the case of our analysis we have to rely on historical data sources from national and international entities, and generally  no further information is available. For instance it would be of interest to assess the number of entrepreneurs and not the number of economic entities, as one entrepreneur could arguably be responsible for several entities, or a single entity might entice several individual with entrepreneurial profile.

## 1.2 Macroeconomic factors of entrepreneurship

Several factors are considered to be influenced or influence entrepreneurial activity. The ones that we have selected are some of the most often invoked in the literature, namely Gross Domestic Product (GDP), Inflation, Unemployment, Loan rates, and Difficulty of starting a business.

The relationship between GDP and entrepreneurial activity has been investigated previously in several studies, generally using Global Entrepreneurship Monitor data and the results indicated a negative relation (Arin, Huang, Minniti, Nandialath, & Reich, 2014), a U shaped relation (Wennekers, Van Wennekers, Thurik, & Reynolds, 2005), a positive relation for developed economies (Stel, Carree, & Thurik, 2005) or a negative relation, with some deviations from the trend at the highest GDP levels (Amorós & Bosma, 2014).

As it can be noticed from this brief review there is emerging evidence for a non-linear relationship, and we plan to test this hypothesis in the case of the European Union as well. The relationship between unemployment and entrepreneurial activity is postulated to be bidirectional, with two concurrent effects: "push" and "pull" (D. Audretsch, Carree, & Thurik, 2001). However empirical results in this case are mixed, with some studies reporting a positive relation (Brixy, Sternberg, & Stüber, 2012; Ritsilä & Tervo, 2002; Theunissen, Verbruggen, Forrier, & Sels, 2009), others a negative one (D. Audretsch & Fritsch, 1994) and some failing to observe a significant effect (D. B. Audretsch & Keilbach, 2008; Noorderhaven, 2004). An explanation is the different time lags used by these studies, as the relation seem to change sign as a function of the time lag chosen (Sipos-Gug, 2012) and it might thus be non-linear (Congregado, Golpe, & Carmona, 2010; Faria, Cuestas, & Mourelle, 2010).

## 2. Method

In our analysis we used the data regarding entrepreneurship and the macroeconomic factors investigated provided by the World Bank and Eurostat. Where it was possible the two sources were compared and used to complete each other.

We excluded Greece and Cyprus from our analyses due to the large number of missing values. The resulting data base therefore included 26 European countries.

We included the following indicators:

- Gross Domestic Product (GDP) per capita, constant 2005 USD (Source: http://data.worldbank.org/indicator/NY.GDP.PCAP.KD)
- Entrepreneurial density - the number of newly registered entities per 1000 inhabitants or working age (Source: http://data.worldbank.org/indicator/IC.BUS.NDNS.ZS)
- Inflation - Harmonized consumer price index (HICP) (Source: Eurostat http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tec00118&plugin=1)
- Difficulty of starting a business - the length, cost and number of procedures required to start a business. The cost of starting a business is normalized by the World Bank by reporting it as a percentage of Gross National Income (GNI) per capita
  (Source: http://data.worldbank.org/indicator/IC.REG.COST.PC.ZS)
- Unemployment
  (Source: http://data.worldbank.org/indicator/SL.UEM.TOTL.NE.ZS)
- Ease of financing - the lending interest rate
  Source: http://data.worldbank.org/indicator/FR.INR.LEND).

The data was processed in R version 3.1.3 with the use of the "plm" package (Croissant & Millo, 2008).

## 3. Results
We resulted to several regression models with single predictors as the data base presented a number of missing values and a multiple regression model would have lead to short (4-5 years) time series.

### 3.1. GDP
We tested several models relating GDP to entrepreneurial density. We started with linear fixed and random effects models. According to the usual methodology in the field we used the Hausman test to whether the coefficients of the fixed model and the random effects model are equal (Frondel & Vance, 2010).
As the Hausman test yielded values that were under the critical value, we concluded that in this case the fixed effects model should be used, and further analyses addressed this model.

**Table 1: Fixed effects linear model of entrepreneurial density regressed on GDP**

| Test | Statistic | Value |
|---|---|---|
| Anova | F(1,206) | 39.316 |
| | p | <0.01 |
| Linear Coefficient | Estimate | 0.000332 |
| | t | 6.27 |
| | p | <0.01 |

Our results indicate a valid model (F(1,206)=39.31, p < 0.01) and that GDP is a significant factor of entrepreneurial density in the EU. The relationship is linear and positive, as expected, so an increase in GDP is a strong predictor of increased entrepreneurial activity. This result confirms similar results by other researchers and can easily be explained by the fact that a growing economy creates multiple opportunities that entrepreneurs can seize.
Before drawing further conclusions however we decided to investigate if our model meets the assumptions of the regression method.

The assumptions tested were linearity, homoskedasticity, and normality of the error distribution.

We resorted to a residuals versus predicted values plot to visually asses both linearity and homoskedasticity.

Normality of the error distribution was tested with the Shapiro-Wilk test, which rejected the hypothesis that this condition is met by our model ($p < 0.01$). This raises some questions regarding the model, and might be an indication of a non-linear relation between the variables.

The Breusch-Pagan test for homoskedasticity in this case (BP = 302.3, $p < 0.01$) indicated the presence of heteroskedasticity (Breusch & Pagan, 1979). Under these circumstances we resorted to testing a corrected model. We used the "arellano" heteroskedasticity-consistent covariance estimators. Under the corrected model the GDP coefficient remained significant ($p = 0.0002$).

Another issue that can appear in panel date regression is cross-sectional dependence. This was investigated using the Pesaran CD test, which failed to reject the null hypothesis ($p = 0.60$) and thus we have little reason to suspect that cross-sections dependence was present.

The last potential error source investigated was the stationary property of the series. The Augmented Dickey-Fuller test in this case rejected the hypothesis that the series has a unit root, and therefore we can assume it is indeed stationary.

In conclusion the proposed model only partly meets the required assumptions of the linear panel regression methods used and there are indicators that another model, a non-linear one, might better explain the relation between these variables.

In light of other studies postulating a quadratic model (Wennekers et al., 2005) we decided to test this as an alternative model, and the results are presented in Table 2.

**Table 2: The quadratic model regressing entrepreneurial activity on GDP**

| Test | Statistic | Value |
|------|-----------|-------|
| Anova | F(2,205) | 27.6591 |
|       | p | <0.01 |
| Linear Coefficient | Estimate | 6,6917e-04 |
|       | t | 6.38 |
|       | p | <0.01 |
| Quadratic coefficient | Estimate | -3,7820e-09 |
|       | t | -3.68 |
|       | p | <0.01 |

The quadratic model has coefficients that significantly differ from 0, as it is shown from the Anova and t tests presented in Table 2.

The linear and quadratic models show little differences when it comes to model fit, however the Wald test shows that the quadratic model does add a significant ($p<0.01$) amount of information to the model.

The quadratic model shows better linearity of the error distribution graphically, however the Shapiro-Wilk test continues to reject the normality hypothesis.

Homoskedasticity was also rejected (BP = 311.34, $p <0.01$), however again the heteroskedasticity consistent coefficients were significantly different from 0.

After our analyses we conclude that there is evidence of a quadratic relation between GDP and entrepreneurial density in the case of the European Union. The interesting issue here is the sign of the quadratic coefficient. While generally the postulated relation is U shaped, in our case it was observed to be upside-down.

In the case of the European Union between 2004 and 2012, as it can be observed in Figure 1, it would seem that the relation between GDP and entrepreneurial density is positive (according to our quadratic model). Entrepreneurial density seems to be low in the case of low GDP, then to increase rapidly up to a maximum, to be reached around 88500$/capita GDP, as predicted by our equation. This maximum was not present in our sample.
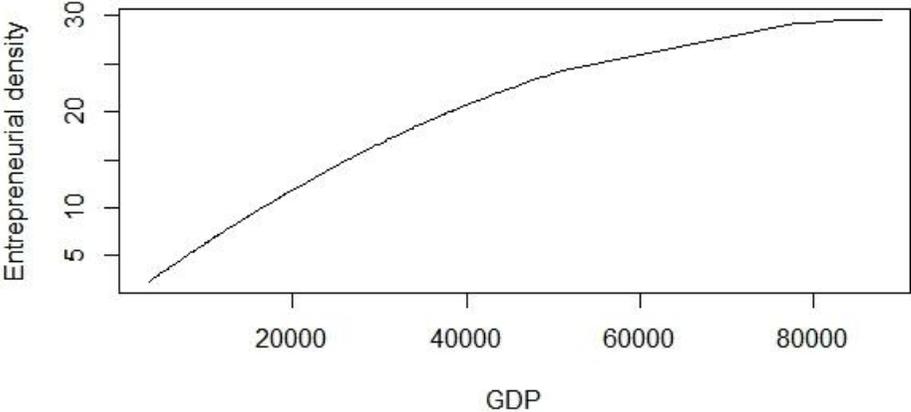


Figure 1. Graphical representation of the quadratic function between GDP and entrepreneurial density

The implications of these results from a more pragmatic perspective are that an increase in GDP (up to the threshold of 88500$/capita) will be related with a positive development of entrepreneurial density, and this impact should be maximized in the case of the lowest GDPs in the European Union.

### 3.2 Inflation - HICP

We resorted to a similar analysis in the case of inflation, as measured by HICP, and the fixed effects model's coefficients are significantly different from 0 (Table 3).

**Table 3: Fixed effects linear model of entrepreneurial density regressed on HICP**

| Test | Statistic | Value |
|---|---|---|
| Anova | F(1,206) | 27.544 |
| | p | <0.01 |
| Coefficients | Estimate | 0.034 |
| | t | 5.2482 |
| | p | <0.01 |

We resorted to testing the assumptions of the model, as done previously in the case of GDP, We found that using heteroskedasticity consistent coefficients was again necessary, however the coefficient remained significant after the Arellano correction. Normality of the error distribution could not be demonstrated (Shapiro-Wilk p value <0.05) however the standardized residuals plot in this case is very close to the expected configuration, so we consider the impact of this violation to be minimal.

The relation between inflation and entrepreneurial activity is postulated to be negative (Arin et al., 2014; Fogel, Hawk, Morck, & Yeung, 2006; Georgiou, 2009; Gnyawali & Fogel, 1994) due to the relationship between inflation and uncertainty. However this might

hold only for high inflation fluctuations and not the increase of inflation values in itself. The changes in HICP were, on average, slightly over 3% (std. deviation 2.2) yearly in the investigated area and time frame. Under these circumstances it might be possible that a small increase in inflation has a positive impact on entrepreneurship, for instance as postulated by some authors that it might happen in the case of inelastic labour supply (He, 2011).

A non-linear model (quadratic) was tested, to see if the relation could reflect previous results in the literature on a certain section of the function, however no such model could be fitted on our data.

We believe that in this case we are experiencing the effects of a sample bias, as inflation over the investigated time frame did not present enough variation to allow us to properly assess, for instance, the direction of the relationship in the case of high inflation and volatility.

We conclude that in the case of an inflation rate of around 3% there is a significant, positive, relation between HICP and entrepreneurial density.

### 3.3 Ease of starting a business

We used three indicators to measure the ease of starting a business: the number of procedures, the time and cost of registering a new company. These indicators were significantly correlated with each other and including them into a model simultaneously might have unjustifiably inflated the model fit. So we chose to use only the cost of registering a new company (the models for the other two variables had similar fit).

From Table 4 one can observe that the model has adequate fit and the relation is negative, as expected.

**Table 4: Fixed effects linear model of entrepreneurial density regressed on ease of starting a business**

| Test | Statistic | Value |
|---|---|---|
| Anova | F(1,206) | 16.7194 |
|  | p | <0.01 |
| Coefficients | Estimate | -0.097 |
|  | t | -4.08 |
|  | p | <0.01 |

Testing the assumptions of the model yielded similar results to the HICP analysis, with normality of error distribution being rejected by the Shapiro-Wilk test and partly supported by the standardized residuals plot. Heteroskedasticity was present, and the coefficient remained significant after correction.

In this case the relation is present and in the direction we have expected. Clearly rising the costs (or number of procedures or time required) that involve starting a business has a negative impact on the entrepreneurial activity. All these factors act as barriers between the potential entrepreneur and the implementation of his plans.

### 3.4 Cost of financing

As a indicator of the cost of financing a business we used lending rates as reported by the World Bank. Despite the initial concern of comparability, due to various terms and conditions tied to loans that are country specific, a valid model could be constructed.

**Table 5: Fixed effects linear model of entrepreneurial density regressed on lending interest rates**

| Test | Statistic | Value |
|---|---|---|

| Anova | F(1,111) | 3.662 |
|---|---|---|
| | p | 0.05 |
| Coefficients | Estimate | -0.066 |
| | t | -1.913 |
| | p | 0.05 |

Our model indicates the fact that there is a negative, significant, relation between lending interest rates and entrepreneurial density. Regarding the assumption of the linear regression method used, linearity was tested both with a visual inspection of the standardized residuals plot, which shown satisfactory distribution, and with the Shapiro-Wilk test, that rejected our normality hypothesis.

Homoskedasticity was rejected by the Breusch-Pagan test, however the coefficient remained significant even after applying the "Arellano" method.

Overall the model meets the assumption of the linear model (with some reserves as to the normality of the error distribution) and we find it adequate.

This confirms our initial assumptions and provides evidence for the fact that access to lower cost financing could be a means of stimulating entrepreneurship.

### 3.5 Unemployment

In the case of unemployment our preliminary analysis indicated that model fit could not be achieved (Table 6). This was surprising, as we expected to be able to replicate other studies where unemployment was found to be a strong correlate or predictor of entrepreneurial activity.

**Table 6: Fixed effects linear model of entrepreneurial density regressed on unemployment**

| Test | Statistic | Value |
|---|---|---|
| Anova | F(1,206) | 2.122 |
| | p | 0.14 |
| Coefficients | Estimate | -0.037 |
| | t | -1.456 |
| | p | 0.14 |

However in light of the assumed non-linear relationship between unemployment and entrepreneurial activity it is possible that our model not be the best estimate of the relation between the two variables. Bidirectional and complex models have been proposed, and testing for these was not possible under our current methodology, as using time lags shorter than 1 year are not possible due to data constraints and using a 1 year time lag failed to yield any significant results.

### 4. Conclusions

We have found support for most of our proposed hypotheses. The models proposed relating GDP to entrepreneurial density have been accepted, as they  have significant coefficients and reasonably obey the assumptions of the used panel data regression methods (with the exception of the normality of error distribution, discussed later).

The quadratic model proved to be better in terms of fit, even if when restricting for parsimony it's benefits are only marginal. Lower values of GDP per capita tend to be associated with lower entrepreneurial density. Since we investigated registered business', it would seem that in their case (up to a point) a "richer" economy provides a stimulating effect and encourages more individual to take on the role of the entrepreneur. Lower GPD / capita might provide fewer opportunities, but at the same it may be the case that

economies that have a relatively low GDP / capita rely more on scale economy effects, by focusing on industry for instance, and thus might inadvertently discourage entrepreneurs.

Another issue might be that of the transitional economies, as countries with lower GDP in the European Union tend to be those that have transitioned from a planned economy to a market economy 25 years ago, and thus might not have a proper entrepreneurial culture. Since only one generation has been raised in a market economy, it cannot properly benefit from entrepreneurial models and trans-generational learning and thus entrepreneurship might be viewed either as too risky or too difficult.

As expected higher obstacles to starting a business, when it comes to both start-up procedures (time, cost and number) and financing (loan interest rates) lead to lower rates of entrepreneurial activity. Ease of start-up the easiest factor (out of those that we have investigated) to be influenced by public policy. A reduction with 1 point of the costs to start a business would lead to a increase in entrepreneurial density of 0.097, or to approximately 1 new company founded yearly per 10 000 inhabitants of working age. The number of procedures to start a company for instance has a coefficient of -0.211. So dropping 1 procedure could lead to a little over 2 new companies being found per 10 000 inhabitants of working age.

The positive relation of HICP to entrepreneurial activity has been unexpected. We argue that in the case of the European Union inflation has been relatively stable in the investigated time frame, and thus entrepreneurs could take advantage of the positive impact of small changes in consumer prices. the coefficient value of 0.034 suggests that for a 1 point increase in HICP around 3 companies can be expected to founded for every 100 000 inhabitants of working age, so this effect, albeit statistically significant, would be small for practical purposes.

Another issue is that of sampling. The HICP values have shown relative similar evolutions (in terms of magnitude of change). It is likely that the relationship between HICP and entrepreneurship be non-linear, and at the other end of the inflation stability spectrum the relation to become negative. We expect, as previously stated, that a high inflation fluctuation have a negative impact to entrepreneurship.

Unemployment could not be significantly related to entrepreneurship in our study. As this relationship has been investigated extensively previously we believe that our result is inaccurate. The main potential sources of error that could mask the relationship are time lag effects and country differences. As shown in the literature (Sipos-Gug, 2012) when time lags of fractions of a year are taken into account the relations can be noticed, at least at a national level. The second potential error source is probably the most impactful one. Countries have vastly different unemployment policies that could encourage or discourage individuals to enter the workforce versus becoming an entrepreneur. This issue therefore requires further study.

A common issue with the proposed models has been that of normality of error distribution, which raises some questions regarding the fit of the models, however this can at least partly be attributed to the lack of normality of the distribution of entrepreneurial density itself.

The implications of our results in the practical field involve several potential beneficiaries. Policy makers could (and should) make use of our results in order to guide their decisions. Changing the procedures and costs for start-ups for instance could provide a valuable tool in influencing the entrepreneurial activity. Also the impact of inflation might not be as strong as previously believed, and small changes in inflations might actually be beneficial for the entrepreneurial market. Entrepreneurs, both active and potential, could learn more about the factors impacting their activities from our study, and better prepare for an increase or decrease in competition, for instance, or better follow their interests when lobbying for policy changes.

Further research will be required to confirm our results, as more data becomes available and more complex models could be used to assess the complex interactions between the

investigated variables. However we have provided insights in the impact of macroeconomic factors on the entrepreneurial activity in the European Union, and improved our knowledge and understanding of the economic environment.

## 5. Acknowledgement

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# THE EFFICIENCY OF COMMUNICATION CAMPAIGNS OF PUBLIC INSTITUTIONS FROM ROMANIA THROUGH MEDIA

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**Abstract:** *In the present research I will analyze the reactions and opinions of the interviewed persons regarding the efficiency of communication campaigns of public institutions in Romania through the media and also it will be analyzed the justified expectations of the respondents regarding a more efficient communication of public institutions. At the same time, it is aimed at presenting some comparisons between: communication strategies available in most public companies in Romania versus aspects that should be improved, developed within these strategies. Thereby, I will use the interview as a qualitative research method, to confirm or infirm the hypothesis of the present research: Public institutions deliver useful information through the media; The information delivered by public institutions through the media rarely reach the people to whom it is addressed; It is necessary to achieve an active partnership between public institutions in Romania and media organizations locally, nationally and even internationally. The interview was addressed to individuals residing in major cities of Romania but also to several people living in the United States of America and in countries of the European Union, such as Germany, France, Italy and Austria, aged over 20 years, with university education, working in public or privately-owned companies, who have visited a large number of countries, worldwide. The structure of the interview is as follows: 8 open-ended and closed-ended questions whose main objective is to measure the reactions of interviewees on both the efficiency of communication campaigns of public institutions in Romania through the media, and also the justified expectations of the respondents concerning a more efficient communication of public institutions. After summarization, interpretation and analysis of the answers, I'll respond to the two research questions stated: Should communication strategies be optimized and developed in the public sector in Romania? To what extent are monitoring and evaluation stages accomplished inside the communication strategies of public institutions in Romania? Case study results open a new research direction in this area, particulary about the development of the communication strategies in public sector in Romania.*

**Keywords:** communication; public institutions; mass media; efficiency

**JEL classification: M 37**

## 1. Introduction

Formally, communication can be defined as any process whereby decisional premises are communicated from one member of an institution to another . Communication accompanies public institutions activity, contributing to its achieving in good condition. Public communication refers to both the exchange and sharing of public information and maintaining social bond.(Zemor, 1995)

Communication in institutions is a two-sided process: it involves both the delivery of commands, information and advice to a decision center (an individual invested with the responsibility of making decisions), and communication of decisions taken at this center in

other parts of the institution. Moreover, it is a process which occurs upward, downward and laterally inside the institution.

Institutional communication is an extra-organizational communication wherewith the institution of public administration aims to strengthen its image, to attract a climate of confidence and sympathy from the public.(Nedelea, 2006). The external communication of the public institution contributes to the reputation and image of the organization inside the institution . Moreover, it fulfills the duty of promoting the state's public institution  and territorial-administrative units. Communication for promotion is in fact a special case, because although the literature invariably consider it as part of the external communication, it is done unilaterally, from the public institution to its external environment. In this situation, there aren't the members of the public body who communicate with the outside, but the organization as an institution. It gives information about the services they offer, trying to improve the layout or it simply wants to bring into notice and promote its values.(Munteanu, 2006). By its nature, public administration depends on communication: communication between different levels of public administration; communication on the same level; communication between the administration and the executive office; communication between the administration and political authority; communication in social environment.

It becomes more and more important both for administration and for its customers - taxpayers, citizens, interest groups, political authority - the development of communication channels with the "business world". The main ways to materialize this particular type of communication are:

- Advertising: through the media or through their advertising material;
- Sponsorship: funding the cultural and sporting activities;
- Patronage: financial or logistical support  for artists and for non-profit or humanitarian organizations;
- Articles presenting the organization in professional publications;
- Organizing stands at fairs and forums;
- Organizing open gates days;
- Help and assistance from other similar institutions (actually not competitive) through temporary secondment of staff.

Public administration institutions aim to achieve the following features, through communication:(Dubois, 1994)

- Identifying: helps administrative institutions to ensure the reputation and bring into notice their expertise;
- Informing: that aims at bringing into notice the administrative action to the social body;
- achieving social education: that corresponds, in the guise of advice or recommendation, to the function, more and more important, of public institutions in the social life.

The public authority seeks through communication, a close relationship with the citizen; approaching and dialogizing with the citizen, they know better the requirements or wishes.(Munteanu, 2006)


## 2. Case study

In this research, I will analyze the reactions and opinions of the respondents as regards the efficiency of communication campaigns of public institutions in Romania through the media, and justified expectations of the respondents regarding a more efficient communication of public institutions.

Thereby, I'll use the interview as a qualitative research method in order to confirm or to rescind the hypothesis of this study:

- Public institutions deliver useful information through the media.
- The information delivered by public institutions through the media rarely reach the people to whom it is addressed.
- It is necessary to achieve an active partnership between public institutions in Romania and media organizations locally, nationally and even internationally.

The topic of the interview is : The efficiency of communication campaigns of public institutions in Romania, through the media. Overtones locally, nationally and internationally.

The main objective of the research consists in presenting the reactions of interviewees on both the efficiency of communication campaigns of public institutions in Romania through the media, and also the  justified expectations of the respondents concerning a more efficient communication of public institutions.

The interview was addressed to individuals residing in major cities of Romania but also to several people living in the United States of America and in countries of the European Union, such as Germany, France, Italy and Austria, aged over 20 years, with university education, working in public or privately-owned companies, who have visited a large number of countries, worldwide. Undoubtedly, this category consists of people who are very often  informed by the media and have a permanent contact with media organizations in each country. Furthemore, these people have very clear terms of comparison on the subject of mass media activity at European level. The interview was applied to 20 people. Average duration of the interview is 25 minutes, including detailed answers to all questions. The interviews took place between 16th February 2015 – 1st March 2015.

After summarization, interpretation and analysis of the answers, I'll respond to the two research questions stated:

- Should communication strategies be optimized and developed in the public sector in Romania?
- To what extent are monitoring and evaluation stages accomplished inside the communication strategies of public institutions in Romania?

The structure of the interview is as follows: 8 open-ended and closed-ended questions whose main objective is to measure the reactions of interviewees on both the efficiency of communication campaigns of public institutions in Romania through the media, and also the  justified expectations of the respondents concerning a more efficient communication of public institutions.

At the same time it is aimed at presenting some comparisons between: communication strategies available in most public companies in Romania versus aspects that should be improved, developed within these strategies.

At the end of the interview, after the 8 questions that follow the goals stated before, I have asked two more questions whose main objective is to acknowledge the age and the actual residence of targeted subjects. I have chosen a structured interview in order to keep the same number of questions and the same disposal for all interviewees, likewise for the profound approach on the topic of the research.

I will interpret and analyse the answers for each question in the interview guide.

### 2.1. Generally, how often do you have contact with public institutions in Romania?

After addressing the first question in the interview guide these percentages arise, as regards the contact of the respondents with public institutions in various fields:

- About 50% of the respondents appeal monthly to the services of one or more public institutions in Romania.
- About 20% of the respondents appeal daily to the services of one or more public institutions in Romania.
- About 15% of the respondents appeal weekly to the services of one or more public institutions in Romania.
- About 15% of the respondents appeal yearly to the services of one or more public institutions in Romania.

## 2.2. To what extent are you satisfied with the modality of public institutions in Romania to communicate through the media?

After addressing this question in the interview guide these percentages arise, as regards the respondents'levels of satisfaction:
- About 60% of the respondents said they are satisfied on a small scale with the modality of public institutions in Romania to communicate through the media.
- About 25% of the respondents said they are satisfied to a very low degree with the modality of public institutions in Romania to communicate through the media.
- About 15% of the respondents said they are not at all satisfied with the modality of public institutions in Romania to communicate through the media.
- None of the respondents stated to be satisfied to a great extent with the modality of public institutions in Romania to communicate through the media.

## 2.3. Generally, do you think that public institutions in Romania deliver useful information through local, national and international media?

After addressing the third question in the interview guide, the following percentages arise as regards the usefulness of the information delivered by public institutions through the media:
- About 70% of the respondents believe that public institutions in Romania deliver useful information through local, national or international media organizations.
- About 30% of the respondents believe that public institutions in Romania do not deliver useful information through local, national or international media organizations.

## 2.4. How many times have you acquired useful information for you through the media, from press statements sent by public institutions in Romania?

Question number 4 brings in the impact and feedback of the respondents referring to the delivery and dissemination of information towards them. The results are:
- About 70% of the respondents stated that only a few times have acquired useful information for personal interest, through press statements disseminated in local, national or international media.
- About 25% of the respondents said they have often acquired useful information for personal interest, through press statements disseminated in local, national or international media.
- About 5% of the respondents said they have never acquired useful information for personal interest, through press statements disseminated in local, national or international media.

## 2.5. In the past year, which of the following public institutions do you consider to be more active, within mass media programs in Romania?

Question number 5 will emphasize the presence of public companies in the media, but not through press statements sent by these companies. The results are:

- 70% of the respondents believe that the most active public company in Romania in local, national and international media has been the National Anticorruption Directorate.
- About 15% of the respondents believe that the most active public company in Romania in local, national and international media has been the Romanian Government.
- About 10% of the respondents believe that the most active public company in Romania in local, national and international media has been the Presidential Administration of Romania.
- About 5% of the respondents believe that the most active public company in Romania in local, national and international media has been the City Hall in the town of each respondent.

## 2.6. What general recommendations do you have as regards the communication strategy of a public institutions in Romania? Please explain your answer.

I will present the main opinions and arguments of the respondents on optimizing communication strategies in the public sector in Romania. The main responses were:
- To have a clear and transparent communication strategy, including the recruiting of people who work in the communications department of any public institution in Romania.
- I think public institutions in Romania should be much more active and involved as regards their communication strategy. Only through transparency and visibility they will be able to approach citizens.
- More transparent and useful communication. Communication must be constant on all media channels, and when appropriate, on local and national or international channels as well.
- Constant communication of the results.
- Transparency and involvement - very difficult to achieve in the current context of employment made by institutions that aren't looking for competent people, but for those who are influential.
- Total transparency, respect for citizens by delivering accurate information, making available online forms and documents required to be used for different situations, announcing legislative changes in due time.
- Firstly, to have a communication strategy. In many public institutions in Romania, at the moment there is not even a strategy for that purpose. To consider the needs of beneficiaries, to adapt their messages by using a clear and understandable message, to implicate all employees in the implementation process.
- More professionalism. More appliance regarding the relationship with the citizens.
- Each public institution should apply the relevant articles (Law 544/2001) and to have an expert employee in the field .
- To give any information brief and to the point as regards local, national or international interest.
- To inform citizens correctly and regularly.
- Main regulations must become compulsory promoted in order to inform people through all communication channels.
- Be more transparent concercing topics and useful information for citizens.

- Use communication channels with the largest audiences (internet, TV, radio, newspapers) for delivering useful information to citizens.
- Identify some effective solutions to inform citizens about the rules / requirements / legislative changes in the public interest.
- Information must be accurate and timely.
- The flow of information must be coherent.

## 2.7. To what extent do you agree with the development of active partnerships between public institutions in Romania and local, national or international media organizations?

After addressing of the seventh questions in the interview guide, these percentages arise as regards the need to accomplish an active partnership between public institutions and the media:

- About 55% of the respondents believe that achieving this kind of active partnership between public institutions and the media would be useful to a great extent.
- About 30% of the respondents believe that achieving this kind of active partnership between public institutions and the media would be useful to a very great extent.
- About 10% of the respondents believe that achieving this kind of active partnership between public institutions and the media would be useful to a very low degree.
- About 5% of the respondents believe that achieving this kind of active partnership between public institutions and the media would be useful on a small scale.

## 2.8. Do you think is enough for the information to be delivered through the media? Or it would be useful, that within the communication strategy, to necessarily include the monitoring and evaluation stages of information delivered? Please explain your answer.

I will present the opinions and arguments of the respondents about the usefulness and need to develop a communication strategy, which necessarily includes monitoring and evaluation of information delivered through local, national or international media channels. The main responses of the respondents were:

- It is compulsory to show the monitoring and evaluation stages in the communication strategies.
- Monitoring and evaluation is required because in this way we can see if the information effectively gets at the citizens, and what is the impact and its feed-back.
- It would be helpful, within the communication strategy, to show the monitoring and evaluation stages, as it would increase the effectiveness of the communication process and therefore the results.
- The information must reach the citizens through diverse media channels. The results of these communication, monitoring and evaluation strategies can influence the transmission of information prevalently to a particular channel, and improve them as well.

- Without monitoring and evaluating how could we check whether the information reached the target audience?
- Any information sent must be monitored and evaluated in order to find the efficiency of delivered information.
- Communication strategy can not turn out well without monitoring the way the information reached the target group, and an assessment of the feed-back too.
- It isn't enough for the information to be delivered without any monitoring and evaluation in order to increase confidence in the information presented.
- Only through monitoring and evaluation is possible to analyze the efficiency of delivered information.
- Communication strategy also involves monitoring and evaluation phases, and in private companies investing large budgets in communication campaigns, I think the focus is on these two stages. In conclusion, public companies should use monitoring and evaluation stages.
- Monitoring and evaluation are necessary likewise in any other company - in order to draw conclusions and regulate future actions.
- It would be necessary both monitoring and evaluation stages to observe the impacts and to regulate under way if something doesn't go according to plan.
- It's 100% compulsory that monitoring and evaluation stages be present in the communication strategy. Without these stages no one can say if the information reached the population, or they even had an impact on them.

## 2.9. How old are you?
Questions were addressed to people aged over 20 years, as follows:
- 60% of the respondents aged 20 to 30 years.
- 40% of the respondents aged between 31 to 40 years.

## 2.10. Where do you live at present?
The questions were addressed to people living in the United States of America and in Europe - mainly Romania ( Bucharest, Sibiu, Brasov, Cluj-Napoca), Germany, Franta, Italia and Austria.

## 3. Results and conclusions
Most of the respondents appeal monthly to the services of one or more public institutions in Romania, and about 20% of the respondents appeal daily to the services of one or more public institutions in Romania.

Most of the respondents said they are satisfied on a small scale and to a very low degree with the modality of public institutions in Romania to communicate through the media.

Most of the respondents believe that public institutions in Romania deliver useful information through local, national or international media organizations.

Most of the respondents stated that only a few times have acquired useful information for personal interest through press statements disseminated in local, national or international media, while only 25% of the respondents said they have often acquired useful information for personal interest, through press statements disseminated in local, national or international media.

Most of the respondents believe that the most active public company in Romania in local, national and international media has been the National Anticorruption Directorate.

The main opinions and arguments of the respondents on optimizing communication strategies in the public sector in Romania were:

- To have a clear and transparent communication strategy, including the recruiting of people who work in the communications department of any public institution in Romania.
- I think public institutions in Romania should be much more active and involved as regards their communication strategy. Only through transparency and visibility they will be able to approach citizens.
- Total transparency, respect for citizens by delivering accurate information, making available online forms and documents required to be used for different situations, announcing legislative changes in due time.
- More professionalism. More appliance regarding the relationship with the citizens.
- Information must be accurate and timely.

Most of the respondents believe that achieving an active partnership between public institutions and the media would be useful to a great extent and to a very great extent.

The opinions and arguments of the respondents about the usefulness and the need to develop a communication strategy, that necessarily includes monitoring and evaluation of information delivered through local, national or internationa media channels were:

- Monitoring and evaluation is required because in this way we can see if the information effectively gets at the citizens, and what is the impact and its feed-back.
- It would be helpful, within the communication strategy, to show the monitoring and evaluation stages, as it would increase the effectiveness of the communication process and therefore the results.
- Only through monitoring and evaluation is possible to analyze the efficiency of delivered information.
- Communication strategy also involves monitoring and evaluation stages, and in private companies investing large budgets in communication campaigns, I think the focus is on these two stages. In conclusion, public companies should use monitoring and evaluation stages.
- It's 100% necessary that monitoring and evaluation phases be present in the communication strategy. Without these stages no one can say if the information reached the population or they even had an impact on them.

## 4. Acknowledgment

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*SUB-SECTION: ECONOMIC STATISTICS AND MODELLING*

# HOW DOES ECONOMIC FREEDOM INFLUENCE THE RELATIONSHIP BETWEEN GOVERNMENT SIZE AND CONVERGENCE?

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**Abstract:** *In this paper we present some empirical results about absolute and conditional convergence of real GDP within 121 countries using cross-country data. We assume that there is an inverted U-shaped curve, which describes the relationship between economic growth and government spending. It is mainly because the institutional conditions of productivity do not exist at lower levels of government spending. At higher levels, the government needs to levy higher taxes to finance its expenditures, which hinders growth. So there can be somewhere an optimal government redistribution level that maximizes growth. This optimal level depends on institutional factors that can be grabbed by certain Economic Freedom and Worldwide Governance Indicators. It was not our aim necessarily to determine exactly the level of optimal government redistribution, it would be difficult because of the heterogeneity of the countries, only to make a comparison between free and less free countries, and draw some conclusions about how this level depends on these institutional variables. Summing up we can say that our aim was to compare free and less free, legally "good" and "bad", as well as corrupt and less corrupt countries from the aspect of government redistribution level. If we divide countries into free and less free countries and assume that both groups have an inverted U-shaped curve, the optimal level of government spending share is larger in the richer countries because of their better institutional system. These results do not contradict those findings that declare positive or negative relationship between government spending and economic growth. One part of the literature presumes that there is only one optimal level of government spending, we point out that there can be at least two optimal levels, and they depend on the institutional quality.*

**Keywords:** Economic growth; convergence; government spending; cross-country analysis

**JEL classification:** O40; O47; H50

## 1. Introduction

Various authors have examined the relationship between government size and economic growth. Some of the researchers found a positive link, like Myrdal (1960) and Easterlin (1974), but some of them found it negative, for example Rubinson (1977), Cameron (1982), Landau (1983) and Marlow (1986). The most recent ones also found it negative, like Romero-Avila and Strauch (2008), Afonso and Furceri (2010) among many other authors. They used mainly cross-country and panel data to illustrate it. All in all, there is no general convincing empirical evidence about the sign of this relationship, but some other variables will help to understand the problem.

A naive conclusion from the general framework of Solow (1956) model leads to the finding that poorer countries are growing with a faster speed than the richer ones because of the decreasing marginal product of capital. So theoretically, poorer countries can catch up (Solow, 1956, 1957).

On the contrary, according to Barro (1990), we know that there is no absolute convergence within the countries of the world. Absolute convergence occurs only within more homogeneous groups like European Union or Europe and Asia together. African countries for example seem to lag behind and it is mainly due to institutional differences. If the less

developed countries had the same institution quality, they would be able to converge to the developed countries. Summing up, absolute convergence is not true due to institutional differences, but there can be a conditional convergence. If the government spending is near the optimal level in a given country, this country can grow faster. As we mentioned, too high and too low redistribution hinders growth. We assume that richer economies have a higher optimal level, and the institutionally underdeveloped countries have a lower optimal government size. According to Tanzi (2005) the optimal level of government spending is 30 percent. We do not suppose that there is only one optimal level. We assume that there is at least two optimal levels, and it depends on institutional variables. These variables are measured by Economic Freedom, Legal System & Property Rights, and Control of Corruption.

In Chapter 2 we examine 121 countries. Most of the data come from the World Development Indicators (WDI, 2014). At first we provide some descriptive statistics to ascertain whether it is an absolute convergence among all of the countries, than we divided the sample into groups according to the abovementioned there institutional variables: Economic Freedom, Legal System and Property Rights, and finally Control of Corruption. If freer economies are richer, but grow slower than the others, less free ones can catch up. We will see that it is not true.

Freer countries are much wealthier and grow faster at the same time, so less developed countries do have a chance under these circumstances to approach them. The result is similar in the other two situations. So one dividing variable is enough to run regressions. In Chapter 3 we run three regression, the first is for all countries, but these countries are very heterogeneous, so the fit is not so good. After that we run the same on only the free countries, than only on less free countries. Of course, we know that freer economies are also wealthier, and have better legal institutions. According to our results freer countries have a higher optimal government redistribution level than less free, less developed, so those countries that have worse legal system.


## 2. Variables, sample and data

In the next Chapter, from the tables we can see three categorizations of 121 countries. We examined an 18-year period between 1995 and 2012. We took into account the initial real GDP per capita *RGDP1995*, the average real growth rate of the period, indicated by *grr*, and the structure of government spending. *Gtot* variable means the total government spending as a percentage of GDP. This expense means cash payments for operating activities of the government in providing goods and services. It includes compensation of employees (such as wages and salaries), interest and subsidies, grants, social benefits, and other expenses such as rents and dividends (WDI, 2014). *Gcon* variable means the government consumption also as a percentage of GDP, more exactly the final government expenditure including all government current expenditures for purchases of goods and services and compensation of employees (WDI, 2014). *Ghea*, *Gedu* and *Gmil* variables simply mean the government expenditure spent on Health, Education and Military as a percentage of government expenditure.

I also used some important variables to divide the data into two groups: The Economic Freedom of the World Index, indicated by *EFW* (EFW, 2012), Legal System & Property Rights, indicated by *Legal* (EFW, 2012), which is a component of Economic Freedom, and finally the Control of Corruption, indicated by *CC,* also in 2012, which is a very important component of The Worldwide Government Indicators (WGI 2014).

## 3. Descriptive statistics

Let's see at first some descriptive statistics by dividing the sample into groups. The first categorization is according to Economic Freedom of the World Index, which is annually published by the Canadian Fraser Institute. **Table 1** shows that there are 64 units in the sample, where EFW>7, and 57, where EFW<7. Countries above 7 are supposed to be free, below 7 are less free. We can see from **Table 1** that free economies had more than five times larger real GDP in 1995, and since then free economies are growing with faster pace than the others. So less free countries will never catch up, because their institutional system does not allow growing more rapidly. Free countries have larger government redistribution, because they are richer and they can afford it. According to Wagner's law, the demand on public goods is growing in the developed countries (Ram, 1987). If we carefully examine the differences in the structure of the expenditures, we can see that money spent on health is larger, but spent on education and military are lower in the developed countries than in the less developed ones on the percentage of total government expenditures.

**Table 1:** Divergence among free and less free countries

|  | EFW | N | Mean | Std. Error Mean |
|---|---|---|---|---|
| RGDP1995 | >= 7,00 | 64 | 14747,84 | 1892,79 |
|  | < 7,00 | 57 | 2737,82 | 627,83 |
| grr | >= 7,00 | 64 | 2,66 | 0,21 |
|  | < 7,00 | 57 | 2,36 | 0,25 |
| Gtot | >= 7,00 | 64 | 29,17 | 1,45 |
|  | < 7,00 | 57 | 21,12 | 1,13 |
| Gcon | >= 7,00 | 64 | 16,52 | 0,64 |
|  | < 7,00 | 57 | 14,39 | 0,68 |
| Ghea | >= 7,00 | 64 | 12,50 | 0,44 |
|  | < 7,00 | 57 | 9,91 | 0,40 |
| Gedu | >= 7,00 | 64 | 13,32 | 0,43 |
|  | < 7,00 | 57 | 15,73 | 0,61 |
| Gmil | >= 7,00 | 64 | 8,01 | 0,85 |
|  | < 7,00 | 57 | 10,14 | 0,80 |

Source of data: EFW (2014), WDI (2014)

The second division is according to the quality of Legal System & Property Rights (EFW, 2014). If the quality measure of the legal system and property rights (Legal) is more than 5.5, the given country is considered to be legally "good", or if it is under 5.5, we call it legally "bad". We can clearly see from **Table 2** that legally "good" countries were more than fivefold richer than legally "bad" ones, and the growth rate (grr) was also significantly larger, so this difference is continuously increasing. We can also clearly see that legally "good" governments spend a larger share of their GDP than the others. Of course we do not know the causal relationship, but we can guess that the legally "good" economies are also richer, so they can afford to have a bigger redistribution.

**Table 2:** Divergence among legally "good" and "bad" countries

|  | Legal | N | Mean | Std. Error Mean |
|---|---|---|---|---|
| RGDP1995 | >= 5.5 | 60 | 15506,13 | 1968,87 |
|  | < 5.5 | 61 | 2779,51 | 625,12 |
| grr | >= 5.5 | 60 | 2,76 | 0,25 |
|  | < 5.5 | 61 | 2,27 | 0,21 |
| Gtot | >= 5.5 | 60 | 30,38 | 1,46 |
|  | < 5.5 | 61 | 20,45 | 1,04 |
| Gcon | >= 5.5 | 60 | 17,57 | 0,59 |
|  | < 5.5 | 61 | 13,50 | 0,64 |
| Ghea | >= 5.5 | 60 | 12,31 | 0,44 |
|  | < 5.5 | 61 | 10,26 | 0,44 |
| Gedu | >= 5.5 | 60 | 13,84 | 0,47 |
|  | < 5.5 | 61 | 15,06 | 0,59 |
| Gmil | >= 5.5 | 60 | 7,96 | 0,92 |
|  | < 5.5 | 61 | 10,05 | 0,73 |

Source of data: EFW (2014), WDI (2014)

I also divided the sample into two groups with respect to the control of corruption index from 2012. I found that the median value was about at -0.25. The difference is bigger than by the earlier two cases. Countries that are less corrupt, had 9 times larger real GDP in 1995 than the corrupt ones, and the growth rate of these two groups were roughly the same, so there is only a slight catch up between these two groups.

**Table 3:** No significant convergence among "corrupt" and "less corrupt" countries

|  | CC | N | Mean | Std. Error Mean |
|---|---|---|---|---|
| RGDP1995 | >= -.2500 | 59 | 16678,46 | 1950,81 |
|  | < -.2500 | 62 | 1869,18 | 324,75 |
| grr | >= -.2500 | 59 | 2,44 | 0,19 |
|  | < -.2500 | 62 | 2,59 | 0,26 |
| Gtot | >= -.2500 | 59 | 31,52 | 1,43 |
|  | < -.2500 | 62 | 19,53 | 0,92 |
| Gcon | >= -.2500 | 59 | 18,48 | 0,57 |
|  | < -.2500 | 62 | 12,70 | 0,54 |
| Ghea | >= -.2500 | 59 | 12,18 | 0,48 |
|  | < -.2500 | 62 | 10,42 | 0,41 |
| Gedu | >= -.2500 | 59 | 14,08 | 0,56 |
|  | < -.2500 | 62 | 14,81 | 0,52 |
| Gmil | >= -.2500 | 59 | 7,29 | 0,89 |
|  | < -.2500 | 62 | 10,65 | 0,74 |

Source of data: WGI (2014), WDI (2014)

These descriptive statistics do not contain new results, but these findings coincide with some of well-known facts (Barro 1990, Czeglédi 2007). It proves that this dataset is reliable, so we can run further tests with them. It is clear that every categorization provided almost the same result, so hereafter only one variable will be enough to divide the sample.

## 4. Results of the regressions

As we assumed, there must be an inverted U-shaped relationship between government spending and economic growth, because too high and too low government spending does not foster growth. So a simple regression model was used, in which we put the *Gtot* and also the square of the *Gtot* as explaining variables. Our regression model was the following:

$$grr = \beta_0 + \beta_1 \ln RGDP1995 + \beta_2 Gtot + \beta_3 Gtot^2 \tag{1}$$

This framework is according to Mankiw at al. (1992). We omitted some variables, which can cause a little bias, but the order of these levels are good. In this case we can estimate the *Gtot* level that maximizes growth according to the following formula:

$$Gtot^* = -\frac{\beta_2}{2\beta_3} \tag{2}$$

Of course, we know that these estimations are not exact, because there can be some omitted variable distortions, we only want to use it in comparing these levels among free and less free countries.

**Table 4** shows the coefficients for the whole sample, it contains 121 countries. Of course I took the initial *lnRGDP1995* as well, where *ln* means the natural logarithm. Theoretically if we get negative coefficient for the *Gtot2* and positive for *Gtot*, it refers to an inverted U-shape as we assumed, where *Gtot2* means the square of variable *Gtot*. In addition, if we get negative coefficient for the initial GDP, it refers to convergence. The optimal value of *Gtot* can be calculated from the coefficients, which maximizes growth. For the whole sample, it is 35 percent. Of course we cannot take it seriously, because of the omitted variables, but I will use this number only to compare it to the other cases. The Adjusted R Square is very low, it means that the model fit leaves much to be desired. We do not want to draw conclusions from this case. As we will see later (**Table 5** and **Table 6**), the optimal size is 49 percent for the developed countries and 27 for the less developed countries. Sadly these numbers are not exact because of the distortions, they do not show magnitudes, we can only compare them, for which it is larger.

**Table 4:** Coefficients of the first regression (Adjusted R Square=0,04)

| Model | Unstandardized Coefficients | | t | Sig. |
|---|---|---|---|---|
| | B | Std. Error | | |
| (Constant) | 3,898 | ,873 | 4,468 | ,000 |
| lnGDP1995 | -,447 | ,122 | -3,657 | ,000 |
| Gtot | ,140 | ,053 | 2,622 | ,010 |
| Gtot2 | -,002 | ,001 | -2,439 | ,016 |

Source of data: WGI (2014), WDI (2014)

**Table 5** contains only those countries where the EFW index is larger than 7. As we saw from descriptive statistics, these are mainly the richer, the developed countries. We can conclude convergence from the coefficient of the initial GDP, and inverted U-shape from the *Gtot2*. The optimal *Gtot* level would be 49 percent, so bigger than in the others. In this case, the Adjusted R Square is very much higher than in the precious case, partly because the sample is more heterogeneous.

**Table 5:** Coefficients of the second regression (Adjusted R Square=0,429)

| Model (EFW>7) | Unstandardized Coefficients | | t | Sig. |
|---|---|---|---|---|
| | B | Std. Error | | |
| (Constant) | 8,431 | 1,048 | 8,044 | ,000 |
| lnGDP1995 | -,843 | ,137 | -6,161 | ,000 |
| Gtot | ,098 | ,056 | 1,756 | ,084 |
| Gtot2 | -,001 | ,001 | -1,748 | ,085 |

Source of data: WGI (2014), WDI (2014)

From **Table 6** it is clear that there is also a convergence within less free countries, but here the negative coefficient is statistically not significant. Despite this, it seems that there is an inverted U-shaped curve. The optimal *Gtot* level for these probably less developed countries that maximizes growth is 27 percent. Of course, this regression result does not mean that it is exactly the optimal level, but it is quite sure that lower than in the richer economies. According to some researchers, the relationship between growth and government size is inverted U-shaped (Tanzi 2005, Armey 1995, Peden 2005, Sheehy 1995). In all these cases, the coefficient of the Gtot2 is negative, which refers to the inverted U-shape. The coefficient of lnGDP1995 is negative for the developed countries, it means there is a significant convergence among them. It is a little bit surprising that the coefficient of lnGDP1995 is negative for the whole sample, which at first glance seems to contradict to Barro (1990), but we must remark that the whole sample is not the whole world. Finally, there is no convergence between the less developed countries, because the coefficient of lnGDP1995 is not significant, but it seems that there is a U-shape relationship between the investigated variables, the coefficient of Gtot2 is even significant.

**Table 6:** Coefficients of the third regression (Adjusted R Square=0,053)

| Model (EFW<7) | Unstandardized Coefficients | | t | Sig. |
|---|---|---|---|---|
| | B | Std. Error | | |
| (Constant) | ,477 | 1,966 | ,243 | ,809 |
| lnGDP1995 | -,295 | ,223 | -1,327 | ,190 |
| Gtot | ,324 | ,143 | 2,262 | ,028 |
| Gtot2 | -,006 | ,003 | -2,010 | ,050 |

Source of data: WGI (2014), WDI (2014)

## 5. Concluding remarks

From the descriptive statistics we can see the well-known fact, that the freer, "legally" better and the less corrupt countries are also wealthier. And there is a divergence among these countries, but at least does not seem to be any significant convergence between them. So it seems that the freer, legally better and less corrupt countries are not only richer, but grow faster. But why do the poorer countries lag behind, and do not catch up? We can explain it with institutional differences. If the poor countries had the same quality of institutional system, they would be able to take the advantage of higher marginal product of capital and attract much more investment. But these countries are not so free, the quality of legal system is worse, and the corruption is bigger.

We assumed according to Armey (1995) and Tanzi (2005), that there is an inverted U-shaped relationship between government spending and economic growth. If we take the institutional quality into account, we can assume that the developed countries have a U-shaped curve, and the less developed have another. By the developed countries, the government spending level that maximizes growth is larger than by the less developed ones. We can see it from **Table 5** and **Table 6,** that free countries have a larger optimal level. It was not our aim necessarily to determine the exact level of government spending level, this regression method does not make it possible because of the omitted variable distortions, but we can conclude that in the free countries the optimal redistribution is higher. The government spending share is higher in the developed countries, because they have a higher quality of legal system, which is more efficient and enables a higher productivity.

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# ESTIMATING THE PRODUCTION FUNCTION IN THE CASE OF ROMANIA: METODOLOGY AND RESULTS

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***Abstract:*** *The problem of economic growth is a headline concern among economists, mathematicians and politicians. This is because of the major impact of economic growth on the entire population of a country, which has made achieving or maintaining a sustained growth rate the major objective of macroeconomic policy of any country. Thus, in order to identify present sources of economic growth for Romania in our study we used the Cobb-Douglas type production function. The basic variables of this model are represented by work factors, capital stock and the part of economic growth determined by the technical progress, the Solow residue or total productivity of production factors. To estimate this production function in the case of Romania, we used the quarter statistical data from the period between 2000 – first quarter and 2014 – fourth quarter; the source of the data was Eurostat. The Cobb-Douglas production function with the variables work and capital is valid in Romania's case because it has the parameters of the exogenous variables significantly different from zero. This model became valid after we eliminated the autocorrelation of errors. Removing the autocorrelation of errors does not alter the structure of the production function. The adjusted $R^2$ determination coefficient, as well as the α and β coefficients have values close to those from the first estimated equation. The regression of the GDP is characterized by marginal decreasing efficiency of the capital stock (α > 1) and decreasing efficiency of work (β < 1). In our case the sum of the α and β coefficients is below 1 (it is 0.75) as well as in the case of the second model (0.89), which corresponds to the decreasing efficiency of the production function. Concerning the working population of Romania, it registered a growing trend, starting with 2000 until 2005, a period that coincided with a sustained economic growth.*

**Keywords:** *economic growth, production function, econometric model, convergence.*

**JEL classification:** O47, Q56, B23.

## Introduction

Until the 60 models that have dominated the literature in the theory of economic growth, exogenous growth models were developed originally in the Solow-Swan neoclassical model and these associated exogenous sources of long-term growth. They support the realization of a process of real economic convergence between countries, based on assumptions, such as, capital is subject to decreasing returns; states that have the same characteristics in terms of population growth, the rate of technical and investment income will record that converge to the value of the most developed state; perfect mobility of factors of production is a factor determining the reduction of regional disparities, and to stimulate the process of convergence; constant returns of scale; technical progress is exogenous. The Solow-Swan model base is found in the aggregate production function (Y - output) with two inputs (physical capital K and labor L) (Solow, 1956: 66). Without diminishing return technology law makes it impossible to sustain growth for an extended period of time, even by accumulating a quantity of capital per capita that is growing. From this, it is considered necessary to introduce a new factor of production, namely, that of technical progress (Mecu, 2013: 240). Analysis of the effect of stimulating long-term economic growth by technical progress, with the sense of an intensive use of the labor

force, is based on the Cobb-Douglas production function. In order to identify present growth sources in the economy of Romania, we have used a Cobb-Douglas type production function.

## 1. Methodological aspect

The explanatory variables of the model are represented by work factors and capital stock. In order to estimate the production function, we have used the statistical quarterly data, the period we studied being the first quarter of 2000 (Q1) until the 4th quarter of 2014 (Q4), for which there is available data. The source of this data is Eurostat, while there are 60 observations for each variable. The work factor refers to the active population (between the age of 15 and 64). The productive capital stock is estimated for the initial capital level, adjusted with the modifications in the net forming of the fixed capital with the level of depreciation, such as:

$$K_1 = K_0 + I_{net} = K_0 + (I_{gross} - \text{Depreciation}) \tag{1}$$

where:

$K_1$ – stock of capital at t moment in time
$K_0$ – initial stock of capital
$I_{net}$ – net investment
$I_{gross}$ – gross investment

The quarterly information provided by Eurostat regarding the gross forming of the fixed capital and the variations of stock have helped us determine the gross investment as being the sum of the two. We assumed a constant capital depreciation rate of 6% (as in Marinaș, 2008: 229), a value close to that taken into account by the Convergence Program of Romania for 2013-2016 (where it is 5%). In order to determine the initial stock of capital, we assumed that it represents 66% of the GDP from the first trimester of 2000 (this value reflects the contribution of the capital factor in obtaining the internal production of final goods). The capital stock is expressed in millions of euros, at the price levels of 1999. The bouth data series have been deseasonalized and turned into logarithms.

## 2. The Cobb-Douglas production function with work and capital variables

The production function with the working population and the stock of capital as variables is presented as:

$$GDP = A \times K^\alpha \times L^\beta \tag{2}$$

where:
A – the part of economic growth determined by the technical progress, the Solow residue or total productivity of production factors;
K – capital stock
L – working population
α, β – the contribution of capital and of work in obtaining the potential GDP;

By applying a logarithm to the production function, we get::

$$LogGDP = LogA + \alpha \times LogK + \beta \times LogL \tag{3}$$

The α, β coefficients represent the elasticity of the potential GDP compared with the K and L factors. Based on the data provided by Eurostat and using the Eviews software, we have obtained the following results:

**Table 1:** The estimation of regression equation
Dependent Variable: LogGDP
Method: Least Squares
Sample: 2000:1 2014:4
Included observations: 60
LogGDP=C(1)+C(2)*LogK+C(3)*LogL

|  | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| A | 2.619141 | 1.261353 | 2.076452 | 0.0407 |
| α | 1.769408 | 0.064726 | 27.33679 | 0.0000 |
| β | -1.018079 | 0.338723 | -3.005639 | 0.0039 |
| R-squared | 0.945696 | Mean dependent var | | 10.01701 |
| Adjusted R-squared | 0.943791 | S.D. dependent var | | 0.470707 |
| S.E. of regression | 0.111597 | Akaike info criterion | | -1.499133 |
| Sum squared resid | 0.709875 | Schwarz criterion | | -1.394416 |
| Log likelihood | 47.97400 | Durbin-Watson stat | | 1.272745 |

Source: the author's calculus based on the data provided by Eurostat

Thus, the production function is:

$$GDP = 2{,}61 \times K^{1,76} \times L^{-1,01} \qquad (4)$$

Or in a linear form:

$$LogGDP = 0.41 + 1{,}76 \times LogK - 1{,}01 \times LogL \qquad (5)$$

The potential GDP's elasticity compared to the initial stock capital is 1.76, while compared to the working population is of 1.01. Thus, the results are validated, from other previous empiric studies which have underlined the negative contribution of the work factor in obtaining internal production. According to the table above, it can be observed that the α and β factors are significantly different from zero, at the sample level, as well as for the entire population. The probability that the null hypothesis is true is smaller than 5% (p=0.0000 for α and p=0.0039 for β), so it can be stated that the null hypothesis is rejected and the only accepted true hypothesis is the alternative $H_1$ (α ≠0, and β≠0).
As to what the $R^2$ adjusted determination coefficient is concerned, this is equal to 0.94 at sample level, which suggests a strong link between the model variables. In order to study the size of $R^2$ adjusted for the entire population, we used the Fisher test.
Because $F_{calc} = 496.32 > F_{tab} = 3{,}15$ the results prove that the null hypothesis is rejected, so the influence of exogenous variables is significant. If the difference between $F_{calc}$ and $F_{tab}$ increases, the link between the two variables is stronger at the level of the entire population.
In order to find out the autocorrelation of errors, we have used the Durbin-Watson test (Andrei et al, 2008: 126). Working with a significance level of α= 0.05, the number of exogenous variables is $k=2$, and the number of observations is T=60, from the Durbin-Watson distribution table we find the following values: $d_1 = 1.51$ and $d_2 = 1.65$. Because $0 < DW_{calc} = 1.27275 < d_1 = 1.51$, the errors are auto correlated in a positive manner, the $H_0$ hypothesis is rejected, so the independence hypothesis of errors is not verified.
In order to eliminate the autocorrelation phenomenon, we used the Cochrane-Orcutt method, which states that estimating the ρ coefficient and making a regression through quasi-difference in a model that has the form:

$$Y_t = c(1) + c(2) X_{1t} + c(2)X_{2t} + \varepsilon_t \qquad (6)$$

$$Y_{t-1} = c(1) + c(2) X_{1t-1} + c(2)X_{2t-1} + \varepsilon_{t-1} \qquad (7)$$

The $\rho$ coefficient is determined through direct regression of the residue on the delayed (t-1) value of it. Thus the quasi-differential value is written as:

$$Y_t - \rho Y_{t-1} = c(1)(1-\rho) + c(2)(X_{1t} - \rho X_{1t-1}) + c(3)(X_{2t} - \rho X_{2t-1}) + u_t \qquad (8)$$

Starting from the regression model that presents the production function of the capital stock and of the working population, we re-estimated the value of the $\rho$ parameter and the previous regression, until the stability of the c(1), c(2), c(3) parameters. The $\rho$ parameter is estimated using the smallest squares method, observing the hypothesis that the residues follow a self-regressive first order process: $\varepsilon_t = \rho\varepsilon_{t-1} + u_t$, where $u_t$ is a white noise and $\rho \in R$. After the calculus, we have obtained the value of $\rho$ as being equal to 0.363627.
Thus, based on the previous regression and the 8 base relation, corresponding to the $\rho$ parameter estimated above, we have equation:

$$\text{LogGDP}_t - \rho\text{LogGDP}_{t-1} = \text{LogA}(1-\rho) + \alpha(\text{LogK}_t - \rho\text{LogK}_{t-1}) + \beta(\text{LogL}_t - \rho\text{LogL}_{t-1}) + u_t \quad (9)$$

We check the qualities of the new model, repeating the same stages as for the previous model. In order to estimate its parameters, we used the method of the smallest squares and we obtained the following results:

**Table 2:** Estimating the parameters of the new regression model

| Dependent Variable: LogGDP-(0.36*LogGDP(-1)) Method: Least Squares Included observation: 59 after adjustments LogGDP-(0.3636*LogGDP(-1))=C(1)*(1-0.3636)+C(2)*(LogK-0.3636*LogK(-1))+C(3)* (LogL)-0.3636*LogL(-1)) | | |
|---|---|---|
| Testing the significance of the parameters (Student Test) | LogA α (K) β (L) | 1.380273 (Prob=0.0469) 1.674699 (Prob=0.0000) -0.778305 (Prob=0.0170) |
| Adjusted R-squared | | 0.898793 |
| Independence of errors (Durbin Watson Test) | DW$_{calc}$ | 1.705635* |
| Homoscedasticity of errors (White Test) | F$_{calc}$ | 0.631610 (Prob=0.6764) |
| Normality of errors (Jarque Bera Test) | JB$_{calc}$ | 1.942936 (Prob=0.378527) |

* Working with a significance level of α= 0.05, the number of exogenous variables is k=2, and the number of observations is T=60, from the Durbin-Watson distribution table we find the following values: d1 = 1.51 and d2 = 1.65.
Source: the authors' calculus

The three parameters of the new model are significantly different from zero, at the sample level, but also at the level of the entire population, a fact that is confirmed by the probability that the null hypothesis is correct, a probability that is smaller than 5% in the case of the three parameters.
In order to measure the intensity of the endogenous variable's dependency to regression factors, the determination coefficient is used. At a sample level, there is a strong intensity link between the variables, because $R^2$ adjusted = 0.898793. At the level of the entire

population, we have used the Fisher test. Because $F_{calc} = 248.6619 > F_{tab} = 3,153$, the result is that the null hypothesis is rejected.

As to what the testing of the fundamental hypothesis referring to the random $u_t$ variable is concerned for the new model, we have reached the following conclusions:

-*the independence hypothesis* of the values of the residual variable $u_t$ is confirmed this time, because the Durbin-Watson statistic is equal to 1.705635, so that $d_2 = 1.65 < DW_{calc} = 1.730679 < 4 - d_2 = 2.35$, meaning the errors of the model are independent;

-*the homoscedasticity hypothesis* of the residual variable $u_t$ is confirmed, because, as the data from table 2 shows, the probability related to the Fisher statistic is higher than 5%, which determines the acceptance of the $H_0$ hypothesis as being true.

-*the normality hypothesis* of the random variable $u_t$ is confirmed. One way of checking the normality of errors hypothesis is the Jarque-Berra test, which is an asymptotic test, usable in the case of a large volume sample, which follows a chi-squared distribution with two degrees of freedom (Meșter, 2012: p.150). Because the related probability of accepting the null hypothesis as being true (Prob=0.378527) is larger than 5%, we can state that the normality of errors hypothesis cannot be rejected for the level of the entire population, the errors being normally distributed.

Also, it could be observed that the procedure for eliminating the autocorrelation of errors does not alter the structure of the production function. The $R^2$ adjusted determination coefficient, as well as the α and β coefficients have values close to those from the first estimated equation.

The regression of the GDP is characterized by marginal decreasing efficiency of the capital stock (α > 1) and decreasing efficiency of work (β < 1). Concerning the working population of Romania, as in Figure. 1, it registered a growing trend, starting with 2000 and until 2005, a period that coincided with a sustained economic growth.



**Figure 1:** The evolution of the working population in Romania during 2000-2014
Source: made by the author based on data from Eurostat

Given the conditions that the working population in the rural areas is producing mostly for themselves, the variation of this number will influence the growth rate in a less important manner (Marinaș 2008, p. 283).

## Conclusions

According to the results we have obtained based on this production function elaborated in this study, we can conclude that the economic growth process in Romania has been influenced in a positive manner by the stock of capital while the work factor has influenced economic growth in a negative manner. According to data from the National Statistics Institute, starting with 2000, the percentage of the working population in agriculture in the total working population started to decrease, from 46.27% in 2000, to 31.36 in 2010 (TEMPO-Online databases, A.4). This shows a tendency of decreasing the percentage of the working population in agriculture and reorientation to the service sector. In time this will generate an elasticity of the potential GDP compared to the working population. The sum of the α and β coefficients is below 1 (it is 0.75) as well as in the case of the second model (0.89), which corresponds to decreasing efficiency of the production function.

## Acknowledgment

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# ESTIMATING THE COBB DOUGLAS PRODUCTION FUNCTION INCLUDING THE EXPORT AND OPENNESS IN THE CASE OF ROMANIA

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**Abstract:** *Economic convergence theories are closely related to economic growth theories. The first to study the economic growth phenomenon were the classics A. Smith, D. Ricardo, Th. Malthus, whose models of so-called classic models, do not take into account the contribution of technical progress in increasing production per capita. In order to analyze the convergence process, as a result of economic growth, a series of studies have been created to check the convergent or divergent nature of economies. Thus, in order to identify present sources of economic growth for Romania in our study we have used the Cobb-Douglas type production function. The variables that are the base of this model are represented by work factors and capital stock, to which we have added two explicative variables of economic growth: export and the openness degree of the economy. The two economic growth variables have been included in the model due to their favorable influence on the Solow residue. To estimate this production function, quarterly statistical data from the period between 2000 – first quarter and 2014 – fourth quarter have been used; the source of the data was Eurostat. As to what the first estimated model is concerned, the Cobb-Douglas production function including the export variable are both valid in Romania's case, this have the parameters of the exogenous variables significantly different from zero, while the second estimated model, which contains the openness variable, is not valid. Its independent variable coefficient is not significantly different from zero, at the level of the entire population. This shows us that the inclusion of the degree of openness of the economy variable in the model affects the significance degree of the model and in order to validate it, the variable must be eliminated. Therefore, we can state that in Romania an increase of the openness degree of the economy due to capital imports would not generate an improvement in what type of technologies are used.*

**Keywords:** *economic growth, export*, openness, *econometric model.*

**JEL classification:** F43, Q56, B23.

## Introduction
The economic growth process is one of the most talked about aspects in specialized literature, due to the major impact it has on the population of the country. This is the reason for which the making or maintaining a high growth rhythm is a major objective of macroeconomic politics. The preoccupation for studying the economic growth process has been around beginning with the representatives of the classical school, continuing with Keynsists, Neokeynsists and neoclassicist. A series of empirical studies have tested the correlation between the dynamics in different factors and in the economic growth process. Thus, in order to identify present growth sources of the economy for Romania, we have used a Cobb-Douglas type production function.

## 1. Data analysis
In this paper, the explanatory variables of the model are represented by work factors and capital stock, to which we have added the export and the openness of the economy. The inclusion of the openness and the exports in this model is caused by the favorable

influence which they have on the Solow residue. As such, an increase of exports will determine a growth in the efficiency of internal companies, while the increase of the openness will lead to generating an improvement of the technologies in use, following the imports of capital.

In order to estimate the production function, considering the two variables export and openness, we have used the statistical quarterly data, the period we studied being the first quarter of 2000 (Q1) until the 4th quarter of 2014 (Q4), for which there is available data. The quarterly information provided by Eurostat regarding the gross forming of the fixed capital and the variations of stock have helped us determine the gross investment as being the sum of the two. The capital stock and export are expressed in millions of euros, at the price levels of 1999, and the openness degree of the economy (calculated by reporting the sum of exports and imports to the GDP) is expressed in percentages (Marinaș, 2008: 229). All the four data series have been deseasonalized and turned into logarithms.

Initially we estimated the production functions as having the capital stock, working population and export, after which we added a new explanatory variables of economic growth –the openness.

## 2. The Cobb-Douglas production function including the export variable

In order to estimate the production function by including the export variable, we start from this equation:

$$GDP = A \times K^{\alpha} \times L^{\beta} \times Exp^{\gamma} \times \varepsilon_t \qquad (1)$$

where:

γ is the elasticity of the GDP based on the evolution of exports.

Following the transformation into al logarithm of the new production function, we get:

$$LogGDP = LogA + \alpha \times LogK + \beta \times LogL + \gamma \times LogExp + \varepsilon \qquad (2)$$

The errors that result from the estimation of equation 2 were positively correlated (DWcalc = 0.853213). Thus, in the case of this model, in order to eliminate positive self-correlation, we will use the Hildrenth-Lu algorithm. This supposes estimating the parameters of the model in which the ρ parameter has an unknown value. The ρ parameter will be estimated in an algorithmic manner (Stancu, 2011: 249).

With the help of this algorithm, we estimate the linear regression linear log model's parameters 2). The first step of this algorithm is determining the type of positive self-correlation (ρ > 0) or negative (ρ < 0), with the help of the Durbin-Watson statistic, in order to find the positive value interval (Andrei et al, 2008: 126): either [0, 1] or [-1, 0]. In our case, the self-correlation of errors is positive, because $0 < DWcalc = 0.853213 < d_1 = 1.48$. The second step is fixing the values of the ρ parameter, which will be used in estimating the parameters of the model:

$$LogGDP_t - \rho LogGDP_{t-1} = LogA (1 - \rho) + \alpha(LogK_t - \rho LogK_{t-1}) + \beta(LogL - \rho LogL_{t-1}) + \gamma(LogExp - \rho LogExp_{t-1}) + u_t \qquad (3)$$

For each fixed value for the ρ parameter, by using the method of the smallest squares, we estimate the parameters of the regression model given by the above relation, thus obtaining the α, β and γ estimators. Also, in the case of each step, we obtain the series of residue and the sum of the squares of the residue. The last step of this algorithm is eliminating the parameters of the relation that were obtained before (α, β and γ), for which the sum of the squares of the residue is minimal and which are the same as those of the initial equation.

In our case, after completing the above steps, we have found that the value of the parameter ρ is between the 0.90-0.95 interval, more exactly, the value that checks the last step of the algorithm is ρ = 0.94. Next, we will present the model that shows the relation between the GDP, capital stock, working population and export, after we have eliminated the self-correlation of errors.

**Table 1:** Estimating the parameters of the regression model (3)

Dependent Variable: LOG(GDP)-(0.94*LOG(GDP(-1)))
Method: Least Squares
Sample (adjusted): 2000Q2 2014Q4
Included observations: 59 after adjustments
LOG(GDP)-(0.94*LOG(GDP(-1))) = C(1)*(1-0.94)+C(2)*(LOG(K)-0.94*LOG(K(-1))) + C(3)*(LOG(L)-0.94*LOG(L(-1)))+C(4)*(LOG(E)-0.94*LOG(E(-1)))

|  | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C(1) | 4.177032 | 1.339827 | 3.117592 | 0.0029 |
| C(2) = α | 0.193660 | 0.067327 | 2.876383 | 0.0057 |
| C(3) = β | -0.024986 | 0.119526 | -0.209045 | 0.8352 |
| C(4) = γ | 0.487973 | 0.085637 | 5.698137 | 0.0000 |
| R-squared | 0.487162 | Mean dependent var | | 0.623990 |
| Adjusted R-squared | 0.459189 | S.D. dependent var | | 0.043760 |
| S.E. of regression | 0.032181 | Akaike info criterion | | -3.969496 |
| Sum squared resid | 0.056959 | Schwarz criterion | | -3.828646 |
| F-statistic | 17.41546 | Durbin-Watson stat | | 1.689691 |

Source: the authors' calculus

According to the data from the table above, we can write the following relation:

$$GDP = 0.62 \times K^{0.19} \times L^{-0.02} \times Exp^{0.48} \times u_t \qquad (4)$$

The results show that all coefficients of the equation are significantly different from zero at the sample level, and the intensity of the link between the variables of the same level is average (Adjusted $R^2$ = 0.459189). The elasticity of the potential GDP based on the working population is reduced as compared to the initial production function, so an increase of the working population of 10% generated a decrease of 0.2% of the potential GDP by increasing the productivity of work. The increase of exports generated an improvement of work efficiency and capital stock in the exporting sectors of the economy. Given the value of the GDP elasticity, we can say that an increase of exports of 10% determined an average economic growth of 4.8% during 2000-2014. We can also observe that this factor had the highest contribution to the increase of the potential GDP, followed by the stock capital of the economy, a factor that influenced the potential GDP in the same manner, leading to an increase of capital stock of 10%, potential GDP grows with 0.19%. This value corresponds to some decreasing marginal efficiencies of the capital factor. Moreover, we can say that this production function is characterized by decreasing efficiencies, because the sum of the α, β and γ factors is 0.65.

If we check the link between the four variables, at the level of the entire population, we can see that only the free term, meaning α and γ, are significantly different from zero; the β parameter is not significantly different from zero, because the value of the Student statistic is smaller in absolute value (t-statistic β = │-0.209045│) than the table value equal to 2.00 for a P=0.05 probability and df = 59 degrees of freedom. In order for this model to become

valid, the "working population variable" needs to be eliminated from the model. Thus, after re-estimating the new model, we have obtained the following results:

**Table 2:** Estimating the new regression model

| *Dependent Variable:* LOG(GDP)-(0.94*LOG(GDP(-1))) | | |
|---|---|---|
| *Method: Least Squares* | | |
| *Sample (adjusted): 2000Q2 – 2014Q4* | | |
| *Included observation: 59 after adjustments* | | |
| Log(GDP)-(0.94*Log(GDP(-1)))=C(1)*(1-0.94)+C(2)*(LogK-0.94*LogK(-1))+C(3)* (LogExp)-0.94*LodExp(-1)) | | |
| Testing the significance of the parameters (Student Test) | LogA $\alpha$ $\gamma$ (Exp) | 3.969735 (Prob.=0.0000) 0.196879 (Prob.=0.0037) 0.482715 (Prob.=0.0000) |
| Adjusted R-squared | | 0.468424 |
| Independence of errors (Durbin Watson Test) | $DW_{calc}$ | 1.693219* |
| Homoscedasticity of errors (White Test) | $F_{calc}$ | 0.449339 (Prob.=0.8119) |
| Normality of errors (Jarque Bera Test) | $JB_{calc}$ | 0.470459(Prob.=0.79039) |

* Working with a level of significance $\alpha$ = 0,05, the number of exogenous variables $k$=2 and the number of observation T = 59, $d_1$ = 1,51 and $d_2$ = 1,65 (Durbin Watson table).
Source: the authors' calculus

According to the new model, we can state that all parameters are significantly different from zero, at the sample level, as well as at the entire population level, a fact confirmed by the associated probabilities of accepting the null hypothesis, which are smaller than 5%. Thus, after applying the Student test, we can conclude that the null hypothesis $H_0$ is rejected for all parameters of the equation and the alternative hypothesis is accepted, according to which there is a link between the dependent variable and the independent variables at the level of the entire population. We also see that by eliminating the "working population" variable, the structure of the production function is not changed; the $R^2$ adjusted determination coefficient as well as the $\alpha$ and $\beta$ coefficients have similar values to those in the first equation.

In order to measure the intensity of the endogenous variable dependency from regression factors, we have found out the determination coefficient. At a sample level, between the endogenous variable – GDP, and the exogenous variable – capital stock and export – there is an average intensity link, because $R^2$ adjusted = 0.468424. In order to fund out if this intensity is kept at the level of the entire population, we have used the Fisher test. Because $F_{calc}$ = 26.55 > $F_{tab}$ = 3.15, the null hypothesis according to which there is no link between the variables is rejected, meaning that the influence of the exogenous variable on the endogenous variable is significant at the level of the entire population.

As to what the testing of the fundamental hypothesis referring to the random variable $u_t$ of the new model, we have reached at the following conclusions:

-*the independence hypothesis* of the values of the residual variable $u_t$ is confirmed this time, because the Durbin-Watson statistic is equal to 1.705635, so that $d_2$ = 1.65 < $DW_{calc}$ = 1.730679 < 4-$d_2$ = 2.35, meaning the errors of the model are independent;
-*the homoscedasticity hypothesis* of the residual variable $u_t$ is confirmed, because, as the data from table 2 shows, the probability related to the Fisher statistic is higher than 5%, which determines the acceptance of the $H_0$ hypothesis as being true, meaning that there is a link between the residual variable, the exogenous variable and the square of the exogenous variable.

-*the normality hypothesis* of the random variable $u_t$ is confirmed. Because of the importance of normal repartition in modeling various statistics, various special concordance tests have been built to check the normality of these various distributions. One way of checking the normality of errors hypothesis is the Jarque-Berra test, which is an asymptotic test, usable in the case of a large volume sample, which follows a chi-squared distribution with two degrees of freedom (Meșter, 2012, p: 150). Because the probability of accepting the null hypothesis as being true (Prob=0.790390) is larger than 5%, it results that the error normality hypothesis cannot be rejected at the level of the entire population, the errors being normally distributed.

Because all three hypothesis referring to the errors of the model have been checked, we can conclude that the production function that includes the export variable in the Cobb-Douglas production function is valid. Next, we want to determine the influence of the openness of the economy on the economic growth, starting again from the Cobb-Douglas production function.

## 3. Estimating the production function of Romania, by including the openness variable in the Cobb-Douglas production function

In order to identify the influence the openness has on the economic growth (EOP), we will estimate a new production function to which we have added this new variable.

$$GDP = A \times K^{\alpha} \times L^{\beta} \times EOP^{\lambda} \times \varepsilon_t \qquad (5)$$

where:
$\lambda$ represents the elasticity of the GDP based on the evolution of the openness (EOP).

By estimating the regression of the GDP variable, we have found the following results:

$$GDP = 1.30 \times K^{1.76} \times L^{-0.85} \times EOP^{0.35} \times u_t \qquad (6)$$

**Table 3:** Estimating the regression model (5**)**
Dependent Variable: LOG(GDP)
Method: Least Squares
Sample: 2000Q1 2014Q4
Included observations: 60
LOG(GDP)=C(1)+C(2)*LOG(K)+C(3)*LOG(L)+C(4)*LOG(EOP)

|  | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C(1) | 1.303909 | 3.407186 | 0.382694 | 0.7034 |
| C(2) | 1.762346 | 0.063810 | 27.61867 | 0.0000 |
| C(3) | -0.855900 | 0.346574 | -2.469604 | 0.0166 |
| C(4) | 0.351438 | 0.206452 | 1.702274 | 0.0942 |

| | | | |
|---|---|---|---|
| R-squared | 0.948368 | Mean dependent var | 10.01701 |
| Adjusted R-squared | 0.945602 | S.D. dependent var | 0.470707 |
| S.E. of regression | 0.109785 | Akaike info criterion | -1.516251 |
| Sum squared resid | 0.674950 | Schwarz criterion | -1.376628 |
| Log likelihood | 49.48753 | Hannan-Quinn criter. | -1.461637 |
| F-statistic | 342.8673 | Durbin-Watson stat | 1.267148 |

Source: the authors' calculus

As it can be seen in the table above, all parameters of the equation are significantly different from zero, at the sample level. Things are different in the case of the entire population. We can observe that the parameter of the independent EOP variable is not significantly different from zero, because the value of the Student statistic is in absolute value smaller than the table value of 2.00 for a 95% probability. Thus, we can say that the elasticity of the GDP compared to the EOP is insignificantly different from zero. This shows that the inclusion of this variable affects the significance level of the model and in order to validate it, we need to eliminate the variable.
We need to do the same for the free term too. As to what the elasticity of the potential GDP based on the working population and the capital stock is concerned, it had a value of -0.85 in the case of the working population and 1.76 in the case of the capital stock. The coefficients of the two variables are significantly different from zero at the level of the entire population.

**Conclusions**

According to the results we have obtained based on the two models for the production function elaborated in this study, we can conclude that the economic growth process in Romania has been influenced in a positive manner by the stock of capital and exports, while the work factor has influenced economic growth in a negative manner. Moreover, in Romania, an increase of the openness following capital imports would not generate an improvement in what type of technologies are used.

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# TESTING MONETARY EXCHANGE RATE MODELS WITH PANEL COINTEGRATION TESTS

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**Abstract:** *The monetary exchange rate models explain the long run behaviour of the nominal exchange rate. Their central assertion is that there is a long run equilibrium relationship between the nominal exchange rate and monetary macro-fundamentals. Although these models are essential tools of international macroeconomics, their empirical validity is ambiguous. Previously, time series testing was prevalent in the literature, but it did not bring convincing results. The power of the unit root and the cointegration tests are too low to reject the null hypothesis of no cointegration between the variables. This power can be enhanced by arranging our data in a panel data set, which allows us to analyse several time series simultaneously and enables us to increase the number of observations. We conducted a weak empirical test of the monetary exchange rate models by testing the existence of cointegration between the variables in three panels. We investigated 6, 10 and 15 OECD countries during the following periods: 1976Q1-2011Q4, 1985Q1-2011Q4 and 1996Q1-2011Q4. We tested the reduced form of the monetary exchange rate models in three specifications; we have two restricted models and an unrestricted model. Since cointegration can only be interpreted among non-stationary processes, we investigate the order of the integration of our variables with IPS, Fisher-ADF, Fisher-PP panel unit root tests and the Hadri panel stationary test. All the variables can be unit root processes; therefore we analyze the cointegration with the Pedroni and Kao panel cointegration test. The restricted models performed better than the unrestricted one and we obtained the best results with the 1985Q1-2011Q4 panel. The Kao test rejects the null hypotheses – there is no cointegration between the variables – in all the specifications and all the panels, but the Pedroni test does not show such a positive picture. Hence we found only moderate support for the monetary exchange rate models.*

**Keywords:** monetary exchange rate models; cointegration; empirical testing; OECD countries; Pedroni panel cointegration test; Kao panel cointegration test

**JEL codes:** F31; F41; C33

## 1. Introduction

The long run equilibrium relationship between the nominal exchange rate and monetary macro-fundamentals is described by the monetary exchange rate models. These models are essential theoretical tools; even so, their empirical validity is doubtful. The majority of empirical analyses cannot confirm that these models provide a good explanation for the long run behaviour of nominal exchange rates. Many empirical tests using time series analysis have failed to find evidence for the empirical validity of these models. (Meese, 1986; Sarantis, 1994; Rapach and Wohar, 2002; Upadhyaya and Pradhan, 2006).

However, these results do not indicate that the theoretical models are inapplicable. Among others, Groen (2000) and Rapach and Wohar (2004) attributed the failure of the empirical testing of monetary exchange rate models to the short sample length. In such circumstances the power of the unit root and the cointegration tests are too low to reject the null hypothesis of no cointegration between the variables. Others (Shiller and Perron, 1985; Otero and Smith, 2000) showed that the power of the unit root and the cointegration tests is influenced by the length of the sample, not the frequency of the data. To increase the power of the tests we can use the panel technique instead of applying only a single time series. In this way we have more observations which can increase the precision of the

unit root and the cointegration tests (Taylor and Taylor, 2004). Since the power of the pure time series cointegration tests is lower than the power of the panel cointegration tests, the literature increasingly uses the panel technique by testing monetary exchange rate models. Groen (2000) is one of the early analyses which succeeded in supporting the validity of monetary exchange rate models by using the panel technique. Further success was achieved in detecting cointegration between the nominal exchange rate and monetary macro-fundamentals by Mark and Sul (2001), Rapach and Wohar (2004) and Basher and Westerlund (2009).

The results show that the panel analyses are more successful than the country-by-country basis analyses in testing the monetary exchange rate models. In this paper we also apply the panel technique to test the monetary exchange rate models during the following periods: 1976Q1-2011Q4, 1985Q1-2011Q4 and 1996Q1-2011Q4.


## 2. Methodology

### 2.1. The model

There are three versions of the monetary exchange rate models: 1) the flexible price monetary exchange rate model (Frenkel, 1976; Bilson, 1978), 2) the sticky price monetary exchange rate model (Dornbush, 1976) and 3) the real interest rate differential model (Frankel, 1979). These models stress the role of the money supply and the money demand in the determination of the exchange rate. All three models assume that the uncovered interest parity and the purchasing power parity (PPP) are held stable. The central statement of these models is that there is a long run equilibrium relationship between the nominal exchange rate and the monetary macro-fundamentals which appear in the models.

In most cases the literature tests the reduced form of the monetary exchange rate models. We obtain the reduced form in the sense of Groen (2000) and Basher and Westerlund (2009): take the money market equilibrium as the point of origin when the real money supply is equal to the real money demand:

$$m - p = \phi y - \lambda i , \qquad (1)$$

the same equilibrium exists abroad:

$$m^* - p^* = \phi y^* - \lambda i^* , \qquad (2)$$

where $m$ and $m^*$ are the logarithms of the domestic and foreign nominal money supply, $p$ and $p^*$ are the logarithms of the domestic and foreign price levels, $y$ and $y^*$ are the logarithms of the domestic and foreign real income, and $i$ and $i^*$ are the domestic and foreign interest rates. It is assumed that the PPP holds in the markets:

$$e = p - p^* , \qquad (3)$$

where $e$ is the logarithm of the spot exchange rate (define the price of foreign currency in terms of domestic currency). Express the domestic and the foreign price level from equation (1) and (2), then substitute these into PPP (3). Thus we get the equilibrium value of the exchange rate:

$$e = (m - m^*) - \phi(y - y^*) + \lambda(i - i^*) . \qquad (4)$$

It is also assumed that bonds are perfect substitutes, so the uncovered interest parity holds:

$$E_t(e_{t+1}) - e_t = i_t - i_t^* , \qquad (5)$$

where $E_t$ is the conditional expectation operator on the information set available at time $t$, and $E_t(e_{t+1}) - e_t$ the expected rate of depreciation. Substitute this equation (5) into equation (4):

$$e = (m - m^*) - \phi(y - y^*) + \lambda(E_t(e_{t+1}) - e_t) \cdot \qquad (6)$$

In the long run the exchange rate converges to its long run equilibrium value ($e_t = e_{t+1} = \overline{e}$), thus the expected rate of depreciation will be zero: $E_t(e_{t+1}) - e_t = \overline{e} - \overline{e} = 0$. Then we obtain the reduced form of the monetary exchange rate models:

$$e = (m - m^*) - \phi(y - y^*) \cdot \qquad (12)$$

## 2.2. Testing strategy

The monetary exchange rate models assume a long run equilibrium relationship between the nominal exchange rate and monetary macro-fundamentals and this can be captured by revealing the cointegration between these variables. We test the reduced form of the monetary exchange rate models:

$$e_{it} = \beta_0 + \beta_1(m_{it} - m_t^*) + \beta_2(y_{it} - y_t^*) + u_{it},$$

where $e_{it}$ is the logarithm of the nominal exchange rate of the $i$-th country at time $t$, $m_{it}$ is the logarithm of the money supply of the $i$-th country at time $t$, $y_{it}$ is the logarithm of the real income of the $i$-th country at time $t$ and $u_{it}$ is white noise. The asterisks indicate the foreign country, which is the US dollar in all cases, therefore the foreign variables have only $t$ subscript. The literature usually tests this restricted model when assuming that the coefficients of the domestic and foreign variables are equal. We also assume that the proportionality hypothesis is realized, i.e. any changes in the money supplies (in our case changes in the difference between the money supplies) appear as one hundred percent in the exchange rate, thus $\beta_1 = +1$. We assume the same with the difference in real incomes, i.e. $\beta_2 = -1$. In this paper we do not estimate the model, but only test the existence of the cointegration among the variables, even though the restrictions in connection with the coefficients of the variables are important. Beyond this specification we test another two specifications. Either of them has a stricter restriction when handling the monetary macro-fundamentals as a single "composite" variable:

$$e_{it} = \beta_0 + \beta_1\left[(m_{it} - m_t^*) - (y_{it} - y_t^*)\right] + u_{it},$$

where the literature would expect that $\beta_1 = +1$. This kind of testing method was taken from Rapach and Wohar (2002). The third specification is an unrestricted model, which relaxes the previous restrictions. So it is not assumed that the domestic and foreign variables influence the nominal exchange rate to the same extent:

$$e_{it} = \beta_0 + \beta_1 m_{it} + \beta_2 m_t^* + \beta_3 y_{it} + \beta_4 y_t^* + u_{it} \cdot$$

## 2.3. The testing procedure

The long run equilibrium relationship between the examined variables can be captured by the cointegration. The variables are cointegrated if there exists a linear combination of them which is stationary. (Hendry and Juselius, 2000) In this paper the existence of the cointegration between the nominal exchange rate and monetary macro-fundamentals will be tested with panel cointegration tests, so we conduct a weak test of the monetary exchange rate models. This kind of cointegration test has greater power than the time series tests.

To reveal the long run equilibrium relationship between the examined variables we use Pedroni and Kao panel cointegration tests. Both tests use the idea of the Engle and Granger (1987) time series cointegration test in the sense that they are residual-based tests; both tests include the null hypothesis of no cointegration among the examined

variables. Pedroni (2000, 2004) proposes several tests to examine the cointegration in panels. The tests can be divided into two groups: 1) there are tests which average the test statistics of the individual time series across the cross section units, 2) other tests are based on averaging not the test statistics as a whole, but make separate averages for the numerator and for the denominator terms. The tests also differ in terms of the assumption of the time series autoregressive structure, i.e. some tests assume an identical autoregressive structure of the examined time series and other tests allow different autoregressive structures. Since the assumption of identical autoregressive structures is far from realistic, we use only tests which allow enough heterogeneity. Because these tests are also sensitive to the modelling of the time series, all the model possibilities – i.e. the time series a) includes an intercept, b) includes a constant and a trend, and c) includes none of the former – were investigated. (Pedroni, 2000, 2004; Baltagi, 2008) The Kao test also has DF and ADF tests, but we only use the ADF test statistics. There is only one modelling possibility: the time series including an intercept. (Kao, 1999; Baltagi, 2008) In both cases the residuals are obtained from the panel fixed effects estimation.

However, the cointegration can only be interpreted among non-stationary processes; therefore we must investigate the order of the integration of our variables before testing the cointegration. Since the unit root tests are, in general, very sensitive, we applied further tests to check the robustness of our results: Im, Pesaran, Shin (IPS), Fisher-ADF, Fisher-PP and Hadri tests (Im, Pesaran and Shin, 2003; Maddala and Wu, 1999; Hadri, 2000). The Hadri test is the only one which has the null hypothesis of stationarity (the alternative hypothesis is that a few cross section units contain a unit root, but not all do so); the other three tests are panel unit root tests. The IPS $t$-statistics are the average of the individual ADF tests; the null hypothesis is that all the time series contain a unit root, and the alternative hypothesis is that a few cross section units contain a unit root (Im, Pesaran and Shin, 2003). The Fisher type tests combine the $p$-value of the individual unit root tests across the cross sections. Their null hypothesis is also the conjecture of the unit root in the time series (Maddala and Wu, 1999; Baltagi, 2008). In the interest of the robustness of the results, all model possibilities were tested, i.e. the time series a) includes an intercept, b) includes a constant and a trend, and c) includes none of the formers. The selection of the tests was influenced by the assumptions made regarding each test. Panel unit root tests also include tests which presume an identical autoregressive structure at each cross section unit and which allow a heterogeneous autoregressive structure. The selected tests permit the different autoregressive structure of the pooled time series, with the exception of the Hadri test (but this is the only panel stationarity test which is supported by software packages).

## 3. Results

### 3.1. Data
To collate our data we applied the OECD Statistics database. Three panels were constructed because of the absence of data. The shortest panel (1996Q1-2011Q4) has 15 cross section units: Australia, Canada, the Czech Republic, Denmark, the euro area, Hungary, Japan, Korea, Mexico, Norway, Poland, Sweden, Switzerland, Turkey and the United Kingdom; the longest (1976Q4-2011Q4) panel has 6 cross section units: Australia, Canada, Denmark, Norway, Sweden, Switzerland; and the intermediate length (1985Q1-2011Q4) has 10: Australia, Canada, Denmark, Japan, Mexico, Norway, Sweden, Switzerland, Turkey and the United Kingdom. The dollar exchange rates were analyzed using quarterly data. During the sample period the exchange rate policy of the examined countries is characterized primarily by floating exchange rates. We tested the reduced form of the monetary exchange rate models, thus our variables are the nominal exchange rate,

the nominal money supply and the industrial production index. The data selection was influenced by the availability of the data.

## 3.2. Results of the panel unit root tests

The order of the integration of the variables was examined by three panel unit root tests and one panel stationarity test: IPS, Fisher-ADF, Fisher-PP and Hadri tests. In the case of the IPS and the Fisher-ADF tests the number of the lags in the auxiliary regression was determined by the Schwarz information criterion. The other tests use the kernel method to correct the feasible autocorrelation; thus in the case of the Fisher-PP and Hadri tests, the Bartlett kernel was applied. The variables of the USA can also be examined by time series unit root tests, because in each equation there is the same time series as the USA. In order to test all the variables with the same methodology, the four selected panel unit root tests were eventually used for the US variables too. The results are heterogeneous (Table 1, Table 2). The US nominal money supply and the US real income seems to be integrated of order one (it needs once differencing to be stationary), the nominal exchange rate and the nominal money supply of the OECD countries examined is *I(1)* or *I(0)*, and the real income of the examined OECD countries also seems to be *I(1)*.

## 3.3. Results of the Pedroni and Kao panel cointegration tests

The results are not too convincing, but show some degree of support for the monetary exchange rate models (Table 3, Table 4 and Table 5). These tests do not have too much power, so probably they will be sensitive to the length of the sample, the number of the observations and the modelling of the time series. Our hypothesis is that the results will be improved with samples with longer time horizons, and with samples with a relatively high number of observations. Our panels differ in the length of the sample and also in the number of the cross section units examined, so the results are also different for each panel. The Kao test rejects the null hypotheses – no cointegration between the variables – for all the specifications and all the panels. In the case of the first (Table 3) and the second (Table 4) panel at the 1% significance level, in the case of the third panel (Table 5) by the two- and three-variable specification at the 5% significance level, and by the five-variable specification again at the 1% significance level. From among the three test statistics of the Pedroni test it is the ADF test which rejects the null hypotheses the most often. We can also see that in the case of the restrictive models, i.e. the two- and three-variable models, we have better results. With the five-variable specification the null hypothesis is only rejected in the case of the second panel by the Pedroni test. The best results were obtained by the second panel (1985Q1-2011Q4), where we found evidence for the monetary exchange rate models in all the specifications. Presumably the reason for this is the greater number of observations compared to the other two panels.

## 4. Conclusion

The long run monetary exchange rate models are essential theoretical tools of international macroeconomics; nonetheless, their empirical validity is ambiguous. Previously, the time series testing was prevalent in the literature, but it did not bring convincing results. The power of the unit root and the cointegration tests are too low to reject the null hypothesis of the tests. This power can be enhanced by arranging our data in a panel data set, which ensures that we analyse several time series simultaneously and enables us to increase the number of observations.

We conducted a weak empirical test of the monetary exchange rate models by testing the existence of the cointegration between the variables in three panels. The reduced form of the monetary exchange rate models was investigated in three specifications. We examined the order of the integration of the variables with IPS, Fisher-ADF, Fisher-PP and Hadri tests, then ran Pedroni and Kao panel cointeration tests. The restricted models

performed better than the unrestricted one; however we found only moderate support for the monetary exchange rate models.

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# Appendix

**Table 1:** The results of the IPS and the Fisher-ADF panel unit root tests

| Variables | IPS test | | Fisher-ADF test | | |
|---|---|---|---|---|---|
| | **A** | **B** | **A** | **B** | **C** |
| *Variables of the USA 1996Q1–2011Q4* | | | | | |
| $m_t^*$ | 5.775 | -1.070 | 2.159 | 29.279 | 0.000 |
| $\Delta m_t^*$ | -17.650*** | -15.942*** | 324.396*** | 258.702*** | 23.213 |
| $y_t^*$ | -6.156*** | -5.664*** | 89.212*** | 80.431*** | 3.005 |
| $\Delta y_t^*$ | 9.524*** | -7.779*** | 149.323*** | 111.733*** | 221.771*** |
| *Variables of the OECD countries 1996Q1-2011Q4* | | | | | |
| $e_{it}$ | -0.211 | -2.643*** | 33.298 | 47.306** | 31.274 |
| $\Delta e_{it}$ | -18.199*** | -17.273*** | 342.912*** | 292.416*** | 488.164*** |
| $m_{it}$ | -0.446 | -0.394 | 93.110*** | 46.102** | 0.146 |
| $\Delta m_{it}$ | -12.177*** | -11.853*** | 215.837*** | 198.698*** | 91.979*** |
| $y_{it}$ | -0.099 | -2.495*** | 36.660 | 50.798** | 7.378 |
| $\Delta y_{it}$ | -20.908*** | -20.258*** | 378.870*** | 324.774*** | 867.538*** |
| *Variables of the OECD countries 1985Q1-2011Q4* | | | | | |
| $e_{it}$ | -5.615*** | -2.276*** | 83.403*** | 46.307*** | 52.457*** |
| $\Delta e_{it}$ | -20.414*** | -20.652*** | 372.337*** | 338.429*** | 604.651*** |
| $m_{it}$ | 0.249 | -1.524* | 27.922 | 39.878*** | 0.430 |
| $\Delta m_{it}$ | -10.993*** | -9.632*** | 173.074*** | 138.489*** | 208.871*** |
| $y_{it}$ | -0.624 | 0.526 | 24.693 | 22.455 | 1.519 |
| $\Delta y_{it}$ | -25.392*** | -26.342*** | 458.793*** | 412.013*** | 1043.56*** |
| *Variables of the OECD countries 1976Q1-2011Q4* | | | | | |
| $e_{it}$ | -1.778** | -0.321 | 18.548 | 11.368 | 14.082 |
| $\Delta e_{it}$ | -20.012*** | -20.309*** | 315.071*** | 288.102*** | 677.397*** |
| $m_{it}$ | -0.374 | -1.968** | 10.893 | 21.154** | 0.020 |
| $\Delta m_{it}$ | -6.497*** | -6.873*** | 70.656*** | 70.661*** | 29.195*** |
| $y_{it}$ | 0.590 | 1.276 | 10.199 | 9.367 | 0.172 |
| $\Delta y_{it}$ | -22.589*** | -23.643*** | 340.211*** | 313.644*** | 825.119*** |

Notes: A) the time series includes intercept, B) includes trend and intercept, C) includes none; the stars are the significance level of rejection: * 10%, ** 5%, *** 1%

**Table 2:** The results of the Fisher-PP panel unit root and the Hadri stationary test

| Variables | Fisher-PP test | | | Hadri test | |
|---|---|---|---|---|---|
| | **A** | **B** | **C** | **A** | **B** |
| *Variables of the USA 1996Q1–2011Q4* | | | | | |
| $m_t^*$ | 1.745 | 17.118 | 0.000 | 22.167*** | 10.246*** |
| $\Delta m_t^*$ | 328.176*** | 262.335*** | 88.701*** | -2.704 | -0.320 |
| $y_t^*$ | 83.622*** | 31.108 | 1.777 | 11.091*** | 9.555*** |
| $\Delta y_t^*$ | 100.963*** | 61.457*** | 171.216*** | 1.691** | 0.002 |
| $\Delta^2 y_t^*$ | – | – | – | -2.868 | -3.176 |

|  | Variables of the OECD countries 1996Q1–2011Q4 | | | | |
|---|---|---|---|---|---|
| $e_{it}$ | 43.237 | 30.525*** | 38.954 | 10.108*** | 8.716*** |
| $\Delta e_{it}$ | 310.789*** | 252.381*** | 444.651*** | 2.264** | 3.761*** |
| $\Delta^2 e_{it}$ | – | – | – | 3.480*** | 17.343*** |
| $m_{it}$ | 110.402*** | 41.010* | 0.000 | 21.537*** | 9.652*** |
| $\Delta m_{it}$ | 248.988*** | 232.567*** | 152.661*** | 5.762*** | 7.199*** |
| $\Delta^2 m_{it}$ | – | – | – | 1.742** | 10.486*** |
| $y_{it}$ | 28.806 | 27.426 | 6.957 | 14.499*** | 7.405*** |
| $\Delta y_{it}$ | 389.091*** | 338.235*** | 873.100*** | -0.135 | -1.468 |
|  | Variables of the OECD countries 1985Q1–2011Q4 | | | | |
| $e_{it}$ | 74.012*** | 41.911*** | 54.072*** | 8.620*** | 8.653*** |
| $\Delta e_{it}$ | 406.379*** | 368.626*** | 693.699*** | 2.193** | 4.586*** |
| $\Delta^2 e_{it}$ | – | – | – | 1.398* | 10.549*** |
| $m_{it}$ | 77.732*** | 28.123 | 0.000 | 20.811*** | 9.579*** |
| $\Delta m_{it}$ | 277.577*** | 256.229*** | 368.856*** | 3.613*** | 5.280*** |
| $\Delta^2 m_{it}$ | – | – | – | -0.030 | 5.777*** |
| $y_{it}$ | 29.419* | 15.914 | 0.937 | 17.089*** | 9.410*** |
| $\Delta y_{it}$ | 508.485*** | 418.303*** | 1273.48*** | 2.960*** | 2.944*** |
| $\Delta^2 y_{it}$ | - | - | - | -0.009 | 6.051*** |
|  | Variables of the OECD countries 1976Q1–2011Q4 | | | | |
| $e_{it}$ | 14.473 | 7.292 | 12.755 | 5.815*** | 6.081*** |
| $\Delta e_{it}$ | 305.985*** | 276.040*** | 632.390*** | 0.722 | -0.995 |
| $m_{it}$ | 26.043** | 16.403 | 0.000 | 20.101*** | 11.052*** |
| $\Delta m_{it}$ | 322.044*** | 303.089*** | 580.949*** | 3.921*** | 4.122*** |
| $\Delta^2 m_{it}$ | – | – | – | -0.949 | -0.379 |
| $y_{it}$ | 9.820 | 9.013 | 0.115 | 18.664*** | 7.878*** |
| $\Delta y_{it}$ | 431.623*** | 391.834*** | 1211.08*** | 2.178** | 1.071 |
| $\Delta^2 y_{it}$ | - | - | - | 0.065 | 4.051*** |

Notes: A) the time series includes intercept, B) includes trend and intercept, C) includes none; the stars are the significance level of rejection: * 10%, ** 5%, *** 1%

**Table 3:** The results of the Pedroni and Kao panel cointegration tests with respect to the 1976Q4-2011Q4 panel

|  |  | Two-variable model | | Three-variable model | | Five-variable model | |
|---|---|---|---|---|---|---|---|
| **Pedroni test, presumed individual AR structure 1976Q4-2011Q4** | | | | | | | |
| statistics | model | value | *p*-value | value | *p*-value | value | *p*-value |
| **rho** | **A** | 0.430 | 0.667 | 0.834 | 0.798 | 1.243 | 0.893 |
|  | **B** | 0.906 | 0.818 | 0.770 | 0.779 | 1.949 | 0.974 |
|  | **C** | -0.101 | 0.460 | 0.999 | 0.841 | 1.122 | 0.869 |
| **PP** | **A** | -0.024 | 0.490 | 0.339 | 0.633 | 1.046 | 0.852 |
|  | **B** | 0.617 | 0.731 | 0.562 | 0.713 | 1.778 | 0.962 |
|  | **C** | -1.999 | 0.023 | -0.325 | 0.373 | 0.535 | 0.704 |
| **ADF** | **A** | -0.879 | 0.190 | -0.033 | 0.487 | -0.064 | 0.474 |
|  | **B** | -0.340 | 0.367 | -0.310 | 0.378 | 0.315 | 0.624 |
|  | **C** | -2.010 | 0.022 | -0.318 | 0.375 | -0.124 | 0.451 |
| **Kao test 1976Q4-2011Q4** | | | | | | | |
| statistics | model | value | *p*-value | value | *p*-value | value | *p*-value |
| **ADF** | **A** | -2.856 | 0.002 | -2.796 | 0.003 | -3.447 | 0.000 |

Notes: A) the time series includes intercept, B) includes trend and intercept, C) includes none

**Table 4:** The results of the Pedroni and Kao panel cointegration tests with respect to the 1985Q1-2011Q4 panel

| | | Two-variable model | | Three-variable model | | Five-variable model | |
|---|---|---|---|---|---|---|---|
| | | value | *p*-value | value | *p*-value | value | *p*-value |
| **Pedroni test, presumed individual AR structure 1985Q1-2011Q4** | | | | | | | |
| statistics | model | value | *p*-value | value | *p*-value | value | *p*-value |
| **rho** | **A** | -1.762 | 0.039 | -0.782 | 0.217 | -0.026 | 0.490 |
| | **B** | -0.405 | 0.343 | 0.126 | 0.550 | 0.498 | 0.691 |
| | **C** | -0.156 | 0.438 | 0.236 | 0.593 | -0.096 | 0.462 |
| **PP** | **A** | -3.115 | 0.001 | -2.600 | 0.005 | -1.774 | 0.038 |
| | **B** | -1.904 | 0.029 | -1.288 | 0.099 | -1.268 | 0.103 |
| | **C** | -2.459 | 0.007 | -2.100 | 0.018 | -2.492 | 0.006 |
| **ADF** | **A** | -2.717 | 0.003 | -2.740 | 0.003 | -3.388 | 0.000 |
| | **B** | -1.795 | 0.036 | -1.274 | 0.101 | -2.418 | 0.008 |
| | **C** | -2.116 | 0.017 | -1.693 | 0.045 | -2.735 | 0.003 |
| **Kao test 1985Q1-2011Q4** | | | | | | | |
| statistics | model | value | *p*-value | value | *p*-value | value | *p*-value |
| **ADF** | **A** | -4.572 | 0.000 | -4.709 | 0.000 | -5.604 | 0.000 |

Notes: A) the time series includes intercept, B) includes trend and intercept, C) includes none

**Table 5:** The results of the Pedroni and Kao panel cointegration tests with respect to the 1996Q1-2011Q4 panel

| | | Two-variable model | | Three-variable model | | Five-variable model | |
|---|---|---|---|---|---|---|---|
| | | value | *p*-value | value | *p*-value | value | *p*-value |
| **Pedroni test, presumed individual AR structure 1996Q1-2011Q4** | | | | | | | |
| statistics | model | value | *p*-value | value | *p*-value | value | *p*-value |
| **rho** | **A** | 0.105 | 0.542 | 1.278 | 0.899 | 3.155 | 0.999 |
| | **B** | 1.702 | 0.956 | 2.604 | 0.995 | 3.974 | 1.000 |
| | **C** | 1.562 | 0.941 | 0.727 | 0.766 | 2.993 | 0.999 |
| **PP** | **A** | -0.808 | 0.210 | 0.791 | 0.786 | 2.538 | 0.994 |
| | **B** | 0.208 | 0.582 | 1.882 | 0.970 | 3.391 | 1.000 |
| | **C** | -0.871 | 0.192 | -1.046 | 0.148 | 2.382 | 0.991 |
| **ADF** | **A** | -1.831 | 0.034 | -1.345 | 0.089 | 0.174 | 0.569 |
| | **B** | -1.564 | 0.059 | -0.020 | 0.492 | 0.292 | 0.615 |
| | **C** | -1.044 | 0.148 | -2.180 | 0.015 | -0.325 | 0.373 |
| **Kao test 1996Q1-2011Q4** | | | | | | | |
| statistics | model | value | *p*-value | value | *p*-value | value | *p*-value |
| **ADF** | **A** | -2.082 | 0.019 | -2.197 | 0.014 | -4.569 | 0.000 |

Notes: A) the time series includes intercept, B) includes trend and intercept, C) includes none

# ANALYSIS OF RELATIONSHIP BETWEEN CONSUMER BEHAVIOR AND EFFECTIVENESS OF HEART MEDICINES

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**Abstract:** *Nowadays many research dealing with the food consumer behavior and its relationship with health status of population, thus the demand of pharmaceutical market. It is well known that cardiovascular diseases such as ischaemic heart diseases are the most common cause of the early and suddenly mortality. The higher level of pharmaceutical preventive technologies may result partly that fewer people need to consume heart medicines due to the healthy diet, on the other hand that the therapies can keep low the heart mortality rate inside of all mortality. Effectiveness of medicine treating heart diseases is not same in the examined OECD countries, which can also be traced back to different food consumption due to the same forms of treatment and the risks of the disease between regions. The examined OECD countries were selected based on consumer data availability. The target of analysis is to research the relationship between the „ineffectiveness" of heart medicine consumption (via the heart mortality data) and the health awareness in food consumption that also shows the subjective utility of preventive health services. During the examination of preventive services market it could be consider only costumer decisions those motivate effort to realize and maximize health utility that can obtain by reducing the objective likelihood of later illness (prevention defined by the reduction of influenced risk factors). For this it has to be eliminated the impact of all factors in consumption those are not associated with health consciousness – calculation of price and income flexibility serve it. Every nutritional culture considered unhealthy or incorrect, which exceeds the critical values expressed in dietetics recommendations. The data described in a 2 dimensional diagrams, and between diagrams the distances from reference country data to data of another country examine with correlation coefficient. It can conclude there is a strongest connection between the carbohydrate/fat consumer rates and the effect of medical treatments than between the latter and fat or fat/protein consumer rates. Basically, my research is empirical and quantitative.*

**Keywords:** price flexibility, health, consumption, prevention, nutrition, heart diseases

**JEL classification:** I15

## 1. Generally Introduction

Nowadays many research dealing with the food consumption based on health awareness and its connection with health status of population, so the demand of pharmaceutical market. According to KEARNEY (2010) the nutrition transitions associated with rising rates of obesity and chronic diseases such as cardiovascular disease and cancer. Since "the health budget expenditures have increased dramatically over the world, due to the increasing cost pressure" (FRANK, 2007), it can save several type of expenditures in public health sector with following health conscious nutrition. Overall, in Europe "cardiovascular diseases result mostly the inability of work and raising costs in health care, furthermore classify as the most frequent causes of early sudden death" (KÉKES, 2009). "The obesity, smoking, stress-filled environment, excessive alcohol consumption and lack of physical activity constitutes a group of lifestyle-related risk factors, which responsible for at least 40% of total mortality in the developing countries, while 75% of total mortality in the

industrialize countries" (GÁRDOS, 2001). In contrast, a statistical study based on narrow sample contained by young people clearly concludes that knowledge of risk factors itself has not contributed to live healthier (BARANYAI et al., 2006.). For example in Hungary „the level of health awareness is considered stable, the majority eat completely normally or foods those taste good" (KOZÁK, 2009). According to the World Health Statistics by WHO (2014) „the preponderance of noncommunicable diseases (NCDs) such as ischaemic heart disease and cerebrovascular disease in cause of death rankings is therefore potentially misleading and may not appropriately reflect the impact of premature mortality". „Of the leading 15 causes of YLL, ischaemic heart disease and stroke were two of the three causes for which YLL increased between 2000 and 2012. Such changes also have implications for overall rankings as ischaemic heart disease overtook lower respiratory infections as the leading cause of YLL in the world" (WHO, 2014).

## 2. Material and methods

The higher level of pharmaceutical preventive technologies may result partly that fewer people need to consume heart medicines due to the healthy diet, on the other hand that the therapies can keep low the heart mortality rate inside of the all mortality. Accordingly, during the analysis the author illustrate the the former reasons in a diagram that have 2 dimensions: the average drug consumption per 1000 people between 2000 and 2011 and the disease specific mortality rate in the same period (in this case for the ischaemic heart diseases). In the food consumption "depending on the developmental standard of the economy, structural change proceeds along the following dimensions: assortment-, convenience-, health- and environmental trends and transparency of the market" (LEHOTA, 2004). Despite of this the author limited reasons of food consumption decisions only for three factors: the impact of real income changes (including food prices and the incomes of customers), the change of food supply composition and attributed specifics (role in nutritional culture, nutrient content, experienced sense of satisfaction after previous tasting, marketing impact, ability reducing hunger), and the diet awareness which include the health awareness too. During the examination of preventive services market it could be consider only costumer decisions those motivate effort to realize and maximize medical utility that can obtain by reducing the objective likelihood of later illness (prevention defined by the reduction of influenced risk factors). For this it has to be eliminated the impact of all factors those are not associated with health consciousness. It can be distinguished three food types: fats, proteins and carbohydrates – from these types a food basket could assemble. The consumer's own decision that whether worth for it drawn up the former basket in accordance with the prescribed rate in order to maintain his health. The extent of deviation from the desirable consumer basket gives one of dimensions of analysis: due to the three different types and its presumed effects the former extent has to show separately in terms of the energy arise from fat in kcal, the rate of fat/protein, the rate of carbohydrate/fat, vegetable oils and fish consumption, those have polyunsaturated fats.

The author evaluates deviation in terms of the development of ischemic heart diseases: every nutritional culture considered unhealthy or incorrect, which exceeds the critical values expressed in dietetics recommendations. Taken into account the exchange rates used for nutritional science: fat of 9.2 kcal/g, protein of 4.2 kcal/g, and carbohydrate of 4.1 kcal/g. Moreover, based the newest studies, prescribe rate of the energy arise from fat is 30% of daily energy intake, the fat/protein is nearly 1.5, the carbohydrate/fat is approximately 1.66.

The other one of dimensions is the reason of consumption of the given diet composition, which measured by the sum of price and income flexibility: since lower flexibility essentially means greater diet awareness, so the author measures the latter factor as reciprocal of sum of flexibility rates, while the change of food supply composition considered unchanged. The price and income flexibility calculated by the formula (1).

$$\varepsilon = \frac{\partial D(p_0)}{\partial p} * \frac{p_0}{D(p_0)} + \frac{\partial D(I_0)}{\partial I} * \frac{I_0}{D(I_0)} \quad (1)$$

In this case the food consumer decisions motivating health awareness can be detected clearly in the 2 dimensions model if the nutritional consumption, those are nearly to the prescribed diet compositions, have high diet awareness (so low price and income flexibility). From considering preventive nature of nutrition follows that for the consumers it will only be worth it to give up the unhealthier diet, which can have higher utility in order to a healthier one if the utility of prevention, namely the estimated probability of chronic disease within 10 years next to the absence of prevention, compared to the estimated probability next to prevention, would evaluate to higher significantly. However, if diets followed by consumers result utility permanently within the required criteria, than diet with preventive specifics integrate into the consumer customs, for this reason man prefers these foods without the utility of prevention, so in motivation behind consumption the border between the prevention aim and following of nutritional customs disappear, but since the latter finally also based on the health awareness, the author identify the impact of nutritional culture with this. The data described in a 2 dimensional diagram examine with correlation coefficient (r) of relative distances (s) from reference country data to data of another countries.

$$s_n = \sqrt{\Delta x_n{}^2 + \Delta y_n{}^2}$$

$$r = \frac{\sum(s_1 - \bar{s})(s_2 - \bar{s})}{\sqrt{\sum(s_1 - \bar{s})^2 (s_2 - \bar{s})^2}}$$

When setting up the model, the author assume that the pharmacological treatment begin at the same time with disease emergence (or cessation of symptom control), furthermore sudden premature mortality (before life expectancy) explained by the failure of medication. The starting assumption of the model is that all members of examined populations feed as average (the annual sum of price and income flexibility data between 1996 and 2011 characterized by quadratic average of those, which is suitable for handle the different sign variations) based on the OECD Statistics and FAO data services. Owing to the data availability the examined countries are OECD members: Hungary, Slovakia, Germany, Italy, United Kingdom and Norway.

## 3. Results and discussion
If the effectiveness of heart medicine examined only in the paper, it will not appear so differences between countries, which would explain by another reason than health care system or distinct health status of population. Compared this to the food consumption, the differences between country data can also explain in terms of different nutritional cultures.
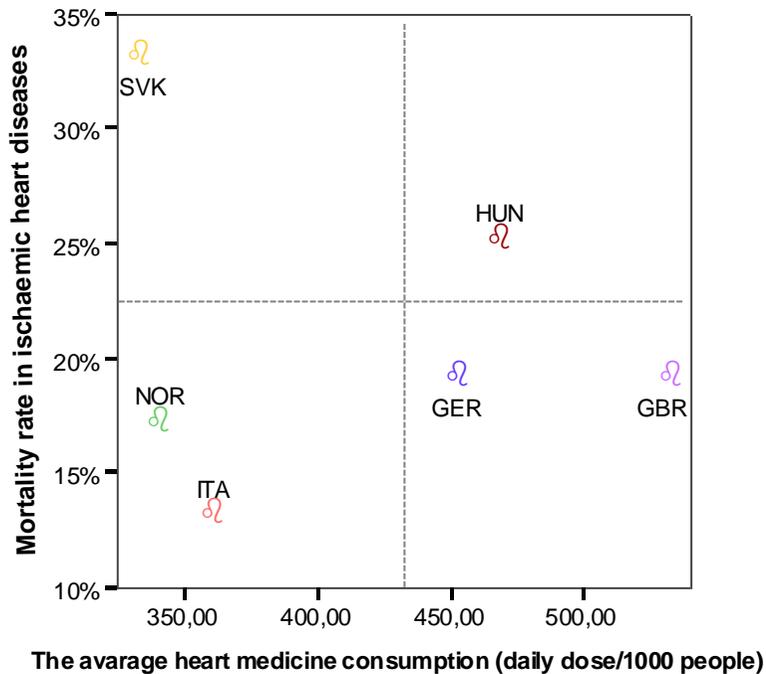
**Figure 1:** The effectiveness of heart medicine consumption (2000-2012). Source: own editing based on OECD Health Statistics.

Based on Figure 1 it can diagnose that between Slovakia and Norway, furthermore Germany and Hungary appear much greater difference in mortality rate in ischeamic heart disease than only differences in heart (blood pressure and cholesterol lowering) medicines consumption would justify. Moreover, in the UK next to relatively higher drug consumption the disease-specific mortality rate is the same as the data of Germany (19%). In relation to each other of six examined countries Slovakia is in the least favourable situation, since relative to the low heart medicine consumption, disease-specific mortality rate is high (33%), so in Slovakia the average effectiveness of medicinal treatment is extremely wrong compared to other countries. However, it can explain by the lower medical availability, but that cannot be said for Hungary, where the mortality is the second highest, next to the highest medicine consumption following the UK. Those countries are in the best position, where beside to lower medicine demand, there is also lower mortality rate in ischeamic heart diseases compared to all mortality, such as Norway and Italy.

In terms of the fat intake the best, upper left quarter of coordinate-system in Figure 2, includes no one country – Slovakia is the only one where – however fat consumption is the lowest, the latter have the highest price and income flexibility too. Despite to Slovakia, Germany stands out in that relatively higher fat consumption rate influenced by diet awareness, which can explain by different in standard of living. However, it is the worst situation too, since the high fat intake rate arises from the dietary culture followed by vast majority of Germans, which can formed only longer term. The majority of examined countries has low fat intake rate, but the price flexibility of consumption is higher, so in this respect those are closer to the most unfavorable case. The dispersion of medicinal data cannot explain by the different of fat meals consumption: the latter is higher in Slovakia compared to Norway despite of the fact that in Norway there is a greater fat intake rate by 5% at the same diet awareness as in Slovakia. Moreover, the larger mortality rate in Hungary can less attributed to different fat intake, while the latter is considered to be more diet conscious in Germany.
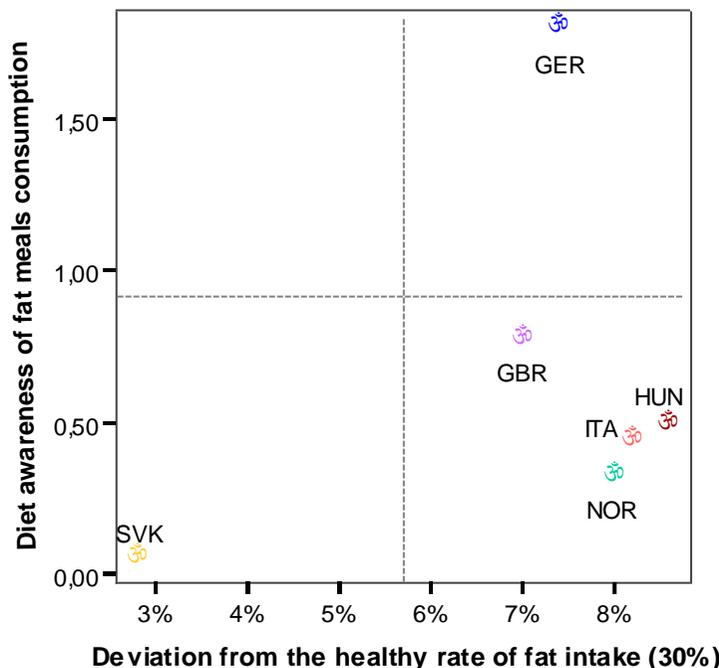
**Figure 2:** The average fat consumption (1996-2011) in six OECD countries. Source: own editing based on FAO Statistics.

According to the literature the lipoproteins (lipid-protein complexes) play an extremely role in causing ischaemic heart diseases by inducing atherosclerosis. According to its composition there are two types of lipoprotein: high density lipoproteins (HDLs) is the protective cholesterol, which the LDLs that deposited in vessel wall transported back to the liver where it is degraded, so if HDL level is low, the risk of arteriosclerosis, heart attack and stroke will increase – the low density lipoproteins (LDLs) increasing risk of disease would occur strongly next to nutritional culture that can characterized by high fat content eating compared proteins. So inadequate fat/protein ratio enhances the number of wrong cholesterols, which already not compensated by the level of protective cholesterols, increasing the chance of occurrence of hyperlipidemia and hypertension (high blood pressure), thus these connect with the less effectiveness of medicinal treatment healing ischaemic heart diseases. Based on data illustrated in Figure 3, Italy, Norway and United Kingdom have the most favorable fat/protein ratio, however, those extend could not explain the least by high diet awareness in Italy. The worst rate can be detected in Hungary, but the price and income relations are more decisive in food consumption than diet consciousness. Compared this with the average consumption of blood pressure lowing medicine, it can consequence that the medicine utilization determined rather by an awareness of consumption of healthier diet (Germany) than a less healthy fat/protein rate, that consume less consciously (Hungary).
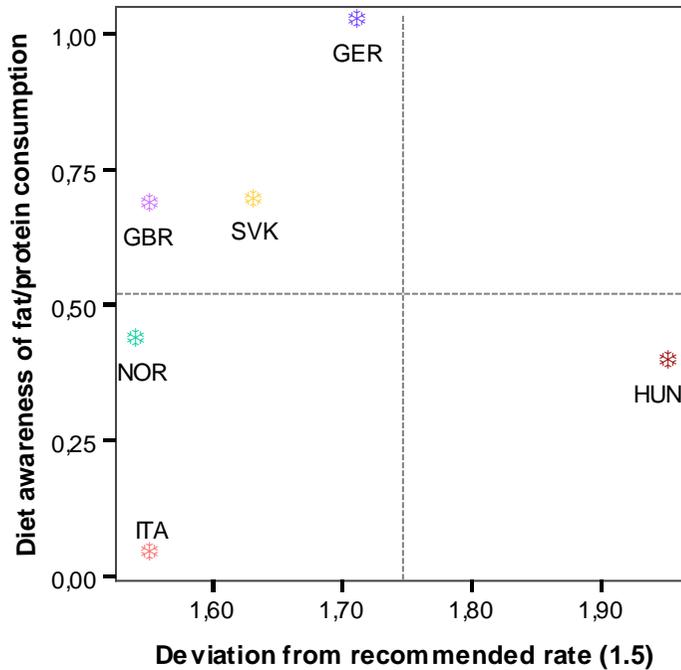
**Figure 3:** The average fat/protein nutritional intake rate (1996-2011) in six OECD countries. Source: based on FAO Statistics own editing.
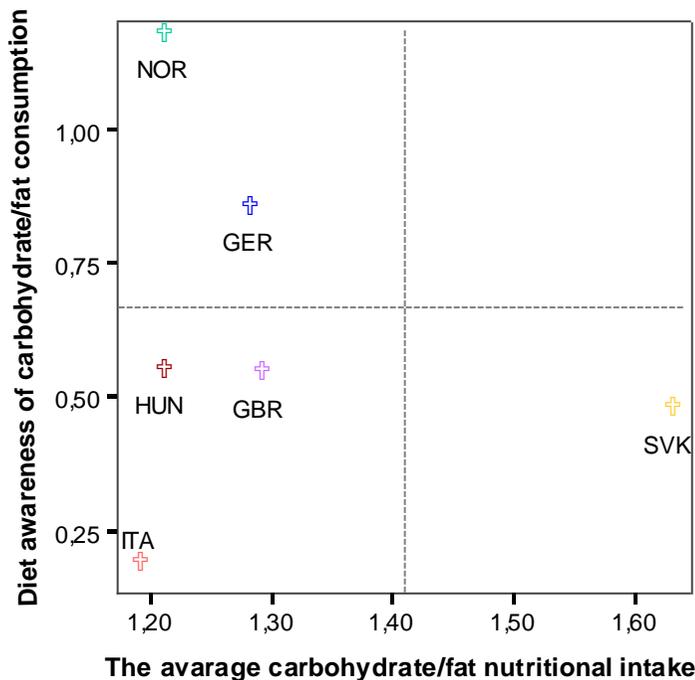


**Figure 4:** The average carbohydrate/fat nutritional intake rate (1996-2011) in six OECD countries. Source: own editing based on FAO Statistics.

Due to high glycemic-index carbohydrate intake, the sugar concentration develops in the blood causing persistently higher level of insulin. It causes that insulin can connect more

weakly to the insulin receptors of cells, so those become resistant to the presence of insulin, and production of those. The brain sensing increased blood glucose level, instructs beta cells to produce further insulin, which exhaust due to the resistance of cells and continued high glucose level, thus insulin deficiency or diabetes develops, followed by obesity and cardiovascular diseases. In terms of carbohydrate/fat nutritional intake, Slovakia is the worst position, while Norway, Hungary and Italy have rate regarded as the best – however the diet awareness remains typical mostly for Norway and the least for Italy. Comparing this to the data of fat/protein intake rates, it is concluded that the medicine utilization determined rather by the carbohydrate/fat intake rate than the fat/protein rate.

**Table 1:** The average consumption of vegetable oils and fishes in six OECD countries

| Consumption | | Germany | Hungary | Italy | Norway | Slovakia | Great-Britain |
|---|---|---|---|---|---|---|---|
| Oils | Rate | 2,1% | 2,1% | 2,6% | 1,8% | 1,8% | 2,1% |
| | Awareness | 1,16 | 10,79 | 1,44 | 14,46 | 26,32 | 3,64 |
| Fishes | Rate | 1,4% | 0,5% | 2,1% | 5,3% | 1,0% | 2,0% |
| | Awareness | 2,39 | 16,66 | 1,56 | 1,76 | 104,81 | 1,52 |

Source: own editing based on FAO Statistics.

In respect of secondary prevention of ischemic heart diseases relevant to consider the consumption ratio of food containing polyunsaturated fatty acids - vegetable oils and fish contain polyunsaturated fatty acids in the largest proportion. The consumption of vegetable oils, shown in Figure 5, is around 2% of the total food consumption in all examined countries. From this Italian rate deviates a little with its 2.5%, while diet awareness is surprisingly low in Norway.

Alternatively, values for fish consumption can be already detected in a wider interval: while in the most of countries fish meals are eaten in 2% or less compared to total food (among others in the lowest proportion in Hungary), the diet of Norwegians determined by more than 5% the consumption of seafood. However, it considers that, in Italy – despite of the results in the fat intake rates – the nutritional consciousness of vegetable oils and fishes is extremely high. Thus the effect of following Mediterranean diet to food consumption manifests not primarily in control of nutrition intake rates relation to each others, but also insistence for certain types of food, regardless of its content, which refers to less health-conscious food consumption. The correlation coefficients of deviations described in Table 2.

**Table 2:** Correlation between nutritional culture and medical treatment

| | Medical treatment | Fat | Fat/Protein | Carbo-hydrate/fat | Vegetable oils | Fishes |
|---|---|---|---|---|---|---|
| Correlation coefficient | 1 | 0,396 | -0,575 | -0,856 | -0,04 | -0,23 |

Source: own editing.

Since in this analysis the presages consider as irrelevant, there is a strongest connection between the carbohydrate/fat consumption and the medical treatment.

## 4. Conclusions and Summary

In conclusion, firstly, effectiveness of medicine treating heart diseases is not same in the six examined OECD countries, which can also be traced back to different food consumption due to the same forms of treatment and the risks of the disease between regions. The latter, however, may be assessed according to several criteria (nutrient intake by itself and in relation to each other, and consumption of foods containing less frequent nutrients), those indicate not the same results concerning effectiveness of medical treatment. It is concluded that the medicine utilization determined rather by the carbohydrate/fat intake rate or fish diets than the fat/protein rate or fat consumption.
During the analysis starting relative results of the six countries, in respect of diet awareness depending on level of development, fat intake can explain less, fish consumption may explain the most the differences in effectiveness of medical treatment, other factors have not explanatory effect.

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*SUB-SECTION: TOURISM*

# FORMS OF SUSTAINABLE TOURISM SUITABLE TO APUSENI MOUNTAINS, ROMANIA

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**Abstract:** *Sustainable tourism is the result of the melange between tourism and sustainable tourism. The concept has evolved during the last decades of the twentieth century, in international conferences, summits etc. organized by the World Tourism Organization, the United Nations and other international organizations where it was defined, characterized and criticized. Unfortunately, the concept was not able to overcome its theoretical conceptualization and it did not reach practitioners of the tourism industry. Sustainable tourism has several forms which are actually practiced by tourists all over the world: ecotourism, backpacking, rural tourism, nature-based tourism, pro-poor tourism, volunteer tourism etc. In the present paper, we have focused on an area in Apuseni Mountains, Romania. We tried to identify the forms of sustainable tourism most suitable for this area considering: natural resources, socio-economical development, protected areas, gastronomic traditions etc. After considering all these we have selected three forms: ecotourism, volunteer tourism and slow tourism, which could have the highest impact in promoting this area, and actually all the Apuseni Mountains as an important destination for sustainable tourism. The arguments for ecotourism are based on the numerous natural tourism resources> caves, gorges, forests and wildlife. Volunteers are needed especially in conservation and English language course. For slow tourism, there are numerous trails for walking and biking. Also there are several foods, mainly based on milk and wild berries that should be promoted and sold under the slow food brand. The shortcomings of the research are the lack of quantitative and qualitative results, as there is no information regarding the number of tourists which visit the area during each year. Also, it is hard to compare the benefits of sustainable tourism with those of mass tourism, due to the lack of references. So it is harder to argue for sustainable tourism and its forms to the detriment of mass tourism.*

**Keywords:** mountain, sustainable tourism, ecotourism, slow, volunteer

**JEL classification:** L83; Q56

## 1. Introduction

Sustainable tourism – as a new form of tourism, both in terms of suppliers and tourists - is, to some extent, a way to counter the negative effects that tourism may have on a destination. Sustainable tourism has emerged in response to the negative impact more and more visible that was generated by the tourism industry in the destination - regions. So, sustainable tourism has emerged as a reactive concept that tries to eliminate the negative impact and increase the positive impact that tourism activities can have.
Since the early 90s, the concept of sustainable tourism has begun to be increasingly used in academic and to a lesser extent among entrepreneurs in tourism. Although some similar forms of the concept were used earlier - the concept of "sanfter Tourismus" described by Krippendorf, we believe that the starting point for sustainable tourism was the publication of the first issue of the Journal of Sustainable Tourism in 1993 (Weaver, 2006: 10; Hunter, 2002:3; Dodds and Butler, 2009:43).
This new form of practicing tourism involved firms or small entrepreneurs, focused mainly

on supporting the community, preserving the environment and protecting local culture. One of the most important personalities of this alternative tourism, David Weaver (1998: 31), considers that "the main difference between the old and the new forms of tourism is the shift of the focus from the wellbeing of the tourist to the wellbeing of the host community".

At that time, the concept was highly debated; being received with hostility by the tourism industry, dissatisfied by putting any limits to growth and which considered it an "ivory tower" that had no connection with the market. Sustainable tourism was also considered "intellectually arrogant, expensive, elitist and unnecessarily" (Lane, 2009:20).

This attitude was not confined to the tourism industry. Governments and local authorities had not taken the concept seriously, the classical model of tourism bringing them numerous benefits. Conventional mass tourism generated employment and wealth transfer from developed countries to developing ones. Mass - media had not paid much attention to the concept of sustainable tourism, noting that it is much easier to denigrate, but to explain it. In academic circles, researchers found that sustainable tourism was "an impossible dream" (Lane, 2009: 21). This was best explained by Wheeler (in Miller and Twining-Ward, 2005: 32): "on the one hand we have the problems of mass tourism, which is growing steadily and uncontrolled. And what is our response? The development of small-scale, slow and controlled tourism. It is simply impossible! "

Like sustainable development, sustainable tourism was the central or secondary theme of conferences or international meetings, during which industry experts discussed the concept, but most important is that it focused world attention on sustainable tourism.

What we can notice more recently, is that tourism is drawing more and more attention from the international community and numerous projects are trying to implement sustainable tourism in different regions of the world. What raise some questions are the results of these projects and the tourism industry's ability to replicate them in other regions. We can also notice some redundant proposals and advice given by the international institutions, with largely the same concepts, but lacking the coercive instruments that oblige the application of these proposals. Scheyvens (2007: 134) has an acid point of view, which states that "any action by the UNWTO, besides promotion is just dust in the eyes of public opinion."

There are numerous definitions of sustainable tourism or sustainable development of tourism, and we believe that this multitude of definitions is just a sign of a lack of global consensus.

Hunter (2002: 4) considers that although the concept of sustainable tourism derived from sustainable development, sometimes is considered independent and separate from other sectors of the economy. Some authors (Hunter, 2002:5, Swarbroke, 1999:18) consider that "tourism development must provide economic benefits to all stakeholders, provided they do not adversely affect the resources available for future generations". Weaver (2006:10) defines sustainable tourism as "a wise form of exploitation of resources in order to preserve them for the long term."

According to another definition, sustainable tourism is "all forms of tourism (conventional or alternative) that are compatible with and contribute to sustainable development" (Liu, 2003: 461). In the context of this definition, development and growth do not necessarily imply being essentially a process by which specific social and economic objectives are achieved. Achieving these goals may involve stabilization, growth, reduction, or even disappearance of products, existing companies or industries.

From the perspective of the World Tourism Organization, sustainable tourism is defined as "tourism that takes into account the economic, social and environmental present and future, and focuses on the needs of the visitors, industry, environment and local community." (UNWTO, 2015)

We can say that, although there is no uniform definition of sustainable tourism, there are some common points achieved by each definition: benefits for the whole community,

protecting natural resources and the environment, reducing negative impact etc. Thus, sustainable tourism should harmonize and balance three elements: economic, social and environmental.

There are many voices who say that sustainable tourism is a form of tourism which runs counter to mass tourism, which is addressed to a relatively narrow niche of people interested in the negative impact that tourism can have. This is an extremely dangerous perspective. It must be much clearer that sustainable tourism, defined as tourism that is based on sustainable development principles, has a fundamental objective: tourism as a whole must be sustainable. The term should reflect a condition of tourism and not only its form. Mass tourism, properly organized and controlled, can and must become sustainable.

Sustainable tourism has been criticized, especially for the highly theoretical nature and lack of actual achievements. But there are still examples of successful companies that have put into practice the theoretical principles of sustainable tourism. Currently there are numerous approaches of the tourism industry in terms of business sustainability. Lane (2009: 22-23) identified the main reasons for the slow implementation of sustainable tourism principles, which is determined by many "actors": the tourism industry, authorities, the market, and tourists.

Therefore, we consider necessary the development of several forms of tourism, under the umbrella of sustainable tourism, which will represent the connection between theory and practice by attracting a growing number of practitioners. The forms of tourism on which we focused are: ecotourism, volunteer tourism and slow tourism.


## 2. Research methodology

The main objective of this research is to identify forms of sustainable tourism, that are suitable for Apuseni Mountains. To achieve this overall objective we established several secondary endpoints that support our research:

1. Identification of forms of sustainable tourism;
2. Define and characterize the forms identified in point 1;
3. Presenting some arguments for each form of sustainable tourism from thepoint of view of the selected region – Apuseni Mountains;
4. Identify the main shortcomings and challenges of these complex forms of tourism.

To achieve these objectives we walked several steps in our research:

1. Review of the bibliography on sustainable tourism;
2. Selecting forms of sustainable tourism;
3. Field research in the area.

In the first stage we have covered a substantial bibliography, Romanian and foreign to identify specific forms of sustainable tourism. We lectured scientific books and articles written in the period 1970 - 2010, by leading authors in the field of sustainable tourism: Weaver, Fennel, Lane, materials / studies / projects undertaken by international organizations such as UNWTO, UNEP, Greenpeace. The whole bibliographic material helped us to get a clearer picture on sustainable tourism and its contemporary forms.

In the second phase we selected three from the multitude of existing forms of tourism few, which we considered the most feasible and which have the most important potential for development. The criteria for our selection were: No overlap (eg nature tourism and ecotourism); accuracy, avoiding general (e.g.: rural tourism); forecasted impact to be as high as possible.

Based on these criteria we closed out the following forms of tourism: ecotourism, volunteer tourism and slow tourism. In the last stage we went through several routes in the area for gathering information for each of the three forms of tourism selected in the second stage.

## 3. Findings and discussions

In 1987, Ceballos-Lascurain offered the first definition of ecotourism (in Luck 2002: 361): "ecological tourism or ecotourism is that form of tourism that involves travelling to a virgin and uncontaminated natural habitat, in order to study and admire enjoy the scenery, flora, fauna and cultural resources existing in that area."

Ceballos-Lascurain considered ecotourism a philosophical concept, that requires planning based on strict rules. He suggested that ecotourists have an enormous amount of information about the natural and cultural resources they visit and are involved in the conservation and protection of resources. Also, Ceballos-Lascurain identified a number of differences between people who practice mass tourism and ecotourism in terms of the use of natural resource. Both tourists are interested in natural resources, but mass tourism practitioners have a passive role in the relationship with nature, practicing activities such as water sports, running and cycling. Ecotourists, on the other hand, are drawn to natural resources and try not to abuse them, practicing photography, botanical studies and observing wildlife (in Diamantis, 1999: 96). We can deduce that from the perspective of Ceballos-Lascurain, ecotourism is essentially passive and must be practiced in protected areas, thus having a positive impact on the environment.

Ziffer (in Diamantidis, 1999:98) has a different perspective on ecotourism: "Ecotourism is a form of tourism primarily inspired by the natural history of the area, including existing indigenous cultures. Ecotourists visit underdeveloped regions, in a spirit of appreciation, participation and sensitivity. Ecotourists use without consuming natural resources and contribute directly, through labour or money to the conservation and welfare of the visited region."

In turn, the International Ecotourism Society gives us a different definition of ecotourism: "responsible travel in natural areas, which protect the environment and increase the well-being of local people" (TIES 2006).

As can be seen from the above definitions we conclude that ecotourism is a form of tourism practiced in the natural environment that oscillates between passive and active tourists about the conservation and protection of nature.

Laarman and Durst (in Orams, 2001: 28) described in 1987 the hard and soft dimensions of ecotourists. The terms of hard and soft cover both the interest of ecotourists in the natural resources of a destination and the physical effort they are willing to do. A hard ecotourist is willing, or even wants, to benefit from reduced travel comfort under difficult conditions in the wild to truly experience nature. By comparison, a soft ecotourist has a casual interest in natural resources and wishes to experience it at a superficial level within a relatively short time.

The ecotourism market is quite difficult to assess in figures, due to confusion arising even in the definition. According to some authors (Diamantis, 1999: 29), the segment of tourists visiting natural resources and wildlife generates between 20 and 40% of total tourism receipts.

Volunteer tourism is defined by Weaver (2002:45) as "a framework where tourists are involved in voluntary work in social or environmental protection, without receiving financial remuneration". Wearing believes that volunteer tourism is aimed at people who "want, for various reasons, to volunteer in an organized way and to spend their holidays helping a community, restoring a natural habitat or participating in research on society or the environment" (in Higgins-Desbiolles, 2009:334).

In general, volunteer tourism is a chance for destination regions that will benefit from the help of volunteers, but also for tourists who will enjoy the results of their work. A distinct feature of this type of tourism is related to the association with religious and environmental NGOs, localized in the regions of origin of tourists.

Another difference between mass tourism and volunteer tourism is the benefits. In the case of the first, the benefit is calculated as the number of tourists arriving or total

receipts, which will be felt, to some extent, by local people. Volunteer tourism generates direct benefits for local people: construction or renovation of houses, medical or educational services (Weaver, 2002: 45-46). Because of this, sometimes volunteers are not perceived as tourists by the host community or themselves (McGehee and Andereck, 2009:47).

Volunteer tourism focuses mainly on two areas: improving living conditions in destination community and protecting the environment.

One of the most important organizations in volunteering is Habitat for Humanity, founded in 1976 by Millard and Linda Fuller. Habitat for Humanity is a Christian non-profit organization that aims to build houses and shelters in the poorer regions of the world. Their projects are carried out on all continents, in 90 countries and 3,000 communities (http://www.habitat.org/eurasia/learn_about_habitat/who_we_are.aspx accessed on 03.11.2015).

Volunteer tourism takes lately a new form: volunteer tourism for justice. It reflects "active partnerships to combat injustice of any kind and is based on the idea that we need partnerships to overthrow the imbalance of power present in many places in the world" (Higgins-Desbiolles, 2009: 337). This global resistance movement crystallized because of the many cases of social injustice, economic and environmental, resulting from globalization and capitalism. Visible results of this tourism are demonstrations - some extremely violent - taking place at all the international meetings with economic issues: WTO conferences, the World Economic Forum, G20 meetings etc.

Although it is hard to criticize this form of tourism, due to the extremely noble motivation, there are authors who consider that some non-profit organizations involved in volunteer tourism behave like companies and are increasingly more interested in public image and lobby at the expense of the initial focus (Holmes et al. 2010: 257; Weaver, 2002:47). There are even authors who raise questions about the motivation of tourists. We cannot be sure whether such a stay will be motivated by empathy and altruism or simply, improving personal image and a CV (Higgins-Desbiolles, 2009:335; Coghlan and Fennel 2009: 377-378).

Slow tourism originated in the slow food movement, which arose in 1986 at the initiative of Carlo Petrini. He established the Arcigola organization to protest to the opening of the first McDonald's restaurant in Rome (Myhrvold et al., 2011: 23). The slow food movement has emerged as the antithesis to fast food, representing an intersection of ecology, gastronomy, ethics and pleasure. The movement opposes the standardization of taste and culture and unregulated corporate power in the food industry and agriculture. The Movement promotes a return to cooking, to avoid the "curse" of fast food restaurants, using local ingredients and information about the food we eat.

The principles and philosophy of slow food are easily adapted to tourism. The central idea of slow tourism is to achieve qualitative experiences, reduced in number, at the expense of volume / high number of holidays, where the emphasis is on quantity (Heitmann et al., 2011:117).

Similar to ecotourism, slow tourism has been defined in many ways. From the perspective of Dickinson (2009:2) slow tourism consists of "holidays involving shorter trips and longer stays in which air transport is not used, but other forms of transport become part of the experience."

Heitmann et al. (2011: 117-118) believes that slow tourism "is characterized by the joy of discovery, study, sharing and holiday slowdown which will create opportunities to interact and establish links with local people and places at a deeper level."

Lumsdon and McGrath (2011:265) believe that essentially slow tourism means "driving a shorter distance and enriching experience, both on the road and the destination."

Slow tourism is based on deceleration at the expense of speed, so the trip becomes a relaxing time, not a stressful interlude between home and the destination (Gardner, 2009:10-11).

Slow tourism can be considered a return to the past pilgrimages and Grand Tour, which largely respected the principles of this form of sustainable tourism (Dickinson et al., 2011:282).

Activities during the holidays are not much different from the other forms of tourism, but the key features - immersion and slowing - are central to the philosophy of slow, requiring more integration, research and spending more time in a particular environment, to form stronger memories. However, not all attractions have been designed to provide such experiences and many of them are forced into a quick tour (fast), because of the popularity and the pressure that a large volume of tourists generates (Heitmann, 2011: 118- 119).

From the economic point of view, slow tourism strategy is based on slow growth by reducing capital flight at the expense of rapid growth based solely on the number of tourists arriving. This will increase efficiency by improving the quality of tourism. This focus on quality will increase the resilience to external shocks (Timms and Conway, 2011:13).

Since slow tourism promotes the use of other means of transport than air (road or water), we can ask some questions about the solutions for countries or regions located at significant distance from tourist generating markets (the Caribbean, Maldives etc.).

For ecotourism, there are many natural resources in the Auseni Mountains: caves, mountain peaks with lookout points, gorges, etc. and there are marked trails for tourists.

Given the fact that much of the area is part of the protected area Apuseni Natural Park, ecotourism seems the most important form of tourism that can be practiced here.

For the volunteer tourism the area offers two types of opportunities: English language training and environmental protection. While schools teach foreign languages in the villages, we consider that the increasing the knowledge of Enlish them by young people, and not only could provide numerous benefits:

- Increasing the capacity of communication with foreign tourists;
- Better promotion of foreign specialized sites or social networks
- Access to information about tourism, sustainable development, food etc.

The second component of volunteering - environmental protection - is necessary because many parts of the mountains need cleaning / sanitizing. Also, the banks of the rivers that flow in the area are in an advanced state of decay due mainly to the lack of a waste collection system.

For slow tourism, we must open the discussion regarding the culinary traditions and culture in the area. Food is generally based on cow and sheep milk, but there also: berries (blueberries, cranberries and raspberries) and mushrooms. These raw materials will have to underpin the development of products to be marketed under the brand Slow Food.

The next step will be to combine food with the quiet and isolated regions of the area for it to become an important destination for slow tourism in Romania.

## 4. Conclusions

Sustainable tourism, or rather its implementation modalities in turn have some shortcomings, which have as their main source the inability to change of both the demand and the supply of tourism.

In the future, for sustainable tourism to become truly a way / philosophy to practice all forms of mass tourism it requires the involvement of many actors. First, the academic community must: engage and collaborate with the tourism industry; investigate issues of governance and regulation; investigate and to look for new solutions to promote sustainable tourism; investigate the role of the media in forming opinions; use ideas developed by the social sciences to explore decision making and social trends. (Lane, 2009: 28)

Also, researchers must find the language and how to explain their results to the public,

because they represent the tourism demand and they are the ones that generate the negative impact that we talked about in the article.

Secondly, the tourism industry has a very important role. Although there are numerous examples of measures taken by hoteliers (use of energy saving bulbs, change of towels only on request, using shampoos and soaps that do not contain chemicals) full and proper implementation of the principles of sustainable tourism is only just beginning. One of the biggest problems of the tourism industry is that it's convinced that changes in technology and management can solve any problems. Lane (2009: 29) believes that although changes and technological discoveries may help solve some problems, for long-term solution a change in lifestyle is needed, using new sales techniques and the development of new products. A new system of values is needed in the management of the tourism industry.

Thirdly, tourism demand is the need to react to the findings of researchers. Unfortunately, this step will be extremely difficult, considering the growing number of tourists from emerging countries (especially China) who want to enjoy leisure time, as tourists from developed countries did for five decades.

Regarding Apuseni Mountains, in order to implement sustainable tourism forms some investments are needed. Although we consider that the total costs are not very high, it takes initiative for these investments to materialize.

In terms of ecotourism, it is needed to create 2-3 camping areas (flat land for tents). They should be placed on the secondary roads that cross the area. The equipments that we consider necessary for these camping areas are: Utilities (showers, lavatories), spaces for cooking, fire places, information points on the resources in the area and luggage storage spaces.

For volunteer tourism companies which offer such packages should be contacted, in order to attract a steady stream of volunteers in the area.

For slow tourism, the first step should be to create a convivium - a local association, which will involve the local community and it will identify the specific goods they can produce in the area: jams, syrups, etc that can be branded with the slow food label.

## 5. Acknowledgements

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# THE INFLUENCE OF MACROECONOMIC FACTORS ON ARRIVALS IN RURAL TOURISTIC PENSIONS IN CRISANA REGION FROM ROMANIA – PART 1

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**Abstract :** In this study we present an econometric analysis of the number of arrivals in rural touristic pensions based on several indicators that we believe may affect in a positive or negative fluctuations of tourists. The analysis we perform for the period January 2006 - December 2013 with a quarterly frequency. We ordered and monthly values of most of the indicators selected, but we tried from start a reduction effect of seasonality.Given the emerging crisis in the second half of 2008, we expect basically after 2008 appear a decrease arrivals in rural touristic pensions, and after 2010, the year a slight recovery from the crisis appear improved this activity.For analysis we selected eight indicators: The average national unemployment; The average national inflation; The volume index of turnover for services provided to the population (hotels and restaurants); The volume index of turnover for services provided to the population (tourist assistance activities); Net use index of accommodation in rural guesthouses nationwide; Net use index of accommodation places in the region Crişana; Average gross salary at national level; GDP. So, in this study we have tried to analyze the influence of macroeconomic factors on rural touristic pensions arrivals in Romania Crisana region. This analysis will help owners of pensions in the management.In this paper we try to find the difficulties, limitations of rural tourism development in Crisana region from perspective of local government. In this paper we try to show as well the main factors of the emergence and development of rural tourism in order to establish priorities in the joint action of local people, entrepreneurs, tourists and local and national administrations. In many countries, the tourism industry fall within government priority. Tourism has been identified as one of the primary industries with potential to support local communities in developing economic diversity.

**Key-words**: *econometric study, rural tourism, Crisana, Romania*

**JEL classification:** M21, R11

## 1.Introduction. Choosing the variables and data collection

For this work we used official data from http://www.insse.ro. We chose to present quarterly indicators to highlight much better their seasonaly character. Following a preliminary analysis of the 8 independent variables were not validated only three: RMS, IUN and SALM. Values are presented in Table 1.

$X_1$ (RMS) - the independent variable - the average unemployment rate at national level, RMS, quarterly, %;

$X_2$ (IUN) - independent variable - net use index of accommodation in rural guesthouses nationwide, IUN, quarterly, %;

$X_3$ (SALM) - independent variable - gross average earning national SALMB monthly average quarter, in RON/month;

Y (SOSCR) - the dependent variable - arrivals region's rural tourist pensions Crişana

SOSCR, romanian and foreign tourists, in%, compared to the fourth quarter of 2005. Recall that the analysis is done from the first quarter of 2006.

**Table 1.** The values of the four variables analyzed, 2006-2013

| Year | Quarter | $X_1$, % | $X_2$, % | $X_3$, RON/month | Y,% |
|---|---|---|---|---|---|
| 2006 | I | 6.1 | 10.7 | 1073 | 75 |
| | II | 5.5 | 12.9 | 1114 | 102 |
| | III | 5 | 18.7 | 1131 | 175 |
| | IV | 5.1 | 13.5 | 1283 | 103 |
| 2007 | I | 5.1 | 13 | 1287 | 90 |
| | II | 4.2 | 15.4 | 1375 | 138 |
| | III | 3.9 | 19.6 | 1403 | 206 |
| | IV | 4.1 | 16.4 | 1574 | 173 |
| 2008 | I | 4.2 | 14.3 | 1601 | 170 |
| | II | 3.8 | 17.2 | 1731 | 208 |
| | III | 3.8 | 22.8 | 1749 | 249 |
| | IV | 4.2 | 18.1 | 1887 | 198 |
| 2009 | I | 5.2 | 12.6 | 1875 | 234 |
| | II | 5.8 | 14.2 | 1891 | 319 |
| | III | 6.6 | 17.8 | 1869 | 565 |
| | IV | 7.5 | 11.4 | 1923 | 268 |
| 2010 | I | 8.3 | 9.4 | 1994 | 244 |
| | II | 7.8 | 11.7 | 1962 | 497 |
| | III | 7.4 | 16.9 | 1853 | 783 |
| | IV | 7 | 11.2 | 1938 | 386 |
| 2011 | I | 6.5 | 9.8 | 1988 | 348 |
| | II | 5.1 | 12.8 | 2033 | 550 |
| | III | 4.9 | 19.2 | 2016 | 845 |
| | IV | 5.1 | 13 | 2090 | 439 |
| 2012 | I | 5.3 | 9.2 | 2059 | 439 |
| | II | 4.7 | 12.3 | 2130 | 845 |
| | III | 5 | 17.8 | 2129 | 1368 |
| | IV | 5.3 | 11.5 | 2218 | 624 |
| 2013 | I | 5.6 | 9.6 | 2171 | 523 |
| | II | 5 | 11.4 | 2245 | 720 |
| | III | 4.9 | 17.2 | 2234 | 1243 |
| | IV | 5.6 | 11 | 2313 | 654 |

Source: own achievement using data from website http://www.insse.ro

It can be noted that these indicators reflect the dynamics of income, unemployment and capacity utilization index of rural touristic accommodation establishments nationally and not necessarily in the region Crişana, and this is because both in terms of rural touristic flow and in terms of unemployment, the capacity utilization index of rural tourism and the average wage, Crişana region falls in national trends.

Moreover, most of the tourists are from other areas than Crişana and most likely their pattern corresponds to a pattern more national and not a regional one.

The econometric analysis will involve several steps:

      1. Preliminary analysis of the data and their characterization in terms of periodicity, bivariate correlations between the dependent variable (SOSCR) and independent variables (IUN, RMS and SALM) and distribution;

      2. Estimation and testing of the model parameters;

      3. Validation of the model - testing hypotheses about the modeling error.

## 2. **The preliminary analysis**

The preliminary analysis of data dynamics and their characterization in terms of periodicity, the bivariate correlations between the dependent variable (SOSCR) and independent variables (RMS, IUN and SALM) and the distribution of values independent and dependent variables.

Data processing was performed using software Eviews 7. For the four variables, $X_1$, $X_2$, $X_3$ - independent and Y - dependent, we made histograms and calculated specific statistical values (the mean, the median value, the maximum value, the minimum value, the standard deviation, the asymmetry coefficient, the vaulting coefficient and then we calculated the coefficient of variation).

**Variable $X_1$ (RMS)** the average unemployment rate nationwide. The RMS indicator is characterized by a normal distribution as shown in the probability analysis associated to the Jarque-Bera analysis in Fig. 1 (accepting the null hypothesis ($H_0$) the tested variable has a standard normal distribution if prob. ≥ 0.05).



| Series: X1 | |
|---|---|
| Sample 2006Q1 2013Q4 | |
| Observations 32 | |
| | |
| Mean | 5.425000 |
| Median | 5.100000 |
| Maximum | 8.300000 |
| Minimum | 3.800000 |
| Std. Dev. | 1.188385 |
| Skewness | 0.779525 |
| Kurtosis | 2.893003 |
| | |
| Jarque-Bera | 3.256115 |
| Probability | 0.196311 |
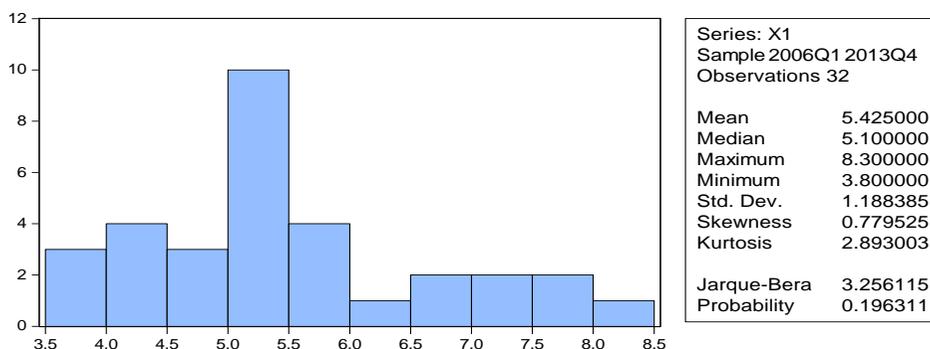
**Figure1.** Histogram independent variable $X_1$
Source: authors with the program EViews 7

From the presentation of the variable $X_1$ histogram, the unemployment rate, we conclude that the largest share of the values are located around the values of 5-5.5%, but there were more special situations, a very high rate, 8-8.5% in the first quarter of 2010 and a very low unemployment rate, 3.5-4% in quarters 2 and 3 of 2008.

The unemployment rate, by its nature, presents quarterly seasonality. From the analysis of variable waveforms RSM, fig. 2, it can be observed that the seasonality exists, the compounding law component can be considered to be additive (when the oscillations are approximately constant, whether the trend is rising or falling, it is recommended to use an additive composition laws of component time series). Deseasonalisation is usually done by the mobile average method, but we can user other more complex methods such as the Census X12, Tramo/Seats, X11, etc.. In the econometric modeling we will use the trend cycle component obtained by the Census X12 method, Fig. 3.
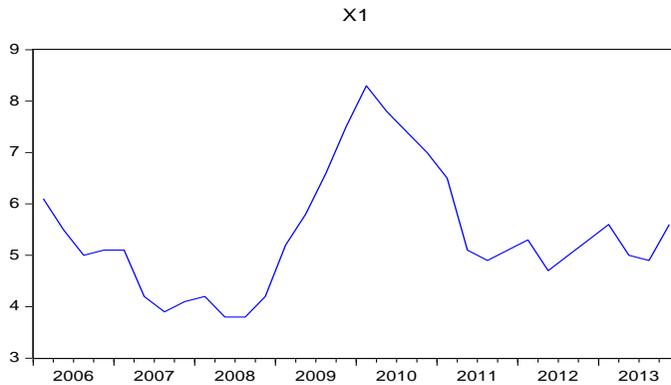
**Figure 2.** Original variable independent waveforms $X_1$ – in %
Source: authors with the program EViews 7

From the analysis of the RSM_TC dynamics, fig. 3. we can see that during the crisis, the third quarter of 2008 to the second quarter of 2010 has been a very strong increase in the unemployment rate from approx. 4% to approx. 8%, followed by a decrease to approx. 5.25% during the third quarter of 2010 to the second quarter of 2011.

**Variable $X_2$ (IUN)** the net use index of accommodation in rural guesthouses nationwide, IUN, is characterized by a normal distribution as shown by probability associated to the Jarque-Bera statistics in Figure 4.

From the presentation of variable histogram $X_2$, net use index of accommodation in rural guesthouses nationwide, it follows that the largest share of the values are located around the values of 11-12%, but there were more special situations, use indexes very high, 22-23%, in the third quarter of 2008 and net use index very low, between 9 and 10% in the first quarter of the years 2010, 2011, 2012 and 2013.
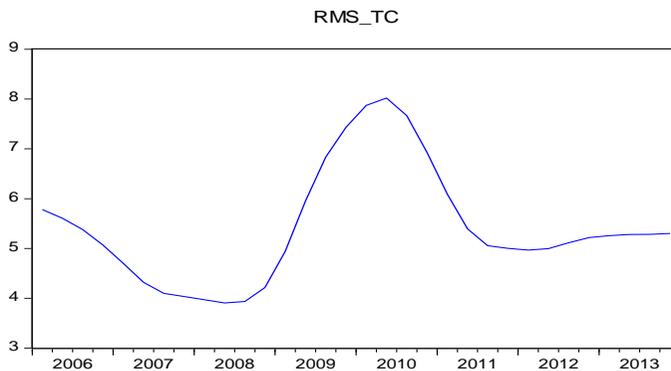


**Figure 3.** Variable waveforms $X_1$ – trend-cycle component - in %
Source: authors with the program EViews 7

674

| Series: X5 | |
|---|---|
| Sample 2006Q1 2013Q4 | |
| Observations 32 | |
| | |
| Mean | 14.14375 |
| Median | 13.00000 |
| Maximum | 22.80000 |
| Minimum | 9.200000 |
| Std. Dev. | 3.516958 |
| Skewness | 0.522403 |
| Kurtosis | 2.366334 |
| | |
| Jarque-Bera | 1.990867 |
| Probability | 0.369563 |
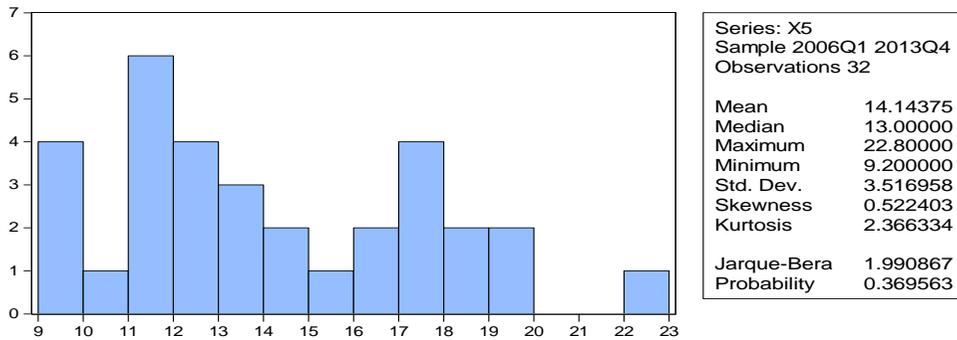
**Figure 4.** Histogram independent variable $X_2$
Source: authors with the program EViews 7

The visual analysis of variable waveforms IUN fig. 5, clearly reflects the existence of seasonality, compounding law is one additive component. In constructing econometric models it is recommended the isolation of the seasonal component and the use of the trend cycle component because the seasonal component by its nature is a variable carrier that can adversely affect the estimation of the parameters of the econometric model. In the breakdown of the components of a time series we used Census X12 seasonal adjustment method, as in the case of variable RMS.

After applying the Census X12 seasonal adjustment method, we will isolate the trend-cycle component, IUN_TC, which we will use in the econometric modeling. This is shown graphically in Figure 6.

From the analysis of waveforms corresponding to variable IUN_TC shown in Figure 6 we can see that there is an area for IUN_TC recession in period 2008 / first quarter- 2010/fourth quarter  followed by another recession within 2011/third quarter - 2013/fourth quarter.
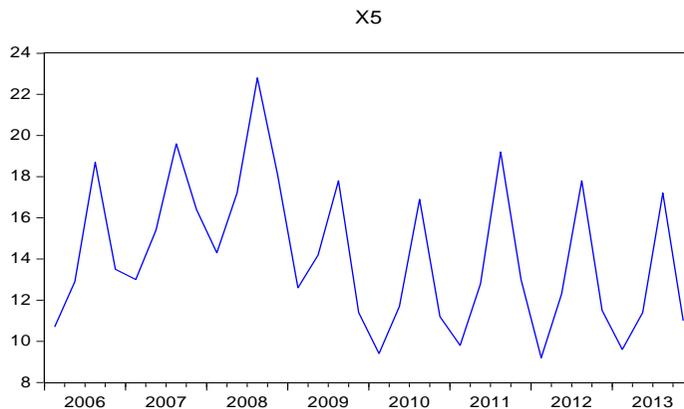


**Figure 5.** Original variable independent waveforms $X_2$
Source: authors with the program EViews 7

**Variable $X_3$ (SALM)**, average gross wage at national level in RON/month follows a normal distribution, fig. 7.

675
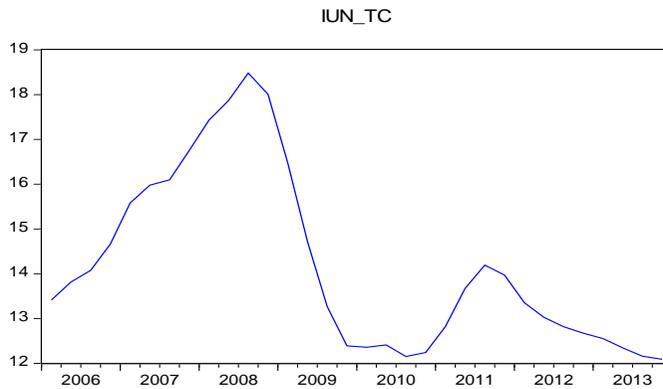
**Figure 6.** Variable waveforms $X_2$ – trend-cycle component
Source: authors with the program EViews 7

From the presentation of variable histogram $X_3$, gross earnings, calculated as an average for each quarter, we deduce that the largest share of the values are located around the values from 1800 to 2000 RON/month, but there were more special situations, higher wages than 2200 RON/month in 2013, and lower wages in the range of 1000-1200 RON/month for the first three quarters of 2006.

The average gross salary is a variable that shows seasonality, fig. 8, which can be removed by using the Census X12 method. Trend-cycle component of the variable dynamics SALM is shown in Figure 9. SALM trend cycle component can be seen that there is an upward trend with a slight brake of growth within the third quarter of 2009 - the third quarter of 2010.
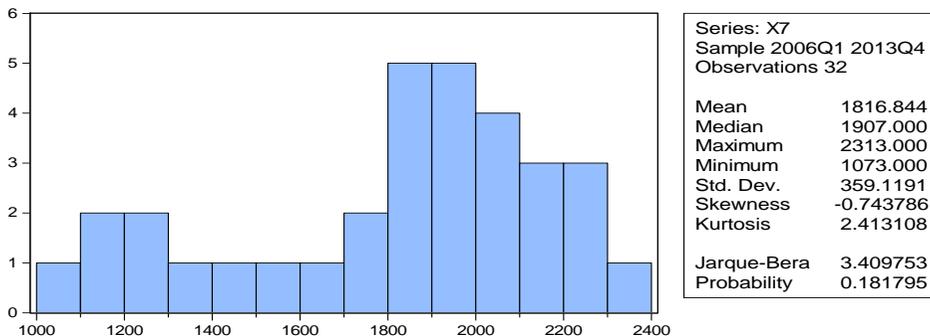


**Figure 7.** Histogram independent variable $X_3$
Source: authors with the program EViews 7

**Variable Y (SOSCR)** arrivals in the region's rural touristic pensions Crişana SOSCR, Romanian and foreign tourists, in %, compared to the fourth quarter of 2005. Recall that the analysis is done from the first quarter of 2006.

From the presentation of the dependent variable Y histogram we can see that the largest share of arrivals in rural touristic pensions Crişana region are located around values of 100-200% over the fourth quarter of 2005, but there were situations more special, more significant increases, 1200-1400% over the third quarters of the years 2012 and 2013, and only up to 100% in quarters I of 2006 and 2007.

676
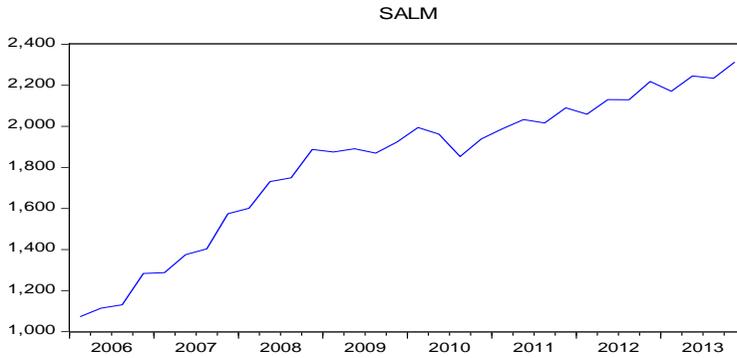
SALM



**Figure 8.** Original variable independent waveforms $X_3$ (SALMB), in RON/month
Source: authors with the program EViews 7

SALM_TC
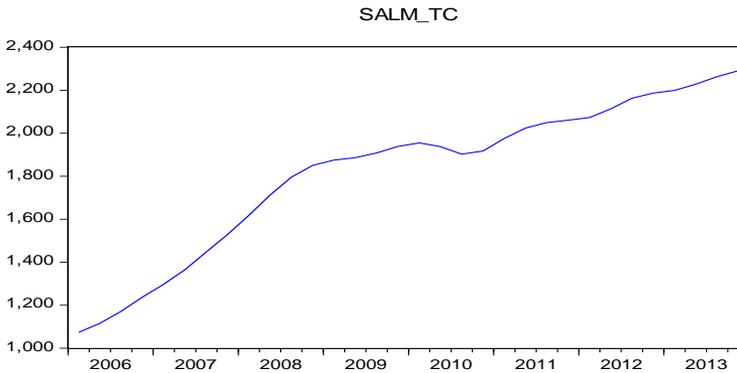


**Figure 9.** Variable waveforms $X_3$ – trend-cycle component
Source: authors with the program EViews 7



| Series: Y |
| Sample 2006Q1 2013Q4 |
| Observations 32 |
| |
| Mean      430.4844 |
| Median    333.3000 |
| Maximum   1367.800 |
| Minimum   75.30000 |
| Std. Dev. 324.9643 |
| Skewness  1.241713 |
| Kurtosis  4.118504 |
| |
| Jarque-Bera  9.891279 |
| Probability  0.007114 |
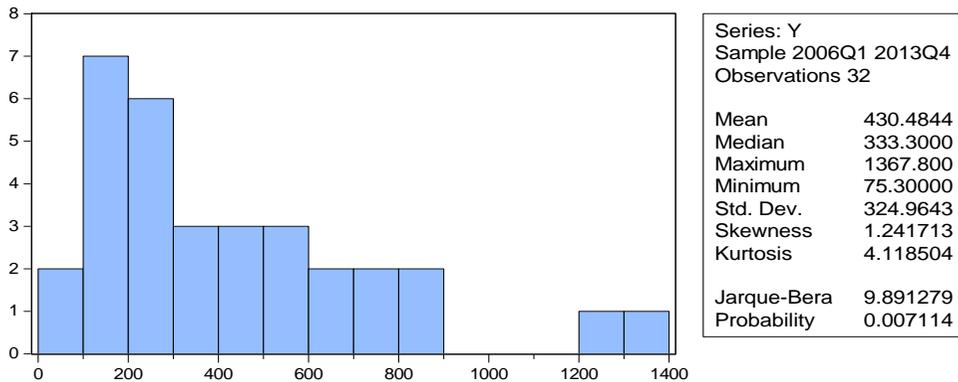
**Figure10.** Histogram dependent variable Y
Source: authors with the program EViews 7
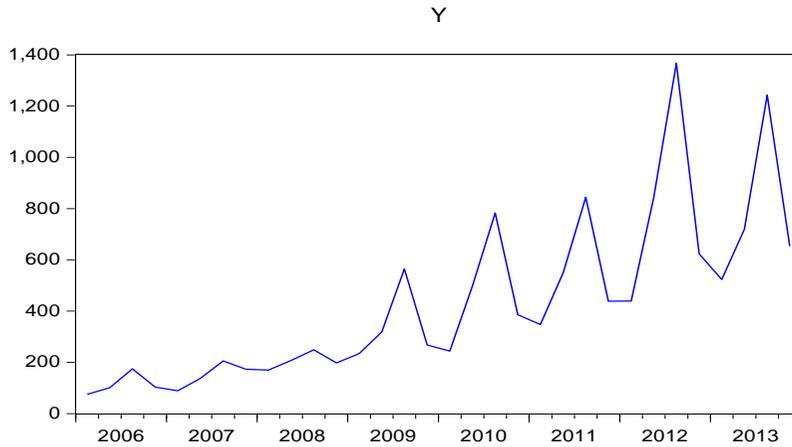
**Figure 11.** Original variable dependent waveforms  Y
Source: authors with the program EViews 7

From figure 10 we can observe that the distribution of the variable SOSCR is not normal (prob = 0.007). The main reason seems to be the existence of a group of extreme positive values recorded in 2012-2013. From visual analysis of the cronodiagram in Fig. 11 one can see that indeed for 2012-2013 are recorded large amplitude fluctuations from one quarter to another until reaching an amplitude of oscillation of about 1000%.

From the analysis of the cronodiagram figure 11 it can be said that the series is composed multiplicative.

Following the decomposition of the Census X12 method, the trend-cycle component of the original series will present the dynamics of Fig. 12. From the graph we can see that the series shows an upward trend approximately linearly with a decrease in early 2008 and another fall more pronounced during the third quarter of 2012 - the second quarter of 2013.
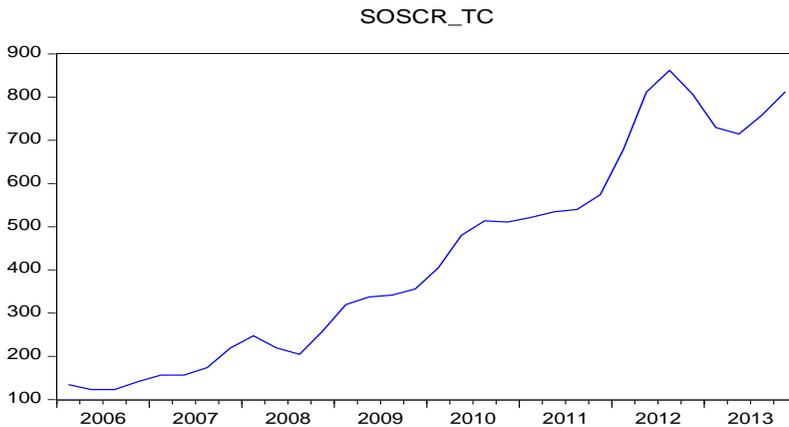


**Figure 12.** Variable waveforms Y – trend-cycle component
Source: authors with the program EViews 7

| | | |
|---|---|---|
| Series: LN_SOSCR | | |
| Sample 2006Q1 2013Q4 | | |
| Observations 32 | | |
| | | |
| Mean | | 5.790526 |
| Median | | 5.808096 |
| Maximum | | 7.220959 |
| Minimum | | 4.321480 |
| Std. Dev. | | 0.774127 |
| Skewness | | -0.073203 |
| Kurtosis | | 2.130254 |
| | | |
| Jarque-Bera | | 1.037191 |
| Probability | | 0.595356 |
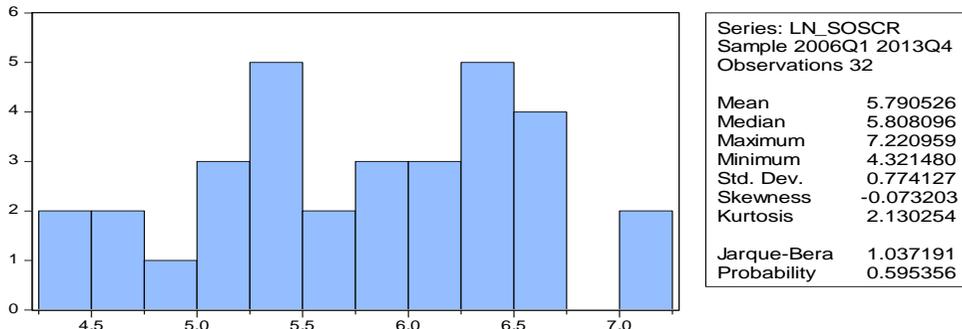
**Figure 13.** Histogram dependent variable ln(SOSCR)
Source: authors with the program EViews 7

SOSCR variable logarithm we obtain a new variable, LN_SOSCR, which this time has a normal distribution, as shown in Figure 13.
The dynamics of the new defined variable will look like the one in Figure 14. The new defined variable also presents seasonality only this time the composition scheme will not be a multiplicative but additive one.
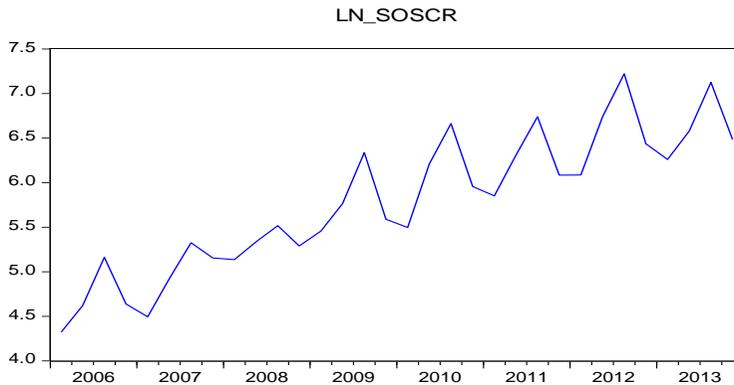


**Figure14.** Variable dependent waveforms   Y
Source: authors with the program EViews 7
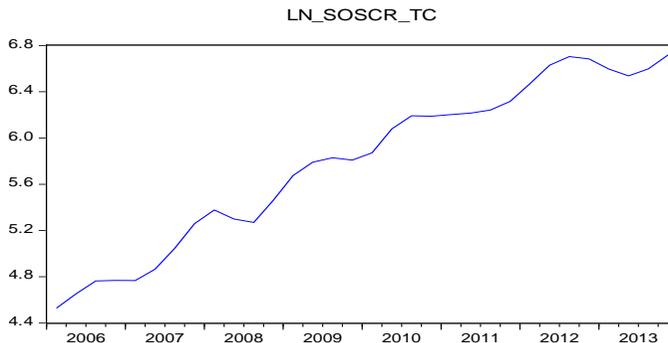


**Figure15.** Variable dependent waveforms  ln(Y) – trend-cycle component
Source: authors with the program EViews 7
Trend cycle component resulting from the decomposition of the Census X12 method, based on an additive model, is presented in Figure 15.

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## 3.Conclusions

From the econometric study of arrivals in rural pensions based on the three independent variables we can conclude that:

- overall, tourist arrivals in the region Crişana pensions are reverse proportional to the rate of unemployment, but we noticed that a very low unemployment rate does not increase the number of arrivals in rural guesthouses, tourists probably prefer a different type of tourism than in the areas;

- tourist arrivals pensions Crişana region follow approximately the same trend with average net earnings that in both indicators analyzed there is an increase in mean annual seasonality but still remains present and characterize the evolution of arrivals;

- in the analysis of the influence of the number of employees we can say that arrivals in rural tourist pensions Crişana region does not grow by increasing the number of employees. So in periods of economic development, and characterized by low unemployment and obviously an increase in the number of employees, tourists prefer another kind of tourism than in rural areas.

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# 2015 – THE YEAR OF TOURISM REVIVAL IN ORADEA

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**Abstract:** *This paper presents a case study on the endeavours taken by public institutions in Bihor County in order to revitalize tourism in Oradea. According to the official website of Oradea Municipality, there are several ongoing projects in 2015, most of them aimed at raising Oradea's tourism at European standards. Projects which are currently in progress are focused, in particular, on developing the cultural and historic heritage (by conserving the history of places, buildings, customs and other works by men) and valorising the geothermal resources of which it benefits. Most projects are carried out through the Regional Operational Programme 2007-2013, Priority Axes 1 "Support to sustainable development of cities – urban growth poles" and 5 – "Sustainable development and promotion of tourism". Actually, the completion of these projects aims to diversify and improve tourism services in Oradea, on the one hand, by creating modern leisure services (of the Aqua park, Spa, Wellness type), and on the other hand, by rehabilitating and modernising the cultural and historical centre of Oradea (Piața Unirii [Union Square] and Vasile Alecsandri Street). Moreover, Oradea City App was created, available in Romanian and English, in order to provide the user with complex information both on tourist attractions, accommodation and catering establishments that are available in Oradea and Băile Felix, as well as on the possibilities for leisure (theatre, movies, concerts, fairs, exhibitions, sports facilities, etc.). This year also, on May 10, 2015, it was decided that a referendum will be held in order to request the territorial merger between Oradea and Sînmartin which would lead to ranking Oradea in the league of large cities. According to mayors Ilie Bolojan (Oradea) and Lucian Popuș (Sînmartin) "the purpose of this endeavour is the joint development of the two localities, by numeric increase of the population, in order to ensure economic development, tourism revival by highlighting the architecture of the city and by developing the hydro-thermal resorts of Băile Felix and 1 Mai, located within the area of Sînmartin commune, respectively by attracting European funds". Upon successful outcome of the Municipality referendum, Oradea could become an attractive tourist destination, both at national and international level.*

**Keywords:** Nymphaea Thermal Wellness Complex Oradea; Oradea Fortress – multicultural and multidenominational centre; Piața Unirii – cultural and historical centre of Oradea; Oradea City App; Oradea - Sînmartin merger.

**JEL classification:** O10, L83

### 1. Introduction

It may be noted that for Romania tourism strategies included in the 2013-2016 Government Programme are oriented towards local tourism by: decentralizing the authorization and approval activity, developing an integrated tourism by capitalizing on all the local resources (cultural, historical, thermal, agricultural, handicraft, etc.), connecting Romanian tourism to international trends, etc. (information available on the website: http://gov.ro/fisiere/pagini_fisiere/13-08-02-10-48-52program-de-guvernare-2013-20161.pdf).

As far as Oradea is concerned, through projects developed this year (2015), an intense concern of the local authorities can be observed with regards to the development of local tourism.

## 2. Tourism potential of Oradea

Oradea, located in the Western part of Romania, in the immediate vicinity of the Hungarian border (approximately 13 km from the Borș – Artand customs) is the seat and largest municipality of Bihor County. With an area of 11,556 ha, Oradea ranks 10th in size among the cities of Romania. Its geographical location makes Oradea a very important nodal point in the regional and international tourism, being only 12 km away from the famous hydro – thermal resorts (Băile Felix and Băile 1 Mai) located in Sînmartin commune.

**Map 1:** Oradea location



Source: http://www.eurobusinessparc.ro/ro/localizare/harti

The tourism potential of Oradea is due not only to its overall position, but also to its history and architecture, as well as the location of its monuments within the city plan.

In the records of Bihor County Office of the Directorates for Culture, Religious Denominations and National Cultural Heritage, Oradea is registered with the following data (information available on the website: http://www.oradea.ro/pagina/turismul-in-oradea):

**Table 1:** Protected objectives

| Crt. no. | Protected objectives | Number |
|:---:|:---|:---:|
| 1. | Archaeological monuments and sites | 6 |
| 2. | Architectural monuments and ensembles, technical monuments | 91 |
| 3. | Memorial buildings | 6 |
| 4. | Plastic arts monuments and ensembles | 19 |

Source: http://www.oradea.ro/pagina/turismul-in-oradea

At Bihor County level, the Municipality of Oradea is the one that stands out due to the most extensive variety of tourist attractions. Thus, there are various *imposing buildings* in Oradea, built in different styles (eclectic, baroque, secession), such as: Baroque Palace, Black Eagle Palace, Greek Catholic Bishop's Palace, Moon Church, City Hall and City Hall Tower, etc.; *museums and memorial houses* of which: Cris Country Museum, National Military Museum, "Ady Endre" Memorial Museum, "Emanuil Gojdu" Memorial House, "Lucian Blaga" Memorial House, etc.

Among the most important cultural institutions in Oradea we can include: State Theatre, "Arcadia" Theatre for Children and Youth, State Philharmonic, Cris Country Museum, George Şincai County Library and Gallery of Plastic Artists (at the pedestrian area). Other cultural institutions that are representative for Oradea are: Cultural Centre of the Syndicates, Cultural Centre of the Youth, Children's Palace and the Hollywood Multiplex cinema complex in the Oradea Shopping City and Lotus shopping centres.

One of the most important educational centres in Romania is the University of Oradea, state university with a wide range of specialisations for bachelor, master and doctoral

degrees. Among private education centres the following stand out: Partium Christian University (higher education institution with Hungarian language of teaching, founded in 2000), Agora University (founded in 2000) and Emanuel University (Baptist academic school founded in 2002).

Types of tourism that can be mainly developed in Oradea and the surrounding areas:
- *Cultural and Religious Tourism.* The variety of the historical and cultural heritage of Oradea – Baroque Palace next to Basilica of Saint Mary and Canonical Row is the most valuable Baroque complex built in Romania, Greek Catholic Bishop's Palace, Orthodox Moon Church, Black Eagle Palace, etc. – favours the development of integrated tourism packages.
- *Business Tourism.* The conditions for organizing conferences, symposiums, exhibitions etc. are currently provided by hotels and institutions in Oradea, Băile Felix and Băile 1 Mai resorts.
- *Urban Tourism.* This type of tourism can be developed in Bihor County, particularly in Oradea, which already has most of the conditions required for the development of business tourism (5*, 4*, 3* accommodation establishments, various catering establishments (luxury restaurants, pizzerias, terraces, bars, cafés, etc.), alternatives for leisure time, etc.
- *Hydro-Spa and Health Tourism.* The qualities of the thermal water in Oradea and the hydro-thermal resorts of Băile Felix and 1 Mai attract numerous local and foreign tourists each year. The existence of thermal resources in other cities, as well, in Bihor County (Marghita, Beius, Tinca) favours the development of new touristic resorts at county level.
- **Events Tourism**. Among the attractions of Oradea also the intangible heritage on the customs and traditions, cultural events, traditional crafts, traditional costumes, gastronomy, etc. can be noted, such as: Oradea Fall Festival, Festum Varadinum, International Sports Dance Festival, International Book Fair, Short Theatre Week, Wine and Brandy Festival, Romanian Traditional Craftsmen Fair, Traditional Song, Dance and Costume Festival, **etc.**

3. **Tourism projects that are ongoing or in process of completion in the municipality of Oradea. Case studies**

Due to the fact that tourist traffic in Oradea is dominated by short stays, pronounced seasonal character, transit tourism (at the expense of medium and long stays with annual coverage), in 2015, the Public institutions in Oradea launched a series of projects that aim to place Oradea among the international tourist destinations.

Aiming to develop tourism in Bihor, Bihor County Council, University of Oradea and Bihor Mountain Rescue Association started the procedures for setting up the association called "Agency for the Management of Bihor Destination". According to Horia Cartiş, director of the Office of the President of Bihor CC, the actions of the association will not be limited only to promoting tourism in the area, but rather aim at developing a tourism strategy (according to eBihoreanul newspaper of 01/04/2015) which could place Bihor County among the favourite destinations of local and international tourists.

*Initiatives*
In 2015, the Municipality of Oradea has several ongoing projects all focusing on creating the most complex image possible on the tourism of Oradea. Such projects include:
- development of the Nymphaea Aqua Park in Oradea;
- restoration of Oradea Fortress;
- renovation of Ciuperca *(Mushroom)* area;

- *Oradea City App* Application;
- significant increase of green spaces at city level; etc.

1. Nymphaea Aqua Park in Oradea **is achieved through the project called "Development of leisure tourism by developing the "NYMPHAEA" Thermal Wellness Complex Oradea"** (information available on the website: http://www.complexnymphaea.ro/index.php/descrierea-proiectului)

*The project is financed by the Regional Operational Programme 2007 – 2013;*
*Priority Axis 5 – "Sustainable development and promotion of tourism";*
*Key Area of Intervention 5.2 – "Creation, development, modernization of tourism infrastructure for exploitation of natural resources and increasing the quality of tourism services";*
*Implementation period: March 2015 - March 2017.*

The *purpose* of this project is to complete, enhance and diversify the touristic offer of Oradea municipality with modern leisure services of Wellness, Aqua Park, Spa type (specific to leisure tourism) which are currently missing and deprive Oradea of an integrated development of the local tourism and a rational, responsible and sustainable exploitation of the natural resources of which it benefits. By achieving this goal, the project also aims to create additional revenue streams at regional and local level, to create new jobs in the field of tourism and the synergetic economic sectors.

The *overall objective* is to create "Nymphaea" Thermal Wellness Complex Oradea. The aim of creating this complex is to diversify and improve tourist services, in general and, leisure, in particular, offered to tourists and residents of Oradea Municipality, raising the standard of tourist offers, and the sustainable and responsible exploitation of the geothermal mineral resource.

2. Restoration of Oradea Fortress is achieved through the project called "**Revitalising Oradea Fortress for introducing it into the touristic circuit. Oradea Fortress, European tourist cultural complex**", (information available on the website: http://www.oradea.ro/cetatea-oradea/despre-proiect/index.php)

*The project is financed by the Regional Operational Programme 2007 – 2013;*
*Priority Axis 5 – "Sustainable development and promotion of tourism";*
*Key Area of Intervention 5.1 – Restoration and sustainable valorisation of the cultural heritage, creation and modernization of related infrastructure;*
*Implementation period: June 2009 - July 2015.*

The *purpose* of this project is to reintroduce Oradea Fortress into the national, regional and international tourist circuit, as a multi-secular historical, architectural and cultural value within the European context. Moreover, by achieving this goal, the project also aims to create additional revenue streams at regional and local level, to create new jobs in the field of culture, tourism and related economic sectors.

The *overall objective* of the project consists of transforming the Oradea Fortress area into an area of major tourist attraction, the core of historical and cultural tourism, a pillar of sustainable urban development and European multicultural centre.

3. Renovation of the "Ciuperca" *("Mushroom")* area – achieved through the project called "*Development of natural habitats of protected trees species and volunteer flora on Ciuperca Hill – Oradea*", (information available on the website: http://www.oradea.ro/stiri-oradea/au-inceput-lucrarile-la-gradina-publica-de-pe-dealul-ciuperca)

*The project is funded by the Hungary – Romania Cross-border Cooperation Programme 2007-2013;*

*The project value is of EUR 1,722,253, of which 54.07% is the contribution of the municipality and 45.93% are grants. The area to be developed is of 38,759 sqm. Implementation period: January 2015 - December 2015.*

The *project aim* is to develop the hill as a recreational area, by transforming it into an urban garden with amphitheatre, waterfall, exotic plants and cellar, therefore becoming a major tourist attraction where the city could be admired from above.

4. Oradea City App Application

Eduard Florea (city manager of Oradea Municipality) and Mihai Jurcă (representative of the Association for the Promotion of Tourism in Oradea) have launched on February 3, 2015, during a press conference, the official tourist application of Oradea Municipality and of Băile Felix resort. According to manager Eduard Florea *"the application is addressed both to tourists, and residents in their daily activities. We can say that through the information it provides, this application is the most complex in Romania. The aim was to create a free and intuitive electronic platform in order to access the most important information on Oradea Municipality and Băile Felix resort"*.

As of 03/02/2015, the application is available for free in Google Play and App Store stores and upon installing the application it may be viewed or consulted with no internet connection required. The application is available both in Romanian and English (according to the document "*Oradea City App*", available on the website: http://www.oradea.ro/stiri-oradea/primaria-a-lansat-oradea-city-app-cea-mai-complexa-aplica-539-ie-de-turism-din-romania).

The *aim* of the project was based on:
- creating a free and intuitive electronic platform in order to access the most important information on the two destinations (Oradea and Băile Felix)
- promoting the most important touristic attractions;
- focusing the information one "touch" away;
- integrating part of the online services of the Municipality in one single place (OTL tickets, parking tickets);
- promoting and supporting economic agents in providing services for tourists;
- creating a method for direct tourist interaction; etc.

The *objectives* of the project consisted of:
- increasing the level of information of citizens and tourists;
- increasing awareness towards and repute of Oradea – Băile-Felix tourist destination;
- diversifying the methods of promotion;
- reducing marketing and promotion costs;
- adapting and updating the marketing strategy to the new trends; etc.

5. Significant increase of green spaces in the municipality of Oradea

Furthermore, a special attention has been paid to green spaces in Oradea Municipality. *Relative to the number of residents, Oradea can take pride in its 25 sqm of green space per citizen, which is only 1 sqm below the minimum required by the European Union.* Based on this criterion, in 2011 Oradea was granted the title of Green Capital of Romania (According to the document "*Oradea Parks*", available on the website: http://www.oradea.ro/pagina/oradea-capitala-verde-a-romaniei).

At the January 26, 2015 press conference, two major projects of Oradea Municipality were presented which are aimed at significantly increasing green spaces (by an additional 9 ha) in the Municipality of Oradea, respectively: *4.5 ha Ciuperca Park, 1.4 ha Arena Park, 2.2 ha Salca II Park and 1 ha Adona Park*. According to the Mayor of Oradea, Ilie Bolojan, such works will be completed *either this fall or, at the latest, in the spring of 2016*

(information available on the website: http://www.oradea.ro/stiri-oradea/primaria-va-amenaja-8-hectare-de-spa-539-ii-verzi)

*Other Initiatives*

Renovation of the downtown area alongside the renovation of buildings with architectural value in the city centre will be achieved through several projects:

✓ *"Rehabilitation, modernisation and reconstruction of squares in Piața Unirii (Union Square)"* (information available on the website: *http://www.oradea.ro/subsituri/piataunirii/index.php*)

*Project financed by the Regional Operational Programme 2007 – 2013;*
*Priority Axis 1 "Support to sustainable development of cities – urban growth poles";*
*Key Area of Intervention 1.1 "Integrated urban development plans";*
*Implementation period: March 2015 - December 2015.*

The project envisages the decrease of environmental pollution by 25% and improvement of traffic flow by car traffic reconfiguration in Piața Unirii.

The *project objective* aims, on the one hand, to enhance the quality of life in Oradea by rehabilitating the urban infrastructure and improving the public transportation and, on the other hand, to increase tourist attractiveness of the urban ensemble and of the Historical Centre of the city.

✓ "*Rehabilitation and modernization of Vasile Alecsandri Street, including through restoration of the public lighting network and provision of street furniture*" (information available on the website: http://www.oradea.ro/stiri-oradea/proiectul-de-reabilitare-si-modernizare-a-strazii-vasile-alecsandri-votat-in-consiliul-local )

The *project objective* aims to create a pedestrian area, offering the possibility to admire the imposing architecture of buildings located on Vasile Alecsandri Street.

✓ „*Rehabilitation of the Black Eagle Passage (sewage system and interior paving) and architectural lighting in order to obtain an optimum touristic exploitation and inclusion of this monument into the European circuit of the Secession style*" (information available on the website: http://www.oradea.ro/stiri-oradea/mozaicul-din-pasajul-palatului-vulturul-negru-va-fi-refacut-cu-o-tehnologie-moderna)

*This project was submitted in the Regional Operational Programme (2007-2013), Priority Axis 1 "Support to sustainable development of cities – urban growth poles";*
*Duration: 4 months.*

*Project objective* consists of the rehabilitation of the Black Eagle Passage (located in Piața Unirii), which is an important attraction of the cultural and historical downtown area of Oradea.


### 4. Oradea and Sînmartin – Merger for prosperity

Tourism projects in Oradea (presented in the previous chapter) together with the tourist facilities offered by the hydro-thermal resorts (Băile Felix and 1 Mai) in Sînmartin could place Oradea Municipality in the foreground of Romanian tourism. Therefore, on May 10, 2015, a local referendum will be held in the two localities (Oradea and Sînmartin) requesting the modification of the administrative limit of the administrative and territorial unit of Oradea, in the sense of integrating Sînmartin commune in the administrative perimeter of Oradea Municipality. The pillars underpinning this merger refer to: attracting investors and investments, highlighting the local amenities and local labour, good infrastructure, and best possible public services.

According to mayors Ilie Bolojan (Oradea) and Lucian Popuș (Sînmartin) "*the purpose of this endeavour is the joint development of the two localities, by numeric increase of the population, in order to ensure economic development, tourism revival by highlighting the architecture of the city and by developing the hydro-thermal resorts of Băile Felix and 1*

*Mai, located within the area of Sînmartin commune, respectively by attracting European funds".*

The May 10, 2015 referendum on the territorial merger of Oradea and Sînmartin represents an important step in the administrative reorganization, being the first project of its kind in Romania. By joining the two areas, Oradea Municipality will have a population of approximately 234,000 residents (in 2014, according to http://statistici.insse.ro/shop/), which will result in its positioning among 1st rank municipalities, thus ranking as 10th place among the top urban population of the country. Moreover, by territorial expansion, Oradea will consolidate its position in the "league of large cities" which will give rise to new lines of urban and industrial development by the extensive offer of credible strategic areas for investments and investors.

Furthermore, the complementary tourist offer of the two localities (Sînmartin – hydro-thermal spa tourism, Oradea - urban type tourism: cultural, architectural) will provide tourists with multiple opportunities for spending their vacation. Upon successful outcome of the Municipality referendum, Oradea could become *the capital of hydro-thermal spa tourism in Romania,* therefore representing an important tourist attraction both nationally and internationally.

## 5. Conclusions

Given that tourist flows mainly focus towards urban centres, tourism is an effective tool, by which benefits obtained by it may be redistributed from the urban to the rural areas.

Oradea Municipality and its structures employed in the tourism industry believe that sustainable, responsible and healthy development is achieved by investments in the local community, therefore creating a competitive business environment. Thus, through projects started in the current year (2015), local institutions aim to transform Oradea into a competitive tourist destination both nationally and internationally. Current investments for the development of hydro-thermal spa, as well as cultural and historical tourism will result in improved valorisation of the current potential Oradea benefits of.

According to the new vision on tourism demand, the objective for the future will be the development of complex and complementary tourism packages that would lead to extended tourist stays and increased tourism proceeds.

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# SIGNIFICANCE OF TOURISM IN ECONOMY OF THE EU'S MEMBER STATES, PARTICULARY CONCERNING THE EMPLOYMENT

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**Abstract:** *Tourism can have a key role in the national economy by offering opportunity for employment, contributing to improvement of the current account balance and stimulating the economic growth. On the other hand, more and more attention should be paid to the serving of the tourist in certain countries where the number of the tourists is large as well as environmental and social consequences can be expected. Therefore, the governments are interested in the controlled development of tourism for economic, social, cultural, architectural and natural environmental reasons equally. Today, around the world, one of the most important governmental tasks is to stimulate the development of the tourism sector considering its key role in the job creation. This essay investigates the role of employment in economy of the developed countries, focusing on the states possessing the largest tourism revenue. The sector means an important pulling power for each macro economy having a positive effect on different areas of the economy. At the same time, the average income of the persons employed in the accommodation services and catering is "traditionally" one of the lowest recognised ones among the national economic sectors in the European countries. With analysing the data of the examined period and comparing them to the targets simultaneously, we can experience that, at the end of 2013-2014, a measure of growth started in point of the employment and the gross average income but it still lags behind the goals stated in 2005. The economic crisis coincided with this period, effects of which cannot be left out of account because it greatly influenced not only the Hungarian but the global tourism as well. However, in the long term, it seems likely that economic role of the tourism, including the stability and enlargement of the labour market, will intensify both globally and in the EU's member states in future years.*

**Keywords: tourism, accommodation and gastronomy, developments, GDP, wages, employment**

**JEL classification: J49**

## 1. Economic role of tourism in the world economy

Several facts indicate that penetration of the tourism experienced during the last half century will continue in the forthcoming decades. The sector means a major pulling power for the individual macro-economies, influencing a series of processes favourably, among other things the employment. This research material deals with the latter issue and provides details about the question from theoretical works in one respect, on the other hand, and mainly, it presents international statistical figures.

Throughout the world, one of the most important governmental tasks is to urge the development of the tourism sector, considering its significant role in creating jobs because a large number of countries suffer from high unemployment.

Today, the sector already represents 9% of GDP, around 6 trillion USD worth in total. Furthermore, it creates 120 million jobs directly and 125 million jobs indirectly by means of the relating sectors. This means that the sector globally provides 1/14 part of the job

opportunities which can be increased to one-tenth part of the total employment by 2022, according to the World Travel & Tourism Council. (BLANKE – CHIESA, 2013.)

Albeit the statistical figures and estimates are different (sometimes significantly), importance of the sector is unquestionable, for the reason of the orders of magnitude as well.According to another source (WTTC, 2014), for example in 2013, the sector created almost 101 million jobs directly all over the world – this is 3.4% of the total employment. It is estimated that this number will exceed 126 million by 2024 – this will be 3.7% of the future total employment. (WTTC, 2014.) Taking the indirect job creation into consideration, the sector created more than 266 million jobs in 2013 which is 8.9% of the total employment. Based on the forecasts, this number will be almost 347 million by 2024 which means 10.2%of the future total employment. (WTTC, 2014.)

In the developed countries, role of the tourism in the employment is more significant. In the OECD states – according to the data regarding 2010 (OECD, 2012.) – the tourism sector directly contributes 4.2% to GDP on average and this sector provides 5.4%of the total employment.Considering the mean values of the EU's member states, the same index number is even higher: 4.4% and 5.7% according to the same source (OECD, 2012.). However, these averages cover quite large differences as we will see.

Given the importance of tourism, it is recommended for the different level of government to take measures supporting the sector. There are many simple opportunities for the necessary governmental measures.Based on the joint research of UN WTO and WTTC, results of which were presented on the fourth T20 Ministers' Meeting in May of 2012, improvement of the visa facilitations could result in around 206 billion USD income growths in the tourism and could create 5.1 million new jobs in economies of the G20 countries until 2015. (BLANKE – CHIESA, 2013.)

## 1.1. Role of aviation in job creation

The International Air Transport Association (IATA) has commissioned the Oxford Exonomics to draw up an estimate of the economic and social effects of the aviation,covering 80 countries for the past three years.The analysis comprises the sector's traditional economic effect ("footprint") which was measured by the aviation's contribution to GDP, the job creation and tax revenue generated by the sector and its supply chain. (BLANKE – CHIESA, 2013.)

The aviation industry *directly* creates jobs in several areas and enlarges the economic activity, including operation of the aircrafts and the ground infrastructure.The aviation sector's direct effect on the employment and GDP appears in use of the domestic resources provided for all such services in case of any given nation. (BLANKE – CHIESA, 2013.)

In 2010, throughout the world, the aviation sector contributed 8.4 million jobs and 539 billion USD to the global GDP directly which is equal to of the order of economic performance of Poland or Switzerland. (BLANKE – CHIESA, 2013.)

Calculation of the sector's economic footprint is the following: the output as well number of the jobs which are created by the industries *indirectly*related to the aviation and the output as well as jobs which are resulted by the labour force directly and indirectly employed in the aviation are added to the indirect contribution mentioned above. In addition, that wider catalytic effect is also counted in which is taken by the aviation through the tourism. These effects are going to be described in detail in the next phase. (BLANKE – CHIESA, 2013.)

The aviation sector has a key role in the global economic by ensuring the only fast world-wide transport network connection. By means of this activity, the aviation has a huge indirect and wider effect on the employment and GDP, with more than 22 million jobs and 1.4 trillion USD share in the GDP. In addition, the aviation sector also supports other sectors, contributing their growth and supporting their activity. Given that the international tourism depends on the air transport, the aviation industry maintains 34.5 million jobs

within frame of the global tourism, contributing 62 billion USD to GDP of the world. (BLANKE – CHIESA, 2013.)

## 1.2. Circumstances and conditions of work in the tourism sector

Due to the consumer demands, the employment by hotels and restaurants requires such working conditions from which the only, unusual and occasionally unsystematic work schedule (frequent and night shifts, working on weekends and holidays) is generally highlighted by the literature dealing with job market side of the tourism.This feature of the job increases the stress, hampers the situation of those employees, particularly women, who bear larger family responsibilities in caring for children or the elders as well as in the homework. (ILO, 2010, p. 14.) Turnover of the labour force being higher than in other sectors and the feature partially resulting from it are to be kept in mind by all those (employers, workplace managers, state institutions) who/which appoint the enhancing of the tourism's stability as a target.

Dominance of the call on, ad hoc, temporary, seasonal and part-time employment is in relation to the following things:  the uncertainty, the relatively low wages (which are often far lower than the national average), the limited carrier opportunities, the high level of subcontractors and outsourcing as well as the fast changing of the labour force. Of course, all this is present in varying degrees from country to country. Within the European Union, while the general trend is on the way to the increased application of the part-time employment, a large diversity can be seen in this respect as well: proportion of the part-time employment is 5% in Portugal, 50% in the United Kingdom and 68% in the Netherlands. (ILO, 2010, p. 14.)

The rural tourism, as a supplementary activity can contribute to the increase of the population's income, hence it can decrease the emigration and it has a positive effect on the development of the rural settlements with unfavourable aptitudes (Pakurár-Oláh, 2008.)

In the average of EU-27, rate of the part-time employment is 7.7% among men and 19.4% among women amidst hotel and restaurant employees, as it can be seen on *Sheet 1.*

**Sheet 1: Structural distribution by gender and working hour in individual economic fields of EU-27**

| Sectors | Men | | Women | | Total |
|---|---|---|---|---|---|
| | part-time work | full-time work | part-time work | full-time work | |
| Wholesale and retail trade | 4,6 | 40,9 | 18,0 | 36,5 | 100,0 |
| **Hotels and restaurants** | **7,7** | **44,0** | **19,4** | **28,9** | **100,0** |
| Agriculture and fisheries | 7,9 | 56,5 | 8,2 | 27,4 | 100,0 |
| Processing industry | 1,8 | 67,5 | 5,1 | 25,6 | 100,0 |
| Transport and telecommunication | 4,7 | 68,8 | 6,2 | 20,3 | 100,0 |

Source: ILO (2010)

If we examine the average gross hourly rates by national economic sectors then, based on data of Sheet 2, we can determine that the average Hungarian hourly rate proved in 2010 is at the end of the EU-27 countries' field; only Latvia, Lithuania, Rumania and Bulgaria follow our country. The wages are the highest in Denmark, Ireland and Luxembourg. The sectoral differences are significant; the wages are the highest in the energy and financial sector in most countries.

In the EU-27 countries, the average hourly rates are the lowest in the area of accommodation and gastronomy, 66% of the EU average. In our country, the 3.2 euro gross hourly rate is 77% of the national average and only 34% of the EU average. Rumania with the 1.6 euro and Bulgaria 1.3 euro hourly rates belong to the file-closers of the sector.

## 2. Development of the number of employees in the accommodation services, catering and changes of the gross average income in Hungary

In the following, based on statistical data, we examine the realization of the goals worded in the National Tourism Development Strategy for 2013, such as
- number of the persons employed in the tourism sector should reach the 200 thousand heads,
- the monthly gross average income should reach the national economic average income of 2013 in the accommodation services, catering sector.

According to data of Sheet3, we can directly see that though the number of employees increased in the sector, after the huge regression of 2009, but the rate of employees is still 4.1% in comparison with the whole national economy. In 2012, 168.1 thousand heads worked in the sector which lags considerably behind the goal of 200 thousand heads and a creation of other 32 thousand new jobs would be required.

**Sheet 2.:Gross hourly wages in the tourism-catering and some major sectors of the national economy in the EU's countries in 2010**

| Countries | Means | Energy | Financial sector | Accommod. and gastronomy | Health care | Education |
|---|---|---|---|---|---|---|
| Belgium | 18,2 | 27,7 | 24,7 | 13,3 | 17,6 | 28,3 |
| Bulgaria | 2.0 | 4 | 3,8 | 1,3 | 2,2 | 2 |
| Czech Republic | 5,2 | 8,2 | 9,2 | 3,1 | 5,2 | 5,2 |
| Denmark | 27 | 33 | 34,9 | 21,1 | 24,5 | 27,6 |
| Germany | 16,9 | 24,6 | 23,3 | 9,4 | 15,9 | 19,6 |
| Estonia | 4,8 | 6,2 | 8,1 | 3,3 | 4,9 | 4,4 |
| Ireland | 22,2 | 33,8 | 30,2 | 14 | 22 | 33,6 |
| Spain | 11,5 | 20,1 | 18,2 | 8,4 | 13,3 | 14,7 |
| France | 16,2 | 24,8 | 21,8 | 12,2 | 14,75 | 18,7 |
| Italy | 14,5 | 17,5 | 21,9 | 9,5 | 16,6 | 22,1 |
| Cyprus | 12,1 | 15,9 | 18,9 | 7,5 | 12,3 | 22,1 |
| Latvia | 3,8 | 3,9 | 7,8 | 2,7 | 3,6 | 3,6 |
| Lithuania | 3,4 | 4,8 | 6,1 | 2 | 3,4 | 3,9 |
| Luxembourg | 21,9 | 31,6 | 32,1 | 13,6 | 24,9 | 32,5 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Hungary | 4,5 | 6,9 | 8,6 | 3,2 | 3,6 | 4,3 |
| Malta | 8,4 | 9,1 | 12,4 | 6 | 8,4 | 10,4 |
| The Netherlands | 17,2 | 23,18 | 24,2 | 10,5 | 17,9 | 21,1 |
| Austria | 14,7 | 22,9 | 21,13 | 8,7 | 14 | 17,2 |
| Poland | 5,1 | 6,4 | 8,1 | 3,6 | 4,8 | 7,1 |
| Portugal | 7,7 | 16,9 | 16 | 5,4 | 7,5 | 12,4 |
| Rumania | 2,7 | 4,5 | 6,5 | 1,6 | 2,4 | 2,6 |
| Slovenia | 9,1 | 12,4 | 12,7 | 6,7 | 9,9 | 11,6 |
| Slovakia | 4,7 | 7,3 | 7,9 | 3 | 4,7 | 4,3 |
| Finland | 18,1 | 22,3 | 22,8 | 13,4 | 16,2 | 19,5 |
| Sweden | 16,6 | 19,7 | 24,6 | 13,1 | 15,2 | 15,1 |
| England | 16,7 | 20,6 | 27,2 | 8,9 | 17,6 | 17,7 |
| EU-27 | 14 | 17,4 | 21,6 | 9,3 | 14,9 | 16,1 |

If we examine the changes in the number of employees then the growth is a total of 2.2% at national economy level between 2007 and 2014, in turn, the decrease is almost 7.2% in the accommodation services sector. After the slump, the number of employees in the sector regressed at large scales in 2009 at first (after a few thousand-head growth of in the years of 2010-2011) then in 2012-2013. Its explanation is that several accommodations and service providers have ceased so the employees had to be laid off. Effect of the tenders in the period of 2007-2013 also prevails in the fluctuation at the same time. In 2013, a number of such programs ended which involved the growth of the employees.

**Sheet 3 – Development in the number of employees and changes of the gross average incomes in Hungary between 2007 and 2013**

| Description | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|---|---|---|---|
| **Employees, thousand heads[a]** | | | | | | | | |
| National economy | 2761 | 2762 | 2661 | 2702 | 2692 | 2674 | 2700 | 2823 |
| From this: quarters, services, catering | 87,2 | 87,9 | 80,4 | 84,4 | 83,9 | 79,9 | 77,2 | 80,9 |
| Total employees | 156 | 158 | 151 | 149 | 157 | 162 | 158 | 168 |
| **Number of the unemployed, thousand heads** | 14,4 | 12,3 | 18,7 | 22,7 | 20,6 | 22,0 | 22,9 | 15,0 |
| *Monthly gross verage income, thousand HUF[b]* | | | | | | | | |
| *National economy* | 185 | 199 | 200 | 202 | 213 | 223 | 230 | 238 |
| From this: quarters, services, catering | 112 | 121 | 123 | 123 | 126 | 140 | 147 | 153 |

However, we need to make allowance for the fact that the seasonality and the black labour are considerable in the sector. During period of the tourist season, additional labour forces are employed for some weeks or months in numerous places but the workers are not legally employed. This distorts the data and we cannot get an accurate picture of the workers' number.

Number of the persons detected as unemployed in the sector was between 12 000 and 23 000 heads which can be considered high compared to the national economic average as well. In 2013, the rate of unemployment was 10.2% at national level and almost 18.5% in the sector. It can be explained by that, in case of the tourism jobs, the staff turnover is high, the wages are extremely low, the seasonal and part-time employment is typical as well as the rate of low-skilled workers is very high so the latter get the sack at first. Of course, the public employment has not affected this sector.

Based on data of Sheet 3, it can be stated that the gross average income is 283 thousand HUF in the national economy behind which the 153 thousand HUF paid in the accommodation services, catering sector is very significantly lagged; this is only 64.4% of the national economic average so the monthly average income of the employees in this sector was the lowest. Between 2008 and 2011, the wages changed barely, only with 1-2 thousand HUF. We can experience a greater degree of growth from 2012 but wages in the sector are lower with almost 80 thousand HUF than at national economic level. Of course, here we also need to calculate with that, on the one hand, not every worker is declared, on the other hand, a lot of workers are declared with such amounts which are significantly lower than their real incomes as well as the wages paid officially – depending on the job, position – are complemented with tips given by the customers and with other non-tax incomes.

## Summary

Importance of the tourism is expanding in the EU countries and globally; the governments and the national organizations keep the tourism in mind as an advantageous phenomenon, the job creation can be considered one of its most important affects. The sector means an important pulling power for each macro economy having a positive effect on different areas of the economy. At the same time, the average income of the persons employed in the accommodation services and catering is "traditionally" one of the lowest recognised ones among the national economic sectors in the European countries. Then again, in the developed European countries where sum of the wages of the persons working in the tourism is several times more than in the Central European countries, it is not possible to hold the wage level of the workers of tourism down therefore the competitiveness in these countries is strengthened by providing excessively high level, excellent quality services.

In most developed countries – and particularly in several states of Eastern Central Europe – the tourism has a key role in stopping the depopulation process of rural regions but in slowing that down at least. (Karcagi-Kováts, il et al, 2009a; 2009b)

With analysing the data of the examined period and comparing them to the targets simultaneously, we can experience that, at the end of 2013-2014, a measure of growth started in point of the employment and the gross average income but it still lags behind the goals stated in 2005. The economic crisis coincided with this period, effects of which cannot be left out of account because it greatly influenced not only the Hungarian but the global tourism as well. Trend of the indexes is negatively influenced by the seasonality and the black labour appearing in the sector and the incomes not declared officially; these ones cannot be eliminated appropriately until now.

However, in the long term, it seems likely that economic role of the tourism, including the stability and enlargement of the labour market, will intensify both globally and in the EU's member states in future years.

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# ANALYZING THE MOUNTAIN TOURISM DEMAND IN ROMANIA OVER THE LAST TWO DECADES

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**Abstract:** *Mountain tourism demand fluctuated predominantly downward in the last two decades, as a result of some complex economic, social, and political changes. Tourism demand for the Romanian mountain destinations in the last two decades has been analyzed in quantity and evolution, by processing (also graphically) and interpreting the specific tourism indicators (tourist arrivals, tourist structure, tourists' preference for accommodation, overnight stays, average length of stay, accommodation occupancy rate), also making comparisons with the situation at national level. Mountain tourism demand is an important segment of tourism demand (domestic and international) in Romania, with shares between 13.19% (minimum in 1994) and 15.63% (maximum in 2013). The mountain area is ranked second most popular for the Romanian tourists and third place for the foreign tourists. Tourist arrivals in the mountain area recorded the following variations: a period of sharp decline (1994-2002) with a minimum in 2002 (700,000 tourists), a period of growth (2003-2008) with values around 1 million tourists in 2007 and 2008, a decrease of 100,000 tourists corresponding to the economic crisis in 2008-2009, followed by a period (2010-2014) of strong revival with the maximum value of the entire analyzed period (nearly 1,3 million tourists in 2014). The fluctuations of overnight stays were directly proportional to those of arrivals. The increasing demand for mountain destinations resulted from a better promotion of winter sports in recent years, a revival ("fashion") of Romanians' preferences for winter sports practicing; in parallel, a number of ski areas were arranged or redesigned in many traditional 'white' resorts, and several smaller centers for winter sports emerged or were re-launched. Tourists' preferences for the mountain accommodation units such as boarding houses, villas and chalets reflected the characteristics of the mountain tourism activities and the corresponding accommodation facilities. In case of accommodation comfort degree, most tourists preferred the 3 or 4 star units. The average length of stay in mountain destinations recorded a downward trend, from more than 3 days in the period 1994-1998, to a long period of stagnation at 2.2 days in the past 7 analyzed years (2008-2014). Tourism density in the Romanian Carpathians in 2014 registered almost 2 tourists / sq.km. The accommodation occupancy rate showed a decreasing trend with stagnant periods in the analyzed period, reaching 18% in 2014. That decrease was the result of reducing travel demand until 2003, but after that period there were many and complex causes: management changes in many resorts, poor management of the companies and stakeholders involved, as well as tax evasion in tourism.*

**Keywords:** *tourism indicators; mountain tourism demand; Romanian mountain destinations.*

**JEL classification:** *L83*

## 1. Introduction

The demand for mountain areas represents an important segment of tourism demand in Romania. It has fluctuated predominantly downward in the last two decades, as a result of some complex economic, social, and political changes. The purpose of this paper is to analyze in terms of quantity and evolution the specific indicators of tourism demand for the Romanian mountain area in the last two decades, to draw relevant conclusions on the causes of its oscillations, and to make comparisons with the situation at national level.

The information derived from statistical sources are the starting point in the documentary process requested by a prospective study of tourism demand, especially regarding the quantitative side (Cocean and Dezsi, 2001). The statistical analysis of tourism demand is a method that traces the evolution of some indicators (volume, structure, distribution, density, territorial distribution and evolution of tourism demand over time, noticed trends and changes), but it is also useful in researching the origin and destination of tourists, the travel motivation, the average stay, or their loyalty to a particular destination.

The indicators of tourism demand are part of the system of tourism flow indicators and include: the number (arrivals) of tourists, the number of days-tourist (overnight stays), the average length of stay, the tourism flow density, the seasonality of tourism activity, the relative preference of tourists (Niță and Niță, 2008; Stănciulescu and Micu, 2009).

## 2. Materials and Methods

This approach is a first step in analyzing the tourism activity in the Romanian Carpathians over the last 25 years. This paper relies on studying the mentioned references and on processing the statistical data published by the National Institute of Statistics (the chapters referring to tourism in the Romanian Statistical Yearbooks; Romanian Tourism. Statistical Compendium, 2014; Travel Series, No.4/2014), into pertinent conclusions. In this study, we analyzed, processed and interpreted the most significant indicators of tourism demand (tourist arrivals and their structure, overnight stays, average length of stay, tourism flow density), as well as indicators of the relation supply-demand (accommodation occupancy rate). For each calculated indicator we made suggestive diagrams using the method of graphical modeling and the application Microsoft Office Excel. Then we interpreted the graphs and data tables to conclude on the evolution and structure of the main indicators for the mountain tourism demand, while making comparisons with the situation at national level.

## 3. Research Results

The *number of tourists* (visitors) or *tourist arrivals* is the most important indicator of tourism flow (Stănciulescu and Micu, 2009). This is a physical, quantitative indicator, analyzed in evolution (over a period of 25 years) at national level and structured by types of destinations (to make comparisons with the mountain area), by origin of tourists (domestic and international), or by their preference for accommodation.

This indicator recorded some noticeable oscillations over the past 25 years (Figure 1, Table 1). It decreased significantly between 1990-2003: from a peak of 12.2 million tourists in 1990, to almost two-thirds lower values in the coming years (1992-1995), followed by another period of constant decline from year to year (1996-2002), with values fluctuating at around 5 million tourists to the end of that period (and a minimum of 4.8 million tourists in 2002). The causes were complex - economic, social and political – and related to the post-communist transition period: decreasing standard of living for the resident population (unemployment, low income) higher tourism tariffs, decreasing quality of services in many Romanian resorts, political instability, insufficient promotion of tourism on foreign markets (Țigu G., 2001), improper coordination of tourism nationally (frequent changes within the Ministry of Tourism, incomplete tourism legislation).

Since 2003 there has been a steady increase in tourist arrivals to more than 7 million tourists in 2008. Growth in the period 2003-2008 was due to rising incomes and living standards of the resident population. In 2009 and 2010, the value dropped suddenly with 1 million tourists compared to previous years, due to the economic crisis.
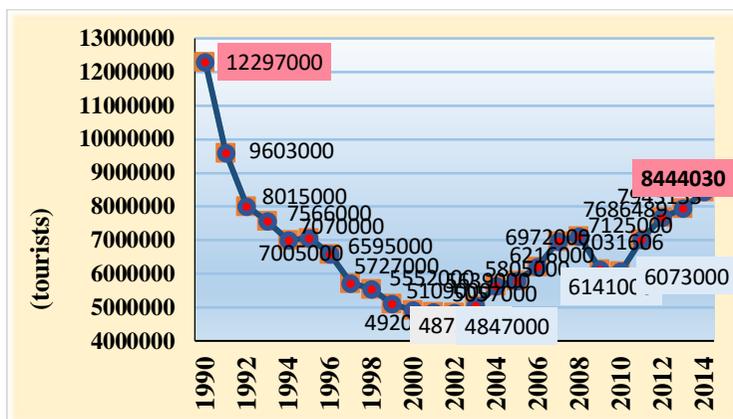
**Figure 1:** Evolution of tourist arrivals in Romania over the last 25 years (1990-2014)
Source: own processing using the application Microsoft Excel

There was a significant increase of arrivals (over 0.5 million tourists yearly) starting with the year 2011 (a worldwide trend, noting that only in 2009 there was a fall in international tourist arrivals). Thus, 2014 recorded the highest value of the last 23 years: 8.4 million tourists (a value close to the period 1991-1992), a surprising revival of the Romanian tourism. In 2014, the annual growth rate of arrivals was also high: 6.3% overall, 5.3% for the Romanian tourists and 11.5% for the foreign tourists. In the period 2011-2014, the annual growth rate of arrivals in mountain destinations was significantly higher (from 10.72% to 19.76%) than the national average, an encouraging fact for the Romanian mountain tourism. This high demand for mountain destinations resulted from a better promotion of winter sports in recent years, a revival ("fashion") of Romanians' preference for winter sports practicing; in parallel, a number of ski areas were arranged or redesigned in many traditional 'white' resorts (Poiana Brașov, Sinaia, Predeal, Bușteni, Păltiniş), with the emergence or re-launching of several smaller centers for winter sports (Rânca, Vidra, Arieșeni, Șuior, Parâng, Straja, etc.).

**Table 1:** Evolution and structure of tourist arrivals in Romania compared to the mountain destinations, over the last 20-25 years (1990 / 1994-2014)

| Tourist arrivals in Romania | | | | | Tourist arrivals in mountain destinations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Year | Total tourist arrivals in Romania | Annual change (%) | Romanian tourist arrivals | Foreign tourist arrivals | Year | Total tourist arrivals in mountain destinations | Annual change (%) | Share of total tourist arrivals in Romania | Romanian tourist arrivals | Foreign tourist arrivals |
| 1990 | 12,297,000 | - | 10,865,000 | 1,432,000 | 1990 | * | * | * | * | * |
| 1991 | 9,603,000 | **-21.91** | 8,309,000 | 1,294,000 | 1991 | * | * | * | * | * |
| 1992 | 8,015,000 | -16.54 | 6,830,000 | 1,185,000 | 1992 | * | * | * | * | * |
| 1993 | 7,566,000 | -5.60 | 6,718,000 | 848,000 | 1993 | * | * | * | * | * |
| 1994 | 7,005,000 | -7.41 | 6,149,000 | 856,000 | 1994 | 924,000 | * | **13.19** | 859,000 | 65,000 |
| 1995 | 7,070,000 | 0.93 | 6,310,000 | 760,000 | 1995 | 1,056,000 | 14.29 | 14.94 | 984,000 | 72,000 |
| 1996 | 6,595,000 | -6.72 | 5,833,000 | 762,000 | 1996 | 918,000 | -13.07 | 13.92 | 856,000 | 62,000 |
| 1997 | 5,727,000 | -13.16 | 4,894,000 | 833,000 | 1997 | 796,000 | -13.29 | 13.90 | 723,000 | 73,000 |
| 1998 | 5,552,000 | -3.06 | 4,742,000 | 810,000 | 1998 | 821,000 | 3.14 | 14.79 | 744,000 | 77,000 |
| 1999 | 5,109,000 | -7.98 | 4,314,000 | 795,000 | 1999 | 790,000 | -3.78 | 15.46 | 718,000 | 72,000 |

| 2000 | 4,920,000 | -3.70 | 4,053,000 | 867,000 | 2000 | 756,000 | -4.30 | 15.37 | 668,000 | 88,000 |
|------|-----------|-------|-----------|---------|------|---------|-------|-------|---------|---------|
| 2001 | 4,875,000 | -0.91 | 3,960,000 | 915,000 | 2001 | 750,000 | -0.79 | 15.38 | 662,000 | 88,000 |
| 2002 | **4,847,000** | -0.57 | 3,848,000 | 999,000 | 2002 | **700,000** | -6.67 | 14.44 | 602,000 | 98,000 |
| 2003 | 5,057,000 | 4.33 | 3,952,000 | 1,105,000 | 2003 | 748,000 | 6.86 | 14.79 | 650,000 | 98,000 |
| 2004 | 5,639,000 | 11.51 | 4,280,000 | 1,359,000 | 2004 | 836,000 | 11.76 | 14.83 | 720,000 | 116,000 |
| 2005 | 5,805,000 | 2.94 | 4,375,000 | 1,430,000 | 2005 | 828,000 | -0.96 | 14.26 | 715,000 | 113,000 |
| 2006 | 6,216,000 | 7.08 | 4,836,000 | 1,380,000 | 2006 | 883,000 | 6.64 | 14.21 | 786,000 | 97,000 |
| 2007 | 6,972,000 | 12.16 | 5,421,000 | 1,551,000 | 2007 | 998,000 | 13.02 | 14.31 | 879,000 | 119,000 |
| 2008 | 7,125,000 | 2.19 | 5,659,000 | 1,466,000 | 2008 | 998,000 | 0.00 | 14.01 | 893,000 | 105,000 |
| 2009 | 6,141,000 | -13.81 | 4,865,000 | 1,276,000 | 2009 | 831,000 | **-16.73** | 13.53 | 750,000 | 81,000 |
| 2010 | **6,073,000** | -1.11 | 4,727,000 | 1,346,000 | 2010 | **815,000** | -1.93 | 13.42 | 728,000 | 87,000 |
| 2011 | 7,031,606 | 15.78 | 5,514,907 | 1,516,699 | 2011 | 936,000 | 14.85 | 13.31 | 839,000 | 97,000 |
| 2012 | 7,686,489 | 9.31 | 6,030,053 | 1,656,436 | 2012 | 1,121,000 | **19.76** | 14.58 | 1,008,000 | 113,000 |
| 2013 | 7,943,153 | 3.34 | 6,225,798 | 1,717,355 | 2013 | 1,241,133 | 10.72 | **15.63** | 1,113,959 | 127,174 |
| **2014** | **8,444,030** | **6.31** | **6,532,213** | **1,911,817** | **2014** | **1,284,312** | **3.48** | **15.21** | **1,152,298** | **132,014** |

Source: own processing of the data taken from the Romanian Statistical Yearbooks (2005-2014), National Institute of Statistics (www.insse.ro); * Not available data

Mountain tourism demand is an important segment of tourism demand (domestic and international) in Romania (Ţigu G., 2001), with shares between 13.19% (minimum in 1994) and 15.63% (maximum in 2013). The mountain area is ranked second most popular for the Romanian tourists and third place for the foreign tourists. The evolution of tourist arrivals in the mountain area was oscillating (Figure 2, Table 1) in the analyzed period (1994-2014), corresponding to the situation at national level stated above: a period of sharp decline (1994-2002) with a minimum in 2002 (700,000 tourists), a period of growth (2003-2008) with values around 1 million tourists in 2007 and 2008, a decrease of 100,000 tourists corresponding to the economic crisis in 2008-2009, followed by a period (2010-2014) of strong revival with the maximum value of the entire analyzed period (nearly 1,3 million tourists in 2014).

Tourism flow to mountain area has higher values than those in the official statistics, since we should add other categories such as trippers, tourists staying in their own accommodation facilities, unauthorized and unapproved facilities, at their relatives or friends, etc. (Ţigu, 2001).
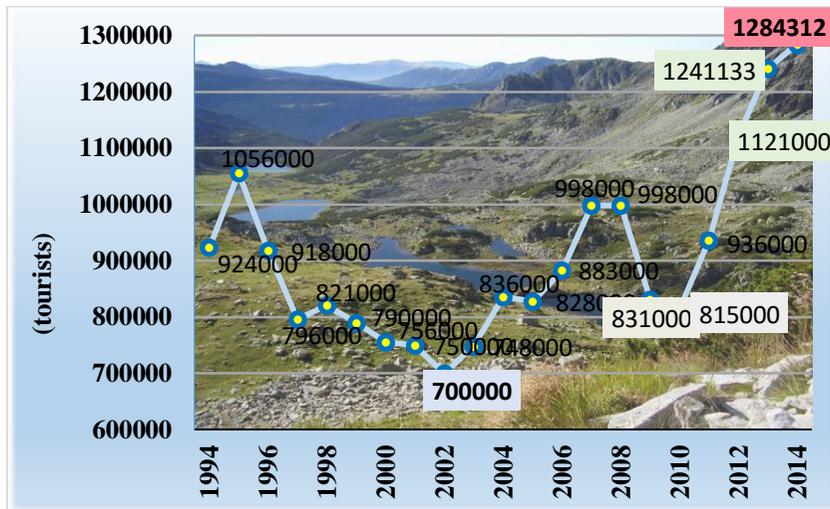
**Figure 2:** Evolution of tourist arrivals in Romanian mountain destinations, over the last 21 years (1994-2014)
Source: own processing using the application Microsoft Excel; own photo of the glacial lakes Lia, Ana, Viorica, Florica in Retezat Mountains National Park

There were also differences between the Romanian and foreign tourists' preferences by destination (Figures 3, 4; Tables 1, 2): the foreign tourists preferred urban destinations (77.72%) and only 6.91% mountain destinations, while the Romanian tourists' preferences were more diversified (43.17% urban tourism, 17.64% mountain destinations, 10.96% seaside resorts, 9.51% spa resorts). The share of foreign tourists in mountain areas was considerably lower than that on national level, even half this value from 2006 until 2014, suggesting their lowering demand for the Romanian mountain areas (compared to the urban destinations they preferred). The Romanian mountain destinations recorded over 100,000 foreign tourists only in 2004, 2005, 2007, 2008 and in the last three analyzed years - 2012, 2013 and 2014 with 132,014 arrivals (the historical peak, registered not only for the mountain tourism, but also for the entire country). In consequence, the mountain is ranked second most popular destination for the Romanian tourists and third for the foreign ones.
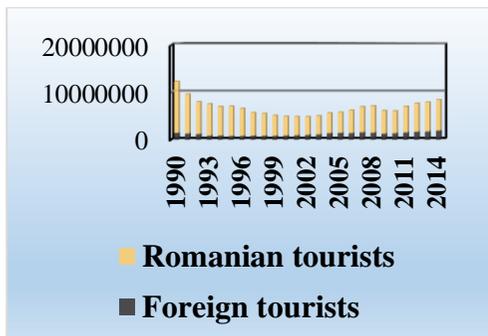


**Figure 3.** Evolution and structure of tourist arrivals in Romania over the last 25 years (1990-2014)



**Figure 4.** Evolution and structure of tourist arrivals in mountain area, in the period 1994-2014

Source: own processing using the application Microsoft Excel; own photo of upper ski area in Azuga mountain resort

**Table 2:** Structure of tourist arrivals by destination in Romania (2014)

| 2014 | u.m. | Total | Sea resorts (except for Constanța) | Spa resorts | Mountain resorts | Danube Delta, including Tulcea | Bucharest and county capitals | Other destinations |
|---|---|---|---|---|---|---|---|---|
| Arrivals | thou | 8,444,030 | 747,103 | 654,519 | 1,284,312 | 65,604 | 4,306,134 | 1,386,358 |
| | % | 100 | 8.85 | 7.75 | 15.21 | 0.78 | 51.00 | 16.42 |
| Foreign tourists | thou | 1,911,817 | 31,325 | 33,562 | 132,014 | 13,482 | 1,485,908 | 215,526 |
| | % | 100 | 1.64 | 1.76 | 6.91 | 0.71 | 77.72 | 11.27 |
| Romanian tourists | thou | 6,532,213 | 715,778 | 620,957 | 1,152,298 | 52,122 | 2,820,226 | 1,170,832 |
| | % | 100 | 10.96 | 9.51 | 17.64 | 0.80 | 43.17 | 17.92 |

Source: own processing of the data taken from Tourism Series, No. 4/2014

Regarding the *origin of foreign tourists* who visited the mountain area in 2014 (Figure 5, Table 3), most came from Europe (64.88%), with higher shares from Germany, Bulgaria, Poland, Spain, Italy, Republic of Moldavia. A significant share of 20% of foreign tourists came from Asia (mostly from Israel with 17%, then Japan, China, and Turkey).

Compared with the previous year, the accommodation capacity increased in 2014 (Table 4). Analyzing the *structure of tourist arrivals in the mountain area by accommodation* in 2014, we noticed that most tourists preferred the hotels (56.86%, compared to the national average of 74.92%), followed by rural boarding houses (15.36% versus 6.38% national average), urban boarding houses (9.94% versus 8.24% national average), villas (6.97% versus 2.73% national average) and chalets (6, 67% compared to 1.11% national average). Tourists' preferences for the mountain accommodation units such as boarding houses, villas and chalets reflected the characteristics of the mountain tourism activities (hiking, climbing, adventure tourism, speleology, ecotourism, rural tourism and so on) and the corresponding accommodation facilities.
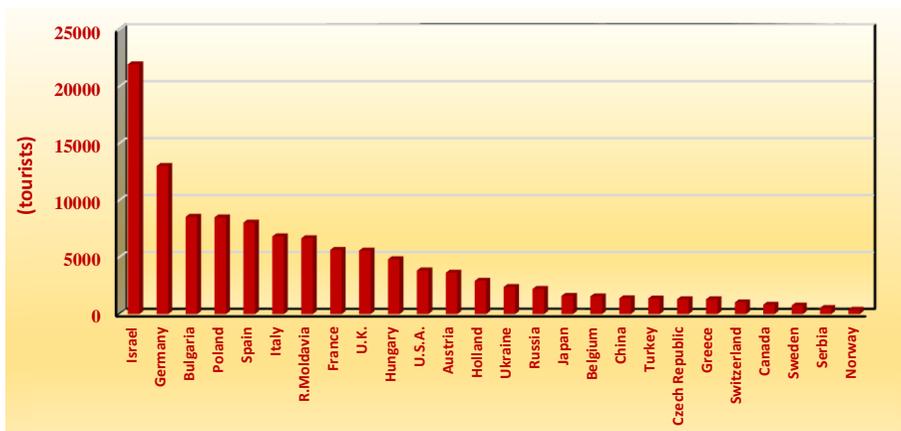


**Figure 5.** Structure of tourist arrivals in the mountain area by country of origin (2014)
Source: own processing using the application Microsoft Excel

**Table 3.** Structure of tourist arrivals in the mountain area by country of origin (2014)

| Country of origin | Foreign tourists | Share of total | Country of origin | Foreign tourists | Share of total | Country of origin | Foreign tourists | Share of total |
|---|---|---|---|---|---|---|---|---|
| Total tourists in the mountain area | 132,014 | 100 | U.K. | 5,579 | 4.23 | Turkey | 1,368 | 1.04 |

701

| Israel | 21,939 | 16.62 | Hungary | 3,839 | 2.91 | Czech Republic | 1,308 | 0.99 |
|---|---|---|---|---|---|---|---|---|
| Germany | 13,015 | 9.86 | U.S.A. | 3,640 | 2.76 | Greece | 1,303 | 0.99 |
| Bulgaria | 8,544 | 6.47 | Austria | 2,923 | 2.21 | Switzerland | 1,029 | 0.78 |
| Poland | 8,500 | 6.44 | Holland | 2,379 | 1.80 | Canada | 826 | 0.63 |
| Spain | 8,040 | 6.09 | Ukraine | 2,216 | 1.68 | Sweden | 749 | 0.57 |
| Italy | 6,835 | 5.18 | Russia | 1,601 | 1.21 | Serbia | 535 | 0.41 |
| Republic of Moldavia | 6,662 | 5.05 | Belgium | 1,557 | 1.18 | Norway | 385 | 0.29 |
| France | 5,640 | 4.27 | China | 1,387 | 1.05 | Other countries | 15,398 | 11.66 |

Source: own processing of the data taken from the Press release no. 24 of February 3, 2015, National Institute of Statistics

We also noticed some differences in foreign tourists' preferences for accommodation in mountain areas: higher shares for hotels (76.68% foreign tourists versus 54.82% Romanian tourists, reflecting their higher expenses for accommodation) and campsites (1.25% foreign tourists versus 0.13% Romanian tourists, reflecting their preference for hiking, climbing, mountain biking and implicitly camping – we should mention the considerable number of foreign tourists hiking the trails that cross the Romanian Carpathians, especially their ridges).

**Table 4.** Structure of tourist arrivals in the mountain area by type of accommodation and by origin of tourists (2014)

| Accommodation type | Total arrivals | Romanian tourist arrivals | Foreign tourist arrivals | Share of total % | Arrivals mountain area | Romanian tourist arrivals mountain area | Foreign tourist arrivals mountain area | Share of total % |
|---|---|---|---|---|---|---|---|---|
| **Total** | **8,444,030** | **6,532,213** | **1,911,817** | **100** | **1,284,312** | **1,152,298** | **132,014** | **100** |
| Hotels | 6,326,198 | 4,599,891 | 1,726,307 | 74.92 | 730,301 | 631,710 | 98,591 | 56.86 |
| Hostels | 188,810 | 162,353 | 26,457 | 2.24 | 17,885 | 16,918 | 967 | 1.39 |
| Motels | 231,740 | 216,068 | 15,672 | 2.74 | 25,059 | 21,387 | 3,672 | 1.95 |
| Inns | 1,336 | 1,336 | 0 | 0.02 | 0 | 0 | 0 | 0.00 |
| Villas | 230,373 | 206,495 | 23,878 | 2.73 | 89,471 | 82,420 | 7,051 | 6.97 |
| Chalets | 93,412 | 88,108 | 5,304 | 1.11 | 72,853 | 69,959 | 2,894 | 5.67 |
| Urban boarding houses | 696,135 | 628,210 | 67,925 | 8.24 | 127,719 | 120,900 | 6,819 | 9.94 |
| Rural boarding houses | 538,388 | 498,469 | 39,919 | 6.38 | 197,291 | 187,749 | 9,542 | 15.36 |
| Campsites | 30,763 | 26,827 | 3,936 | 0.36 | 3,113 | 1,460 | 1,653 | 0.24 |
| Touristic halting places | 14,482 | 13,935 | 547 | 0.17 | 2,347 | 2,264 | 83 | 0.18 |
| Holiday villages | 3,348 | 3,179 | 169 | 0.04 | 2,809 | 2,640 | 169 | 0.22 |
| Bungalows | 17,780 | 17,084 | 696 | 0.21 | 4,750 | 4,334 | 416 | 0.37 |
| School and pre-school camps | 59,523 | 58,774 | 749 | 0.70 | 9,673 | 9,530 | 143 | 0.75 |

Source: own processing of the data taken from Tourism Series, No. 4/2014

In case of *accommodation comfort degree*, most tourists preferred 3 star (48%) and 4 star (28%) units (Table 5) in 2013 (the latest data provided by the National Institute of Statistics).

**Table 5.** Structure of tourist arrivals in the mountain area, by accommodation comfort degree (2013)

| | *Total* | *5 stars* | *4 stars* | *3 stars* | *2 stars* | *1 star* | *uncla-ssified* |
|---|---|---|---|---|---|---|---|
| *Arrivals in mountain destinations* | 1,241,133 | 26,902 | 353,237 | 592,898 | 216,275 | 31,902 | 19,919 |
| *Share of total arrivals in mountain area (%)* | 100.00 | 2.17 | 28.46 | 47.77 | 17.43 | 2.57 | 1.60 |
| *Romanian tourist arrivals in mountain area* | 1,113,959 | 25,161 | 299,570 | 543,254 | 195,343 | 31,590 | 19,041 |
| *Share of total Romanian arrivals in mountain area (%)* | 100.00 | 2.26 | 26.89 | 48.77 | 17.54 | 2.84 | 1.71 |
| *Foreign tourist arrivals in mountain area* | 127,174 | 1,741 | 53,667 | 49,644 | 20,932 | 312 | 878 |
| *Share of total foreign arrivals in mountain area (%)* | 100.00 | 1.37 | 42.20 | 39.04 | 16.46 | 0.25 | 0.69 |

Source: own processing of the data taken from Tourism Series, No. 4/2014

Another important indicator of tourism demand we analyzed was the number of *overnight stays* or *days-tourist*. It is calculated as the sum of multiplications between tourist arrivals and tourism duration expressed in days. The fluctuations of this indicator correspond (of course) to those of tourist arrivals (Figure 6):
- highest values in the period 1993-1995 (more than 3 million overnight stays);
- lowest values in 2002 (1.8 million overnight stays) and 2007 (1.7 million overnight stays);
- an upward trend in the period 2011-2014 (when the overnight stays in mountain destinations registered 2.8 million days-tourist).
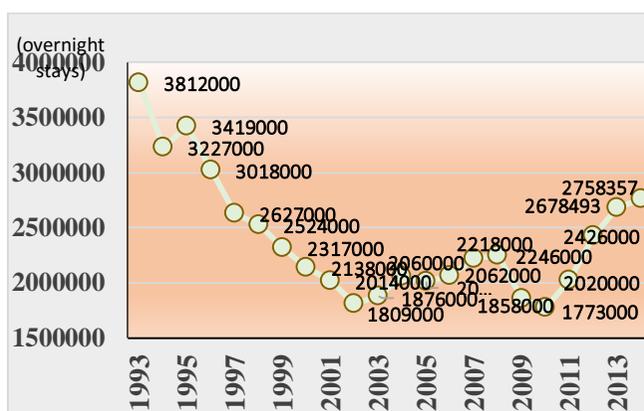


**Figure 6.** Evolution of overnight stays in mountain accommodation units in the period 1993-2014
Source: own processing using the application Microsoft Excel

The *average length of stay* represents the number of days spent by a tourist in a particular destination or accommodation unit. The average stay results from dividing the overnight stays by tourist arrivals. The length of stay depends on several factors: travel motivation, disposable income for tourism, tourist attractions, service quality (Stănciulescu and Micu, 2009).
The average length of stay in the mountain area recorded a downward trend, from more than 3 days in the period 1994-1998, to a long period of stagnation with values of about 2.2 days in the last 7 years we analyzed (Figure 7).
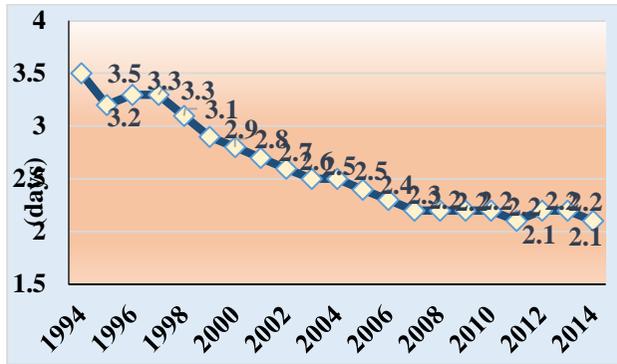
**Figure 7.** Evolution of the average length of stay in mountain destinations, from 1994 to 2014
Source: own processing using the application Microsoft Excel

*Tourism flow density* provides information on how solicited a destination is, and on the indirect measures that should be taken to ensure tourists' satisfaction without disrupting residents' activity or having undesirable effects on the environment. This indicator was calculated by reporting the number of tourists to the surface of the Romanian Carpathians (Tourism flow density $_{2014}$ = 132,014 tourists : 66,300 sq.km = 1.99 tourists / sq.km). Tourism density in 2014 for the Romanian Carpathians registered almost 2 tourists / sq.km, a low value compared to the national average of 25 tourists / sq.km (due to the large extent of these mountains on 28% of the national territory).

Our analysis of tourism demand in the mountain area is supplemented by an indicator of the relation between supply and demand, the accommodation occupancy rate (Stănciulescu and Micu, 2009). The *occupancy rate* expresses the economic efficiency of mountain tourism (Țigu, 2001). It showed a downward trend with stagnant periods since 1992 until 2014 (Figure 8): from 51.4% in 1992, to 40% in the period 1993-1996, followed by another decline and stagnation at 22-23% in the period 2000-2006, a slight increase from 24% in 2008-2009, and a steady 18% until 2014 (18.3%).
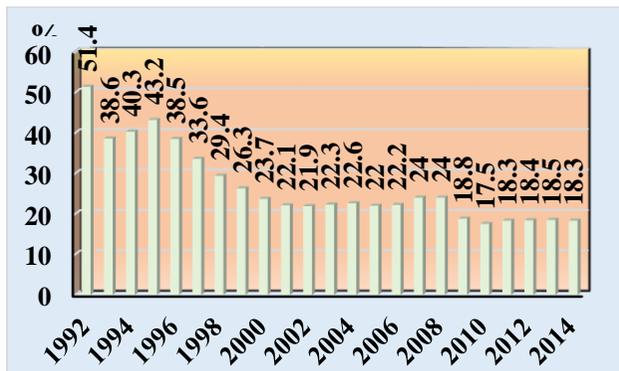


**Figure 8.** Evolution of the occupancy rate in mountain accommodation units, from 1992 to 2014
Source: own processing using the application Microsoft Excel

That decrease was the result of reducing travel demand until 2003, but after that period (when the tourism demand for the mountain destinations grew) there were many and complex causes: management changes in many resorts, poor management of companies and stakeholders involved, as well as tax evasion in tourism (estimated at 40%, in a statement of Elena Udrea, the Minister of Regional Development and Tourism, in 2010). We consider necessary the analysis of this indicator for each tourist resort, since this is an average value at national level and does not reflect properly the different situations

between the large and crowded resorts (like those on Prahova Valley) and the small, local resorts situated in other mountain areas.


## 4. Conclusions

Tourism demand for the Romanian mountain destinations in the last two decades has been analyzed in quantity and evolution, by processing (also graphically) and interpreting the specific tourism indicators (tourist arrivals, tourist structure, tourists' preference for accommodation, overnight stays, average length of stay, accommodation occupancy rate), also making comparisons with the situation at national level.

Mountain tourism demand is an important segment of tourism demand (domestic and international) in Romania, with shares between 13.19% and 15.63%. Although it fluctuated downwards in the post-communist period, the most important indicator of tourism demand for mountain destinations, tourist arrivals, has increased in recent years up to 1,3 million tourists (in 2014). This increasing demand for mountain destinations resulted from a better promotion of winter sports in recent years, a revival of Romanians' preference for winter sports practicing; in parallel, a number of ski areas were arranged or redesigned in many traditional 'white' resorts, and several smaller centers for winter sports emerged or were re-launched.

The mountain area is ranked second most popular for the Romanian tourists and third place for the foreign ones. Most foreign tourists who chose the Romanian mountain destinations came from Europe. The low values of the accommodation occupancy rate was the result of reducing travel demand until 2003, but after that period there were many and complex causes: management changes in many resorts, poor management of the companies and stakeholders involved, as well as tax evasion in tourism.

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# SECTION: FINANCE, BANKING, ACCOUNTING AND AUDIT

*SUB-SECTION: PUBLIC FINANCES*

# INTERCONNECTIONS BETWEEN THE ECONOMIC STRUCTURE OF LOCAL SPENDING AND ECONOMIC GROWTH IN ROMANIA

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**Abstract:** *The issue of the effects of government interventions, explicitly of the taxes and expenditures of local public authorities, has generated substantial debate over time, and still gives rise to numerous controversies in theory and practice. Following the Keynesian path of reasoning, it is, at least theoretically, admitted that it is possible to influence the socio-economic activities and support for economic growth by means of government spending, but different other factors act towards enhancing or, on the contrary, impeding the achievement of the desired effects. From this point of view, the delimitation of competences and public expenditure responsibilities between different levels of government raises the issue of some possible different effects of the central and local governments' interventions. As the macroeconomic stabilization function is usually associated with central governments, and the contribution of local governments often is of lesser importance, less attention is paid to the effectiveness of local administrative actions. In such a context, the paper aims to empirically evaluate the effects of the economic structure of local public expenditures on the local (territorial) economic growth in Romania, over the period 2007 to 2012. The analysis has been conducted at the level of the 42 Romanian counties and on annual data collected from both international and national sources (World Bank, INSSE, The Romanian Ministry of Regional Development and Public Administration).The general method of estimation is the fixed effects estimation technique for panel data models. Our empirical approach is of absolute novelty, especially for Romania, where previous empirical studies have been focusing on the assessment of the overall effects of general government spending. The main findings of our study are that local public expenditures have a negative impact on territorial economic growth, confirmed both for overall expenditures and for various structural components (given the economic structuring of local spending). Striking appears to be the negative impact of the interest payments on local public debt, which calls for the improvement of local government debt management and the selection on the basis of efficiency criteria of local investment projects, in many cases financed by debt issuing. At the same time, the very significant negative impact of social expenditures, currently mandatory expenditures of local governments, draws attention to the need to reconsider public policies and the relationships between different public budgets. Our findings also confirm the unproductive character of local transfer and goods and services expenditures, for which the results are to be interpreted as an alert signal to Romanian local authorities.*

**Keywords:** local public spending; economic structure; interest expenditures; local economic growth; Romanian counties; fixed effects estimation

**JEL Classification:** H72; O40

## 1. Introduction

The issue of the degree and pace of economic development of a statal community, exacerbated in times of crisis, is generally associated in political and scientific debates with central authorities and their revenues and expenditures implicitly, as a result of assuming the "musgravean" vision on public authorities' role and the assignation of responsibilities to different administrative tiers. At the same time, however, the real issues of development are confined and express their effects at territorial level, against the background of some inherent disparities of economic potential and development, requiring, in practice, for the local policy-makers to act as agents of development, and for the scientific community to document and analyze their effective contribution to economic growth. Under these conditions, a core research problem becomes that of investigating the specific interconnections established between local public interventions and economic growth, namely of identifying the linkages and the extent to which local public expenditures are contributing to economic development, complemented or with the support of central governments' spending.

The aim of our paper is to identify and analyze, considering the accepted theoretical background, the links established between local public spending (in economic structure) and local economic growth, assuming that local expenditures' prioritization is carried out in accordance with the attribute of local autonomy and, implicitly, with the real development needs of subnational communities.

The relevant research papers in this field are generally seeking, in line with the above-mentioned perspective, to analyze the impact of general or central government expenditures on economic growth, especially focusing on determining whether they are productive or unproductive, while the issue of the effects of local public spending is almost never distinctively approached, and the results are not uniform ones. Thus, Baro (1990, 1991) finds evidence for a positive correlation between public expenditures and long-term economic growth, and his results are confirmed by other studies, such as Easterly and Rebelo (1993) for public transport and communications expenditures, Gramlich (1994) for public infrastructure expenditures, Alexiou (2009) for capital spending and Wu, Tang, and Lin (2010), with some reserves concerning low-income countries. Also, Morrison and Schwartz (1996) find that public expenditures with investments in infrastructure create significant direct benefits for manufacturing firms and lead to the increase of productivity, as source of global economic growth. At the same time, some other studies fail to confirm a positive correlation between public spending and economic growth, or find evidence only for a very weak correlation, like that of Kormendi and Meguire (1985), Levine and Renelt (1992), Slemrod, Gale and Easterly (1995) Agell, Lindh and Ohlsson (1997). Moreover, other papers (Landau, 1986; Scully, 1989; Evans and Karras, 1994) find the presence of a negative correlation.

Considering the most common views and results found in literature, the assumptions on which we intend to check are: local government expenditures with public employees and goods and services are not generating local economic growth; the interest payments on local public debt adversely affect local economic growth; social welfare spending, as transfer and also mandatory expenditures, do not influence local economic growth; local capital expenditures have a positive contribution to local economic growth.


## 2. Some Stylized Facts About Local Government Expenditures in Romania

The average amount of local public spending of Romanian counties is a small one (below 10% of local GDP), perhaps even contradictory to the general trend towards decentralization and local autonomy strengthening, highly supported in public discourses and policy-making. As can be seen in Figure 1, over the period of our analysis the average ratio of counties' local expenditures to GDP failed to exceed 10% even though, since 2009,

the expenditures from external grants have been introduced into local budgets, and their share exceeded 1% of GDP over the last two years (2011-2012).
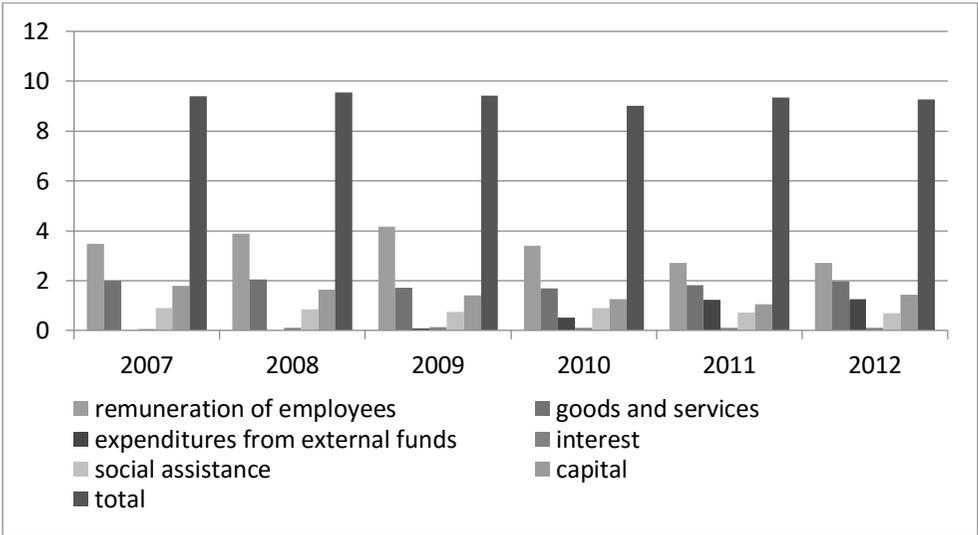


**Figure 1:** Average local public expenditures for the 42 Romanian counties (% of local GDP)
Source: authors' calculations, data from the Romanian Ministry of Regional Development and Public Administration (2015) and INSSE (2015)

With regard to the economic structure of these expenditures, the compensation of public employees component best explains the overall trend highlighted in Figure 1, recording a reduction from 4.17% of GDP in 2009 to 2.72% in 2012. The main measures with incidence on this dynamics, approved under the need for budgetary consolidation in the context of the financial crisis, are those concerning public layoffs and salary cuts (with 25%) with effects since 2010. A similar downward trend is found in the case of local public spending on goods and services, with the sole difference that they have resumed their growth trend in 2011.
The interest payments on local public debt, which have a fairly low share in overall local budgets expenditures, have not experienced significant changes over the period of our analysis. An important effect of the crisis, resulting from the contraction of local economic activity and tax base, is the reduction of the real (effective) indebtedness capacity of local communities. Together with the revision of the conditions and authorization procedure for local borrowing initiated by central authorities, this allowed only for a limited growth of local government debt.
Amid restraining economic activity, the need for social assistance benefits grew causing the increase of corresponding local expenditures in 2010. However, the issue of their sustainability over time drew attention to the need for a revision, which resulted in a subsequent reduction of these expenditures.
Significant also appears to be the evolution of local capital spending, whose growth occurred very late (only in 2012), pointing to a delayed reaction of public authorities to the crisis at the level of local communities.

**Table 1:** Total local public expenditures by counties (% of local GDP)

| County | Year | | County | Year | |
|---|---|---|---|---|---|
| | **2007** | **2012** | | **2007** | **2012** |

| Alba | 7.60 | 8.07 | Hunedoara | 8.18 | 8.44 |
|---|---|---|---|---|---|
| Arad | 7.46 | 8.11 | Ialomita | 10.54 | 7.64 |
| Arges | 7.12 | 8.09 | Iasi | 9.19 | 8.24 |
| Bacau | 9.54 | 10.15 | Ilfov | 6.40 | 6.57 |
| Bihor | 8.36 | 9.64 | Maramures | 10.19 | 9.44 |
| Bistrita-Nasaud | 8.89 | 12.12 | Mehedinti | 10.87 | 14.63 |
| Botosani | 12.51 | 14.88 | Bucuresti | 6.22 | 5.06 |
| Braila | 8.08 | 9.64 | Mures | 8.79 | 9.01 |
| Brasov | 6.49 | 10.48 | Neamt | 10.55 | 11.45 |
| Buzau | 10.48 | 8.68 | Olt | 11.48 | 10.10 |
| Calarasi | 12.24 | 9.66 | Prahova | 7.31 | 7.27 |
| Caras-Severin | 9.09 | 9.84 | Salaj | 10.10 | 10.90 |
| Cluj | 6.33 | 6.21 | Satu-Mare | 9.82 | 10.15 |
| Constanta | 6.96 | 6.71 | Sibiu | 7.88 | 7.54 |
| Covasna | 8.79 | 9.65 | Suceava | 10.81 | 13.00 |
| Dambovita | 8.40 | 8.09 | Teleorman | 10.79 | 9.59 |
| Dolj | 8.73 | 8.72 | Timis | 6.52 | 6.90 |
| Galati | 9.60 | 9.04 | Tulcea | 11.94 | 9.84 |
| Giurgiu | 13.63 | 9.90 | Valcea | 9.80 | 10.29 |
| Gorj | 7.30 | 6.66 | Vaslui | 16.17 | 12.79 |
| Harghita | 9.77 | 9.97 | Vrancea | 12.57 | 10.17 |

Source: authors' calculations, data from The Romanian Ministry of Regional Development and Public Administration (2015) and INSSE (2015)

The data in Table 1 highlight significant differences and interesting situations at territorial level (the ratio of local spending to GDP ranged between 5.06% in Bucharest in 2012 and 16.17% in Vaslui in 2007). These shares can be considered the expression of high intra-regional (between counties) development disparities, which is a notorious problem for Romania. To confirm this, we can notice that the most consistent shares of local public expenditures belonged to the least developed counties (e.g. Vaslui, Botosani, Giurgiu), while the most developed ones (Bucharest being the most notorious case) recorded the lowest shares.

## 3. Data and Methodology

Our paper analyzes the effects of local governments' public expenditures on territorial economic growth for a panel of 42 Romanian counties, over a period of 6 years (2007-2012). The data have been collected from both international and national sources, namely World Development Indicators database (World Bank, 2015), Tempo-online database (INSSE, 2015) and "The situation of the execution of the revenues and expenditures of local budgets for territorial-administrative units (2000-2012)" (The Romanian Ministry of Regional Development and Public Administration, 2015).

The model is a standard growth regression model, where different types of local public expenditures were included as explanatory variables for local economic growth, as depicted in equation (1).

$$gdp_{i,t} = \alpha_i + \beta_1 GDP_{i,t-1} + \beta_2 pop + \sum \gamma_j X_{j,i,t} + \sum \delta_k Z_{k,t} + \rho_p Ch_{p,i,t} + \vartheta_i + \varepsilon_{i,t} \quad (1)$$

Where:

- $i$ refers to the county ($i = \overline{1,42}$)
- $t$ refers to the year ($t = \overline{1,6}$)
- $gdp$ is the dependent variable (the local GDP per capita growth rate)
- $GDP$ is the natural logarithm of the local GDP per capita

- *pop* is the population growth rate
- $X_j$ is a set of county-specific control variables (local variables)
- $Z_k$ is a set of country-specific control variables (macroeconomic variables)
- $Ch_p$ is a set of local public expenditures variables
- $\beta_1, \beta_2, \gamma_j, \delta_k, \rho_p$ are the coefficients of the explanatory variables
- $\alpha$ is the constant term
- $v_i$ are the county-specific intercepts
- $e_{i,t}$ are the observation-specific errors

In our model, the dependent variable is represented by the local GDP per capita growth rate, at the level of Romanian counties *(gdp).* As explanatory variables we considered the lagged value of the natural logarithm of local GDP per capita *(L.GDP),* the growth rate of the population of each county *(pop),*several local public expenditures variables, expressed as % of local GDP (total local expenditures *(ch_tot)*; local expenditures with public employees *(ch_empl);* local expenditures with goods and services *(ch_goods);*local expenditures with interest payments on local public debt *(ch_interest);*local expenditures with social assistance *(ch_socasist);* local public capital expenditures *(ch_cap)*), as well as some county-specific and macroeconomic control variables.

The selection of control variables was performed considering relevant studies on the determinants of economic growth. Also, for the county-specific control variables, the availability of data played an important role. Therefore, our model includes two county-specific control variables (the gross investments in local units in industry, constructions, trade and other services, expressed as % of local GDP, as proxy for local private investments*(invest),* and a variable expressing local infrastructure development, determined as the geometric mean of the density - the length per square kilometer of land - of railway lines and highways *(infras)*)and four macroeconomic control variables (the sum of imports and exports as % of GDP, for the degree of openness of the economy *(exp_imp),* the real effective exchange rate index *(exch),* the real interest rate *(interest)* and inflation measured by the GDP deflator*(infl)*).

Given the quite high number of cross-sectional units (42 counties) and the issue of heterogeneity, the fixed effects estimation technique for panel data models was selected. The results of the Hausman test confirmed that the fixed effects estimation technique is to be preferred to random effects. As the results of the modified Wald test for groupwise heteroskedasticity in fixed effects regression models rejected the null hypothesis of homoscedasticity, we used Huber/White estimators to control for heteroskedasticity.

## 4.   Results and Discussions

The results of our regression analysis are presented in table 2. In model (1) the total amount of local public expenditures of each county is included as explanatory variable, while in model (2) different types of local public expenditures (by economic structuring) are considered as independent variables, along with other county-specific and macroeconomic determinants of local economic growth rates.

**Table 2:** Results of regression analysis for per capita local GDP growth rate

|  | Model 1 (total local public expenditures) | | Model 2 (local public expenditures - economic structure) | |
|---|---|---|---|---|
| L.GDP | -99.68086*** | (-12.17) | -96.20451*** | (-14.22) |
| pop | -0.2913205 | (-0.20) | 1.095438 | (0.77) |
| **ch_empl** | - | | **-10.82082*** | **(-4.39)** |
| **ch_goods** | - | | **-10.27562*** | **(-5.03)** |

| | | | | |
|---|---|---|---|---|
| ch_interest | - | | -19.54373** | (-2.26) |
| ch_socasist | - | | -7.310706*** | (-3.47) |
| ch_cap | - | | -1.181482 | (-1.18) |
| ch_tot | -4.929423*** | (-7.09) | - | |
| invest | -0.0107211 | (-1.13) | 0.010647 | (1.07) |
| infras | 40.27132 | (0.69) | 52.89276 | (0.93) |
| exp_imp | 2.445433*** | (13.10) | 2.011415*** | (11.31) |
| exch | -1.511006*** | (-9.01) | -1.793403*** | (-11.17) |
| interest | 5.82529*** | (10.62) | 7.041235*** | (10.18) |
| infl | 6.845844*** | (12.93) | 8.762787*** | (12.13) |
| cons | 904.9896*** | (10.45) | 930.0719*** | (12.49) |
| N | 252 | | 252 | |
| R-squared | 0.8727 | | 0.8905 | |

Notes:

heteroskedasticity-robust standard errors (Huber/White estimators)

t statistics between parentheses

$* p < 0.1$, $** p < 0.05$, $*** p < 0.01$

Source: authors' calculations using Stata

Our estimation results indicate a negative impact for both total local spending and different structural components (considering the economic structuring of public expenditures), the extreme case being that of interest payments (their negative effect is double the one of some other expenditures, such as with the remuneration of public employees or with goods and services).

Regarding the expenditures with the remuneration of public employees, our study confirms the initial hypothesis of a negative impact on local economic growth, and the recorded value of the coefficient of this explanatory variable shall be, in our opinion, interpreted as a signal of alert to public policymakers. It is reasonable to accept that an oversized local government sector can have, over the long run, a negative impact on local economic growth, by redirecting an increased volume of financial resources to local spending as those with the salaries of public employees. For public policy, the signal should be to carefully reconsider and rationalize the amount of such expenses and their share in overall local budgets spending, in relation to other kind of local expenditures, and the optimization of the public personnel structure should be the starting point.

Similar results are found in the case of local spending with goods and services, the negative effects identified (that confirm the hypothesis of our study) being very close to those of local spending with public employees. The explanation stems from the fact that the volume of these expenses, in principle correlated with the current needs of physical maintenance of the local government sector, reflects either an oversized administrative apparatus in relation to the actual needs of the local community, or an excess of procurements in relation to the real needs. For the Romanian counties and the period under study, the result is extremely relevant, at least partially confirming the notorious criticism on the effectiveness of local authorities' procurement system or on the lack of concern for the rationalization of public administrations' consumption. As policy recommendation, it is necessary to design and enact by law rational standards of local expenditures, in order to minimize the above mentioned negative impact and foster long-term economic growth.

An extremely sensitive situation is that of the interest payments on public debt, the costs associated with local borrowing being, by nature, unproductive ones, thus requiring for a careful management. The estimated coefficient of this explanatory variable validates the hypothesis of our study, pointing to a very significant negative impact of interest expenses on the local economic growth rate for the case of Romanian counties. This raises the issue

of ensuring a more efficient use of borrowed resources to offset this negative impact. Unfortunately, the effects of capital expenditures (according to national regulations, local borrowing should be used only to finance public investment projects or for debt refinancing purposes) on local economic growth are found to be negative and, even if of low intensity, it is necessary to pay greater attention to the prioritization of expenditure projects and investment selecting. From this point of view we should notice that, although Romanian local authorities consistently invoke efforts or results regarding local infrastructure modernization, theoretically associated with a positive impact on economic growth, the actual investments (construction of sports halls, repairs of schools, inter-county roads used mostly by locals etc.) are not effectively materialized in facilities that encourage economic activities in the respective jurisdictions, although they could prove to have a positive impact on the longer term.

For Romania, the question of social assistance expenditures is often identified as problematic in the literature, in the sense that the benefits paid are not conveniently systematized and do not realistically support the strengthening of beneficiaries' incentive to work. The negative impact on economic growth we have identified is significant and should be treated as an alert signal for public authorities and policies (that should be consequently reconsidered). In this regard, we find questionable the effective procedure of social assistance funding, the eligibility of beneficiaries being locally established, while the necessary financial resources are transferred from the state budget (mandatory spending). An eventual shift to local budgets of the social assistance financing responsibilities, accompanied by the corresponding assignment of new income sources, could raise the responsibility of local decision makers and reduce the negative impact of these expenditures on economic growth.

## 5. Conclusions

The analysis we have conducted on the effects of local public expenditures on economic growth at territorial level, for the case of Romanian counties and over the period 2007 to 2012, revealed a substantial negative impact. This is mostly determined by the negative effects of local spending with the remuneration of public employees and goods and services. Although the interest payments on local public debt were found to have a greater negative impact than the above categories (given the almost double value of the estimated coefficient), their reduced share in overall local budgets expenditures diminishes their actual effect.

Striking and inconsistent with our expectations was the negative impact found for capital expenditures, proving the imperative of focusing on investment projects selecting and on increasing their efficiency. Also, the negative impact found in the case of social assistance expenditures calls for the reconsideration of their funding procedure when designing public policies.

However, the results of our empirical analysis should be assessed with caution, as some distortions may be induced by the quite small time framework (resulting from the lack of comparable data). At least for the case of capital expenditure, an analysis of the impact on medium and long-term local economic growth should be conducted to complement short-term analysis. As future research direction we intend to achieve this aim, as new data will become available.

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# FUNCTIONAL ANALYSIS OF THE HEALTH SECTOR IN ROMANIA

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### Abstract

*This paper comprises an assessment of the Romanian health financing policy and a detailed analysis of income and expenditure trends over the past seven years. The current situation of the health system is evaluated by reviewing the existing health legislation and documents on public health policies from Romania and from abroad, by analyzing the official statistics (the Romanian Yearbook of Health Statistics, Who database) and by performing a healthcare system financial analysis. Although the financial efforts of the Romanian state to support the health system have increased, almost all the incomes and expenditures of the health care system having recorded significant increases, the population perception on health services worsened. Financing the health system continues to be inadequate and used in an ineffective way. Health is an essential component of well-being with major socio-economic implications. The organization and functioning of the health system depends on ensuring adequate funding. Romania must develop its health strategy in the context of European Union policies. These policies are based on values and principles such as promoting universal protection against financial risk, promoting a more equitable distribution of the financing burden, promoting equitable provision and use of services relative to need, improving the transparency and accountability of the system to the public, promoting quality and efficiency in service delivery, improving administrative efficiency, while ensuring the financial sustainability of the health system.*

*In this context, in order to support a financially sustainable and high performing health system, the paper includes recommendations for increasing the public incomes in the health insurance system and options to streamline the healthcare services and expenses in the future.*

**Keywords:** health system, income, expenditure, health care reform, funding, budget.

**JEL Codes:** I13, I15, I18, G28

### Introduction

The incomes and expenditures of the Romanian public health sector have recorded a continued upward trend. Currently, the public health resources are the state budget, the budget of the National Health Insurance (UNSHIF), local budgets, own incomes, external credits, external subsidies, donations and sponsorships. In Romania, as much as 80% of the overall resources assigned to the healthcare, are public resources, while 20% are private. Most of the public resources - 85% are managed by the Unique National Social Health Insurance Fund (UNSHIF). A large portion of the public income assigned to healthcare consists of employers / employees / pensioners / freelancers sponsored insurances. Romania has lowered the health insurance contribution levels - from 12.5% to 11% - right before the economic crisis set off in 2008, subsequently to 10.7% since 2009. The effects of the reduction have cumulated with those of the economy decline and they resulted in the nominal decrease of the revenues from the healthcare contributions. At the same time, it should be noted that certain population categories have been excluded from the payment of contributions, without allocating in the same time equivalent funds to compensate for these exemptions from paying the contribution to health. The current situation, in which about 6 million tax payers pay for 19 million insured persons is not sustainable in the long run.

The public health system benefits of incomes from the excise imposed on tobacco

and alcoholic beverages (informally called "vice tax") and the tax on incomes from selling totally or partially UNSHIF subsidized drugs imposed to manufacturers, importers and commercialization licenses holders (known as "claw back").

Another important resource of the health sector is represented by the private expenditure of the population achieved through private health insurances or direct payments (i.e., co-payment and service fees). The private health insurances are insignificant as a percentage of the total private spending and so the proportion of people who pay directly out of pocket for the health services is increasing. The consequence is a reduced access to the necessary health services, especially for the low-income population.

Currently the Romanian health system does not guaranty performance in exchange for used resources. The patient dissatisfaction is high and waste is generalized. The health system is experiencing an arbitrary, inefficient and inequitable use of resources, the cost - efficiency studies are missing or are not used for resource allocation, the allocation process is not transparent and clear criteria are missing or not constantly used. It is necessary that the limited resources of the health system to provide the health services performance and quality and be used more efficiently.

In this context, the system of care needs a real reform to ensure all citizens equal access to health care quality and cost effective.

### The resources of the healthcare system
In an economy, the level of expenditure on healthcare is indicative of the development level. Economically advanced countries allocate significant resources to finance the health sector as a prerequisite for a long-term sustainable development. In contrast, in some developing countries in Europe, including Romania, the health expenditure level as a percentage of GDP stands at a level well below the European average. According to WHO in Romania, the total health expenditure is less than 5% of GDP compared to an EU average of 9.6%. (WHO European Health for All Database, Updated April 2014)

Given the current financial situation, it is necessary a continued and predictable growth of the financial resources allocated to the health system. This situation requires a change of paradigm by which to agree that health is an investment that produces benefits and also increases of the costs. Investing in health contributes to economic development and ultimately, increases the country's national budget.

In our country, of the total resources allocated to health, 80% are public and 20% private. Most of the public resources - 85% are managed by the Unique National Social Health Insurance Fund (UNSHIF). The vast majority of private resources come from direct payments, co-payments or payments for services.

**The average structure of UNSHIF incomes
2007 -2014**

- Employers' contributions - total
- Employees' contributions
- Pensioners' contributions
- Subventions from the state budget for covering deficits
- Subventions from MH's own income

42%
41%
3%
10%
4%
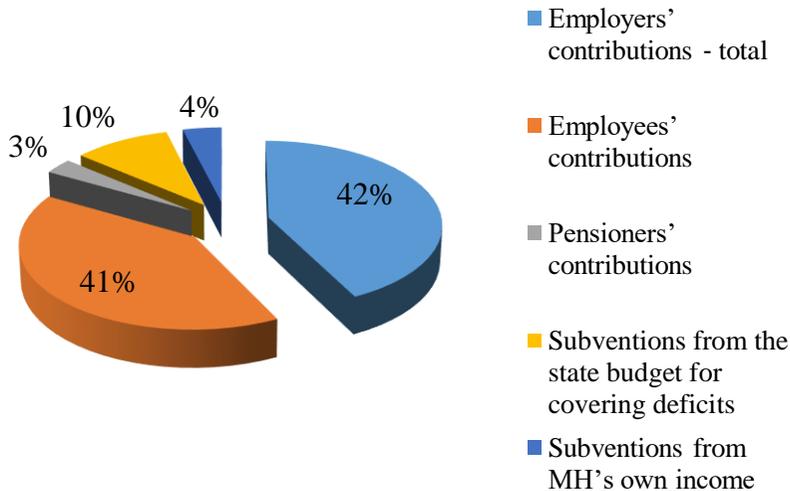
Source: Compiled by the author based on National Health Insurance House database

The UNSHIF revenues consist of the health insurance contributions and subsidies from the state budget and from the own revenues of the Ministry of Health.

Nominally, the total revenues of the Fund were close to 23 billion lei in 2014, by almost 75% more than in 2007. The evolution has not been continuous all this time. The reduction of the contribution quotas to the health insurance and the economic decline in 2008 resulted in the nominal decrease of the revenues from the health contributions in 2009 and 2010. In 2011, the total revenues from contributions were higher than in 2008, due to the health insurances paid by pensioners.

**The tendencies of the main income sources of UNSHIF in the period 2007 - 2014 (Billion Lei)**
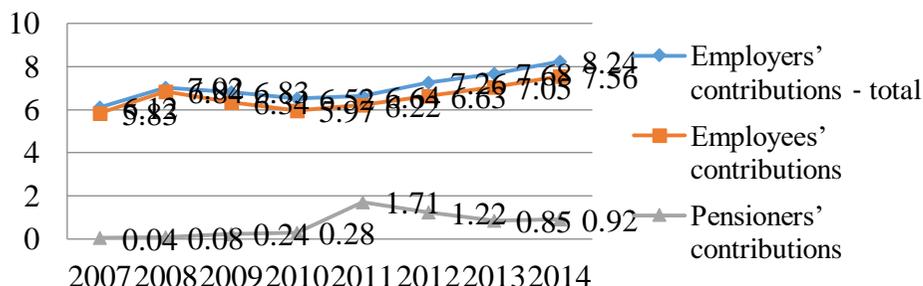


Source: Compiled by the author based on National Health Insurance House database

Because of the unfavorable economic climate, the UNSHIF debts increased from 3 billion lei at the end of 2007, to more than 7 billion at the end of 2014. According to the Ministry of Public Finance databases, the state companies accounted for about 70% of the total outstanding debts.

**Tendencies of UNSHIF's total income and debts**
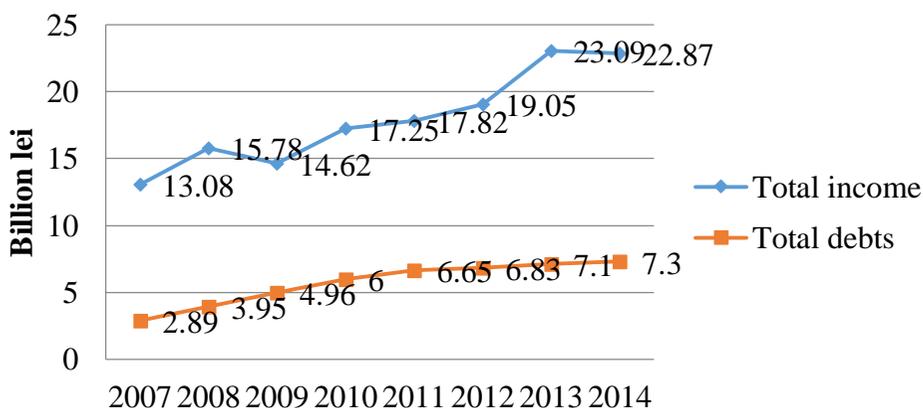


Source: Compiled by the author based on National Health Insurance House database

**Utilization of the healthcare system resources**

Of the more than 26 billion lei public expenditures for health in 2014, 22.9 billion lei were made by UNSHIF within the health insurance system, 3.7 billion lei by the Ministry of Health and 0.2 billion lei by the local administrations.

The Ministry of Health allocates sums for some national health programs, medical care in the emergency facilities, the payment of the salaries for the residential doctors and for the doctors in the medical school cabinets for the operation of the medical and social

units through endowments with equipment and investments in the public sanitary facilities. The local administrations allocate their own funds for their expenses related to goods and services, endowments with equipments and investments. (Efor-Mind Research & Rating Report, Income and Expenditure of the Healthcare System, May 2012)



**Public expenditure on health, structured onto sources (Billion lei)**
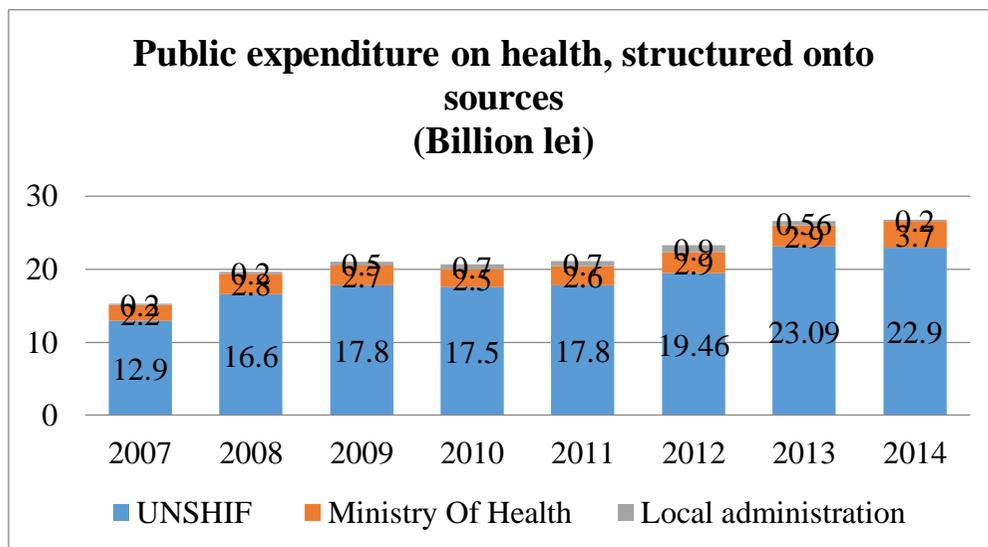
Source: Compiled by the author based on National Health Insurance House database

In the structure, the highest expenditures of UNSHIF are made for hospitals. The following subchapter of expenses is the one with compensated drugs, whose average share in the last 7 years was 31%. The primary medical care has limited resources, 12% of the UNSHIF. This situation is the consequence of the unbalanced development of the health system, when the focus was on the hospital care.



**UNSHIF expenditure 2007 - 2014**
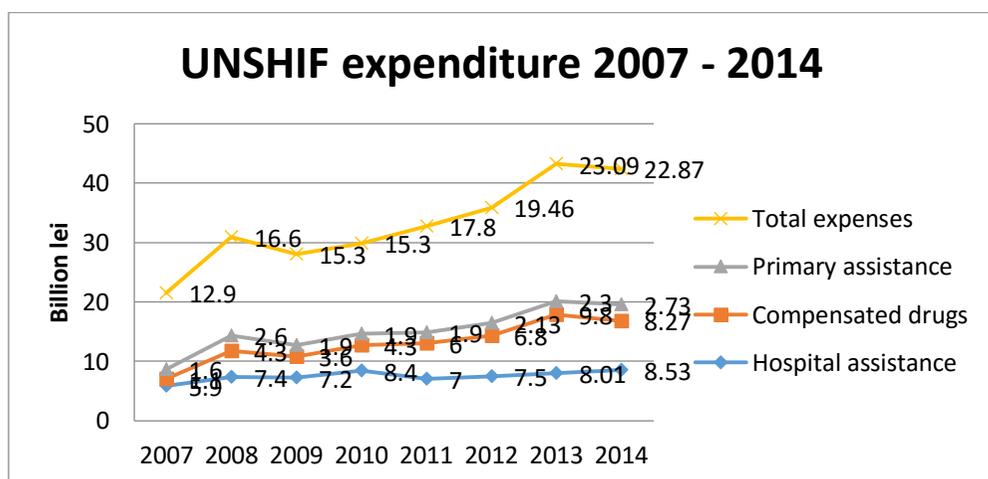
Source: Compiled by the author based on National Health Insurance House database

Clear criteria used to allocate resources between different types of health services (such as primary care vs. hospital care or curative care versus health promotion) between different areas of the country and between different healths institutions are vital to ensure fairness in the health system functioning, and to provide the development of the health

system. (A health system focused on the needs of citizens, Report of the Presidential Commission for review and public health policy of Romania, Bucharest 2008)

## Average structure of UNSHIF expenses 2007 - 2014

Other expenses 15%

Primary assistance 12%

Compensated drugs 31%

Hospital assistance 42%
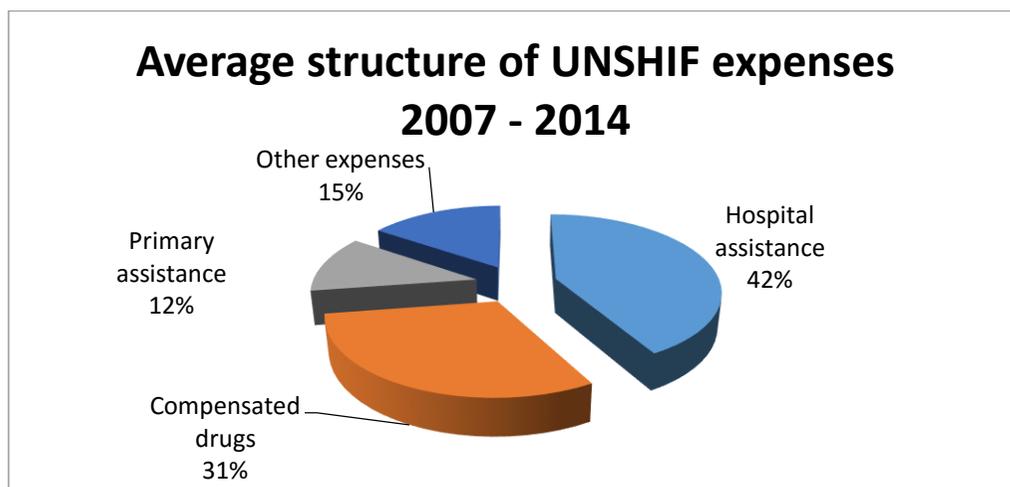
Source: Compiled by the author based on National Health Insurance House database

**Recommendations for strengthening the financing policy of the Romanian healthcare system**
This part of the paper presents a series of proposals for the increase of public resources allocated to healthcare system and options to streamline the healthcare services and expenses in the future, based on the national experience and the EU legislation and also taking into account the Romanian political, economic, institutional and cultural context.
One simple option of increasing the government revenue for health would be to raise the health contribution quotas once the economy has restarted to grow. The extension to 10.7% of the health insurance contribution of the self-employed and of those with incomes from independent activities and the extension of the health contributions to a larger number of incomes from pensions would also increase resources in the health system. In addition, with a define scope of improving the health of the population and thus to reduce the need of medical services, it is necessary to establish a tax on food and drinks with potential negative effect on health. Another important recommendation indicates the co-payment as an instrument necessary in order to temper the appetite of the Romanians for healthcare services and their reorientation towards primary care.
Moreover, the private sector must gradually acquire a significant role in the Romanian health system. The participation of the private sector in the health insurances market is necessary for several reasons: (1) it would provide additional income to the system, for covering certain services beside the basic package; (2) it would force the private and public suppliers to comply with superior quality standards and (3) it could lead to a decrease in the prices of the medical services. (Efor-Mind Research & Rating, Income and Expenditure of the Healthcare System, May 2012)
The options that streamline the healthcare services and expenses in the future should take into consideration the following aspects: the basic package should include only essential services that can be funded with income realized by UNSHIF; the privatization of the hospitals with major consequences for the quality of services and use of resources; the investment in the primary medical assistance in order to control the health expenditure on long end medium term; measures which could increase the national health programmes' efficiency, respectively: the acquisition of certain drugs by public tender at national level or considering the profilactic programmes as priorities by the Ministry of Health.

In conclusion, all these proposals for reforms of the healthcare system are necessary in order to put in line the public financing of health in Romania with the practices in the European Union.

## Conclusions

The analysis of the Romanian health system has emphasized major dysfunctions of the system that directly impact the health status of the population. The Romanian healthcare system has been growing rapidly and constantly since the beginning of the 90's and has identified as one of the National Key Economic Areas under the National Plan of Development 2014-2020. Healthcare in Romania has undergone radical transformations. However, today's healthcare system is continuously facing poor achievement of system function, lack of comprehensive long term strategy, low levels of public investment in health, inefficient used of resources, improper health infrastructure.

In this context, the organization and financing of the health system must be made so it can ensure that the funds are used in the most efficient way to provide the elementary patient rights: the right to quality care and medical treatment in accordance to their needs. In other words, the health financing policy should focus on identifying solutions for rising sufficient resources for health while ensuring efficiency in resource use.

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# IMPACT OF ROMANIAN HIGHER EDUCATION FUNDING POLICY ON UNIVERSITY EFFICIENCY

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**Abstract:** *The issues of higher education funding policy and university operating efficiency are hot points on the actual public agenda worldwide as the pressures exercised upon the public resources increased, especially in the aftermath of the last economic crisis. Concerned with the improvement of the funding mechanism through which government allocates the public funds in order to meet the national core objectives within the area of higher education, the policy makers adjusted the funding policy by diversifying the criteria used in distributing the funds to public universities. Thus, the aim of this research is to underline both the impact and the consequences the public funding patterns of higher education have on the relative efficiency of public funded higher education institutions, across time. Moreover, the research conducted aims to determine whether the changes occurred within the Romanian public funding methodology of higher education institutions improved the relative efficiency scores of public funded universities, before and after the economic crisis of 2008. Thus, on one hand we have underlined the changes brought to the Romanian public funding mechanism of higher education during the years of 2007, 2009 and 2010 compared to the year of 2006, using the content analysis, and on the other hand we assessed and compared the relative efficiency scores of each selected public funded university using a multiple input - multiple output linear programming model, by employing the Data Envelopment Analysis technique. The findings of the research undertaken emphasized that a more performance oriented funding mechanism improves the efficiency scores of public universities. The results of the research undertaken could be used either by the policy makers within the area of higher education or by the administrative management of public universities in order to correlate the funding with the results obtained and/or the objectives assumed by both the government and the higher education institution as well as to optimize the public funding policy designed according to the degree of efficiency each university accomplishes in using the allocated funds.*

## 1. Introduction

Given the international and European changes that occurred in the last decades within the area of higher education, the issues of financial autonomy and public responsibility universities enjoy were also incorporated into the national regulations regarding the Romanian higher education system (National Law for education, 1995 and 2011). As a consequence, significant system-level and also institutional-level changes, concerning the funding mechanisms through which the public funds allocated to the higher education system are granted to public universities, emerged.

Thus, the national funding mechanism was improved almost annually. More exactly, starting with the year of 2002, the core funding of universities, covering staff and material expenses, was allocated using a funding formula considering, along with the number of equivalent students and the cost indexes for each higher education major field of study, also the aggregate qualitative indicators determined for each public university (Ministry of

Education and Research, 2002).

The diversification registered, after 2003, within both the number as well as the type of qualitative indicators, used for the allocation process of public resources to universities, emphasizes the interest policy makers have in tying the public funding to first quality in higher education and secondly to institutional performance. As Barnetson and Cutright (2000, p.281) underline, using performance indicators might lead to the appearance of financial rewards and punishments, through which the institutional behaviour of educational institutions could be manipulated. Another view upon the reasons for introducing performance indicator within the field of higher education refers to identifying the most efficient way to allocate scarce resource in this field, to manipulating/controlling the higher education institutions or to determine the universities to improve their operational efficiency (Taylor and Taylor, 2003, p.71).

Also, the issues of funding higher education based on input and/or output measures and that of assessing the impact different reforms had on higher education systems and/or universities raised the interest of numerous researchers (Rabovsky, 2011; Frølich et al., 2010), there is still room for a detailed research on the impact and consequences of a particular national funding pattern on the efficiency of higher education institutions.

Moreover, given the increasing pressure on public resources, especially in the aftermath of the economic crisis of 2008, the public decision makers within the area of higher education oriented the funding mechanism to the institutional performance of higher education institutions.

Though different issues regarding Romanian public funding of higher education captured the attention of several researchers (Miroiu and Vlasceanu, 2012; Vasilache et al., 2012), the scrutinized research papers on this topic do not directly address the impact the public funding policy within the higher education industry had on the operational efficiency of public universities.

But, from a theoretically point of view, after recognising both the positive changes as well as the unintended side effects of using performance-based funding methods for higher education institutions, Liefner (2003, p.469) emphasizes that the way the public resources are distributed to universities influences the behaviour of academics and managers, especially in terms of level of activity performed, types of activities envolved into and type of risks assumed.

Based on these circumstances, throughout this paper we conducted a two stage analysis of the national funding pattern of higher education institutions trying to answer the main research questions, i.e. whether and to what extent the changes occurred within the Romanian public funding methodology of higher education institutions improved the relative efficiency scores of public funded universities, before and after the economic crisis of 2008.

Thus, on one hand we underlined the changes brought to the Romanian public funding mechanism of higher education during the years of 2007, 2009 and 2010 compared to the year of 2006, using the content analysis, and on the other hand, we assessed and compared the relative efficiency scores of each selected public funded university using a multiple input - multiple output linear programming model, by employing the Data Envelopment Analysis technique.

The rest of the paper is organized as follows. In section 2 we present the research methodology and data used. Section 3 presents the results of the empirical research, while section 4 deals with a short discussion upon the results obtained and concludes.

## 2. Data and Methods

The aim of this research is twofold. Thus, the empirical research conducted within this paper uses both qualitative and quantitative data.

As in the first study we underline the changes brought to the Romanian public funding mechanism of higher education during the years of 2007, 2009 and 2010 compared to the year of 2006, the research was based on qualitative data retrieved from legislation and other policy documents within the area of higher education.

The quantitative part of the research aims at assessing the relative efficiency of some Romanian public universities during the selected universities and consists of a Data Envelopment Analysis (DEA). The DEA study was conducted based on publicly available data, reported by the Romanian Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI).

### 2.1. Stage one – Is the Public Funding Mechanism More Performance Oriented?

In order to answer this research question we have consulted a variety of resources, among which the national Law of education, the annual funding methodologies for public universities and other public reports drawn by The National Council for Higher Education Funding (CNFIS).

The content analysis of all the consulted documents was conducted for the years of 2006, 2007, 2009 and 2010, without excluding the years bringing important reforms within the field of funding universities, focusing on the usage of different qualitative criteria/performance indicators in the core funding of Romanian public universities and on the importance input and /or output indicators play within the national funding formula.

### 2.2. Stage two – Does the Public Funding Mechanism Influence University Efficiency?

After evaluating the changes occurred within the funding methodology of Romanian public universities, an individual study was conducted for each of the years of 2006, 2007, 2009 and 2010 to empirically determine the efficiency frontier and to assess the efficiency of each of the selected Romanian universities, employing the non-parametric technique of Data Envelopment Analysis, first developed by Charnes et al. (1978).

The mathematical linear programming model used for determining the efficiency scores registered by the universities is an input-oriented one (using variable returns to scale), as we want to find out the proportion in which the input measures could be reduced, in efficiency terms, while obtaining the same results.

Based on the notation and exposition of DEA provided by Din and Cretan (2010), the input-oriented VRS model presented below identifies the VRS frontier, the increasing returns to scale, the constant returns to scale, the decreasing returns to scale, the inefficient units as well as their efficiency target (achieved by reducing inputs).

$$
\left|
\begin{aligned}
&\min\left(\theta - \varepsilon\left(S^- + S^+\right)\right) \\
&\begin{cases}
\lambda^t \cdot A_I + S^- = \theta \cdot X_{j_0} \\
\lambda^t \cdot A_O - S^+ = Y_{j_0}
\end{cases} \\
&1_n^t \cdot \lambda = 1; \lambda \geq 0, S^- \geq 0, S^+ \geq 0
\end{aligned}
\right.
$$

where:

θ measures the distance between a DMU and the efficiency frontier defined as a linear combination of the best practices observations;

λ is a n-dimensional column of constants measuring the weights used to determine the location of an inefficient DMU, if it were to become efficient;

$1_n$ is a n-dimensional column vector; the constraint $1_n \cdot \lambda = 1$ imposes the convexity of the frontier in the VRS model;

$A_I = \left(x_j^{(i)}\right)_{\substack{j=1,n \\ i=1,m}}$ is the matrix with m columns $X^{(i)}$, input $i$ used by all $DMU_j, j = \overline{1,n}$;

$A_o = \left( y_j^{(r)} \right)_{\substack{j=1,n \\ r=1,s}}$ is the matrix with s columns $Y^{(r)}$, output *i* obtained by all $DMU_j, \, j = \overline{1,n}$;
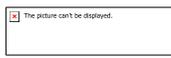
 is the matrix of input/output column for the n DMUs;

 is the  line from A matrix containing inputs and outputs corresponding to the DMU under evaluation, i.e. ;

S⁻ is a (m x 1) vector of input slacks
S⁺ is a (s x 1) vector of output slacks.

The DEA model was conducted using the data collected only for those Romanian public universities providing degree programs in more than 3 major groups of fields of study out of the total 5 groups of studies , i.e. engineering sciences; social sciences; biological and biomedical sciences; humanities and arts and mathematics, informatics and natural sciences. The data set includes 18 universities public universities, as out of the 49 public universities within the Romanian higher education system only these higher education institutions fulfil the above description.

The quantitative data was provided by the Ministry of Education and Scientific Research, namely the Executive Agency for Higher Education, Research, Development and Innovation Funding (2015). The study was conducted based on the most recent data available, for the years of 2006, 2007, 2009 and 2010, data reported by universities for the academic years of 2005/2006, 2006/2007, 2008/2009 and 2009/2010.

In order to determine the relative efficiency scores for each university we selected the appropriate input and output variables. Thus, the conducted DEA model determines the efficiency scores, based on two input measures and three output measures.

Concerning the input measures, we selected the institutional level of funding allocated under the contract concluded with the ministry, i.e. the amount of budget allocations (I1) and the share of qualitative indicators in total budget allocations - showing the influence quality/performance indicators have on the level of core funding (I2). The second input measure was defined as a controllable variable, as the percentage of public core funding allocated to universities is established by the policy makers within the higher education area, through the annual funding methodologies.

With respect to the output measures we defined three output measures, i.e. the total number of graduates (O1), the level of funds obtained for research projects, through competition, from international research funding institutions (O2) and the amount of revenues obtained from services and products supply (O3).

The descriptive statistics for the input and output measures used for assessing the efficiency scores obtained by the 18 universities, for the first and the last year under analysis, are listed in tables 1a and 1b.

**Table 1a**: Descriptive statistics of input and output variables, 2006

| Variable | Mean | Standard deviation | Minimum | Maximum |
|---|---|---|---|---|
| I1 | 37.004.935,72 | 27.199.937,21 | 2.780.672 | 101.167.944 |
| I2 | 20,85 | 3,02 | 16,49 | 28,98 |
| O1 | 4.067,33 | 2.292,14 | 1.157 | 9.360 |
| O2 | 1.356.009,27 | 1.256.020,31 | 55.333 | 4.872.637 |
| O3 | 6.481.256,88 | 20.945.030,46 | 0 | 89.977.642 |

Source: Author's computations using the available data

**Table 1b**: Descriptive statistics of input and output variables, 2010

| Variable | Mean | Standard deviation | Minimum | Maximum |
|---|---|---|---|---|
| I1 | 54.440.752,28 | 38.432.895,41 | 11.197.296 | 130.156.899 |
| I2 | 26,41 | 3,72 | 19,5 | 30,92 |
| O1 | 5.473,61 | 3.221,85 | 1.378 | 12.819 |
| O2 | 2.381.278,55 | 2.498.099,46 | 4.453 | 9.917.816 |
| O3 | 9.698.216,72 | 29.637.299,97 | 0 | 127.721.811 |

Source: Author's computations using the available data

As shown in the tables above, in 2010, compared to 2006, significant improvements took place within the average level of all considered variables.

Finally, the results obtained within each of the year of 2006, 2007, 2009 and 2010 were compared in order to identify the impact the changes occurred within the funding mechanisms had on the efficiency scores registered for each of the 18 Romanian public universities.

## 3. Findings

The results obtained after conducting both the study on the changes occurred within the Romanian public funding methodology of higher education institutions improved the relative efficiency scores of public funded universities, before and after the economic crisis of 2008, as well as the study on the relative efficiency of each selected public funded university, for the same period are presented in the following lines.

### 3.1. Stage one

The allocation process of public funds to public universities significantly changed in the year of 2002, when the policy makers decided to incorporate, into the funding formula qualitative indicators. At that moment, the decision to introduce qualitative indicators such as: the share of occupied academic jobs in total academic jobs; the percentage of professor and associate professor positions in total occupied academic positions; the share of academic staff aged under 35 in total academic staff and the percentage of academic staff with a PhD degree in total academic staff, was adopted in order to diminish the adverse effects the existing funding had in terms of academic staff salaries and other expenditures for developing the material base of the universities. Thus, the introduction of qualitative indicators into the funding formula had direct implications on costs and on the efficiency of spending public resources (CNFIS, 2002).

As a result of the Bologna process, between 2003 and 2006, significant changes occurred within the types and number of qualitative indicators included in the funding formula for core funding of universities. But, changes continued to take place in the following years. If at the beginning of introducing qualitative indicators into the funding formula the percentage of funds allocated base on these was representing only 9.7 percent of the total core funding, the importance of these indicators raised significantly until the last year of our analysis, i.e. 2010. The main characteristics of the universities core funding based on qualitative/performance criteria, within the years of 2006, 2007, 2009 and 2010 are listed in table 2.

**Table 2**: Changes into the core funding of universities, related to qualitative indicators

| Core funding | 2006 | 2007 | 2009 and 2010 |
|---|---|---|---|
| Percentage of funds | 20% | 25% | 30% |

| | | | |
|---|---|---|---|
| allocated based on qualitative indicators | | | |
| Number of qualitative indicators | 13 | 13 | 16 |
| Qualitative indicators:<br>• teaching | Quality of academic staff – QAS (3,5% of total core funding);<br>Staff development potential – SDP (2,5% of total core funding) | QAS (**4%**);<br>SDP (**3,5**%) | QAS (4%);<br>SDP (**4,5**%) |
| • scientific research | Level of performance in scientific research - LPSR (3% of the total core funding);<br>The ratio between the amount of research and design revenues and the total revenue of the university-RARRTR (0,5% of the total core funding); | LPSR (**5%**);<br>RARRTR (0,5%); | LPSR (**7%**);<br>RARRTR (**2%**); |
| • material base | Quality of equipment –QE (2% of total core funding); | QE (2,5%);<br>**Quality of the documentation means –QDM (0,5%)** | QE (2,5%);<br>QDM (**1%**) |
| • university management | Quality of academic, administrative and financial management – QAAFM (5,5% of Total core funding);<br>Quality of social and administrative services for students - QSASS (2% of total core funding). | QAAFM (7%);<br>QSASS (2%). | QAAFM (7%);<br>QSASS (2%). |

Source: Author's representation based on available data collected from the annual funding methodologies of public universities

### 3.2 Stage two

With respect to the second stage of the research, the results are summarized in Table 3. As mentioned before, four different DEA models were performed in order to evaluate the relative efficiency of 18 Romanian universities, randomly coded from U01 to U18, two years before the emergence of the economic crisis of 2008 and the following two years after the onset of the crisis.

Out of the four considered years, the lowest average efficiency score was registered in 2009, while the highest average efficiency score was obtained in the year of 2007. Though, the percentage of universities operating on the efficiency frontier is the lowest in 2006 and the highest in 2007 and 2010.

Thus, the findings suggest that two out of the 18 universities efficiently use the inputs in obtaining the same level of results in terms of graduates, international research funds and revenues from services and products supply, in each of the considered years. Moreover, other two universities manage to obtain the maximum efficiency score in 2007, 2009 and 2010, but starting from initial efficiency scores that differ significantly (0,395 versus 0,944).

**Table 3**: Efficiency scores of Romanian public universities

| University | Efficiency score | | | |
|---|---|---|---|---|
| | 2006 | 2007 | 2009 | 2010 |
| U01 | 0,676 | 0,733 | 0,702 | 0,834 |
| U02 | 0,307 | 0,612 | 0,213 | 0,267 |
| U03 | 0,395 | 1 | 1 | 1 |
| U04 | 0,216 | 0,188 | 0,201 | 0,175 |
| U05 | 0,479 | 0,787 | 0,421 | 0,398 |
| U06 | 1 | 1 | 1 | 1 |
| U07 | 0,880 | 0,383 | 0,347 | 0,471 |
| U08 | 0,853 | 1 | 0,757 | 0,858 |
| U09 | 0,394 | 0,376 | 0,587 | 1 |
| U10 | 1 | 0,802 | 0,690 | 0,768 |
| U11 | 0,627 | 0,646 | 0,503 | 0,532 |
| U12 | 0,140 | 0,279 | 0,175 | 0,338 |
| U13 | 0,560 | 0,614 | 0,572 | 0,737 |
| U14 | 0,279 | 0,671 | 0,390 | 0,483 |
| U15 | 1 | 1 | 1 | 1 |
| U16 | 0,252 | 0,279 | 0,297 | 0,327 |
| U17 | 0,374 | 0,330 | 0,311 | 0,220 |
| U18 | 0,944 | 1 | 1 | 1 |
| Minimum values | 0,140 | 0,188 | 0,175 | 0,175 |
| Maximum values | 1 | 1 | 1 | 1 |
| Mean | 0,576 | 0,650 | 0,565 | 0,634 |
| Standard deviation | 0,302 | 0,287 | 0,294 | 0,307 |
| Number of efficient universities | 3 | 5 | 4 | 5 |

As the efficiency scores below 1 show the inefficiency of universities in using the inputs, with respect to the rest of the universities considered within the analysis, in the last two years under analysis 50% of these registered reductions in the level of the relative efficiency scores, at least compared to the year of 2006. Furthermore, if we evaluate the minimum values of the efficiency scores we find out that among the inefficient higher education institutions there are some very inefficient units, compared with the average efficiency.

Also, to improve the efficiency of less efficient universities, these should adjust the level of one, two or all output indicators, while using fewer resources.

## 5. Concluding Remarks

The results of the two studies conducted within this paper confirm the hypotesis that a more performance oriented funding mechanism leads to the improvement of the efficiency scores of public universities. Thus, for the year of 2007 the percentage of public funds allocated to public universities, based on qualitative indicators, grew with 5 pp, compared to the year of 2006. The result of the DEA for the year of 2007 show us that the average relative efficiency score registered by the Romanian selected universities grew from 0,576 in 2006 to 0,650 in 2007. The number of efficient universities grew up with 8,33 %. Theoretically, the average growth in 2007 was quite high since the average share of qualitative indicators in total budget allocations was 27,09%, compared to share of 25% of the total core funding that was allocated, on qualitative criteria, to all 49 public universities.

In both 2009 and 2010 the percentage of public funds allocated to public universities, based on qualitative indicators, grew with 5 pp, compared to the year of 2007 and with 10pp, compared to the year of 2006. Though the funding policy moved in the same way as in 2007, the efficiency scores registered by the selected Romanian public universities decreased compared to the year of 2007. This result obtained for the years of 2009 and 2010 is the consequence of the fact that even if the whole percentage of public funds allocated to universities on efficiency criteria grew up to 30%, the average share of qualitative indicators in total budget allocations was only 24,77% in 2009 and 26,41% in 2010.

Considering all the above facts and results, the more quality/performance oriented is the funding method of public higher education institutions, the more operational efficient become public universities.

The results of the research undertaken could be used either by the policy makers within the area of higher education or by the administrative management of public universities in order to correlate the funding with the results obtained and/or the objectives assumed by both the government and the higher education institution as well as to optimize the public funding policy designed according to the degree of efficiency each university accomplishes in using the allocated funds.

## 6. Acknowledgements

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# THE EVOLUTION OF THE MACROECONOMIC STABILISATION PENTAGON IN ROMANIA, CZECH REPUBLIC AND HUNGARY

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**Abstract:** *This paper aims to achieve the pentagon analysis of macroeconomic stabilization in Romania, Czech Republic and Hungary in the period 2000 to 2013. It is a comparative analysis of the countries above mentioned in terms of the five key targets of economic policy, aiming the increasing, dynamic balance of each economy: economic growth rate, unemployment rate, inflation rate, the budget deficit as a percentage of Gross Domestic Product, the current account deficit of the balance of payments as a percentage of Gross Domestic Product. The main objective of each economy which passes from planned to market economy should be to cease the economic decline, followed by the elimination of internal and external imbalances and only after that it should be followed by a continuous growth process. All the above mentioned indicators shall be represented on an ad hoc graduated scale. The period of research was chosen so as to obtain a view of the macroeconomic policies in transition from one period to another, in order to highlight the common as well as the main differences in the approach used for economy stabilization. Therefore I have computed the graphical analysis of macroeconomic stabilization pentagon for the three countries in the period 2000- 2013 to captures the dynamics of the economic policy mix. This benchmark tool shows the interdependence which exists between inflation and other important economic indicators. The events occurred in the period starting with 2007/2008 have raised the interest of economics researchers, highlighting the need for significant improvements in the surveillance of the economic and financial system. The global fragility generated concerns regarding the vulnerabilities and causes which led to the occurrence of such events, thus generating different measurement techniques. Despite all its advantages, this approach has a significant limitation consisting in the fact that it can only reveal a picture without surprising other imbalances that can create un-sustainability in the economy.*

**Keywords:** macroeconomic stabilization, economic growth, economic decline, imbalances, deficit, balance of payments.

**JEL classification:** G01, E5

## 1. Introduction

The purpose of this paper is to capture both the comparative analysis at the level of the three periods (pre-crisis period, the year the crisis and after crisis period) for the analyzed countries, as well as to capture the comparability of the macroeconomic decisions between the three countries analyzed Romania, Czech Republic and Hungary in the same period. The main objective of each economy which passes from planned to market economy should be to cease the economic decline, followed by the elimination of internal and external imbalances and only after that it should be followed by a continuous growth process.

This comparative analysis tool shows the interdependence that exists between inflation and other economic indicators important at the level of the three selected economies. The period of research was chosen so as to obtain a view of the macroeconomic policies in transition from one period to another, in order to highlight the common as well as the main differences in the approach used for economy stabilization. One of the limits of this

graphical representation is represented by the fact that it reveals a picture of the economy, without surprising some imbalances that create un-sustainability in the economy.

The paper is organized as follows: Second section presents us the Literature review. Third section presents the Database. Fourth section presents the Methodology used and the results. Fifth section presents the Conclusions.

## 2. Literature review

This approach belongs to Grzegorz Kolodko ("The Vishegrad Economies in Transition: The Comparative Perspective of the Macroeconomic Stabilization Pentagon",1994) economist and Polish Professor of economics and is called "Macroeconomic stabilization Pentagon". It is basically a graphical representation based on five key indicators: economic growth rate, unemployment rate, inflation rate, the budget deficit as a percentage of GDP, the current account deficit of the balance of payments as a percentage of Gross Domestic Product. The above mentioned indicators are represented on an ad hoc graduated scale.

In the book "Macroeconomic Problems of Transformation. Stabilization Policies and Economic Restructuring", Kolodko, Grzegorz and other economists (1994) examines the dramatic output collapse in transforming economies of Eastern Europe, formulating policies for economic recovery. The author discuss about the role of monetary policy and about the importance of exporting growth which may be used as a driving force.

In the book "Economic reflections, Contributions to the theory of macroeconomic stabilisation", Professor Mugur Isarescu (2006)- Governor of the National Bank of Romania analyses the evolution of the Romanian macro-stabilization pentagon starting with 1989. One of the paper's conclusion of the paper is that the Romanian inflation was stooped with delay in comparison with other Vishegrad countries. Also, there was documented that outside the external policy argument, there is a strong argument for internal policy – considering the householder's aversion against the inflationary phenomenon.

## 3. The database

Starting from the literature review in the field and based on equilibrium economic theory, I have composed a set of five main economic indicators collected during the period 2000-2013 for Romania, Czech Republic and Hungary. The database was collected from Eurostat database. The three countries were chosen because of the similarities of economically and financially highlighted during the analyzed period.

Because the economic growth does not constitute alone an economic policy objective, in the context of the last economic and financial crisis, monetary policies objectives, grouped within the pentagon of macroeconomic stabilization, follow the increase of economic growth, price stability, reduction of unemployment rate, lower current account deficit and sustainable finances. Obtaining simultaneously the above objectives, is very hard to achieve. Monetary policies decisions involve the selections of those objectives considered with priority for a specific moment against the other objectives. In the bellow graphs there are presented the evolutions of the key indicators of each economy in the research period. In order to obtain a strong and real economic growth it must be filled in the level of living of the householders, therefore the most important indicator of economic growth is real Gross Domestic Product or GDP per capita. Studying the evolution of GDP per capita in the period 2000- 2013 it is visible a continuous growth of it up to 2008, followed by a deep decrease up to 2009, followed this time by a slow increase up to 2012 when it experienced again a decrease, lower this time in comparison with that experienced in 2008.

Figure 1: The rate of economic growth

**Real GDP growth rate**
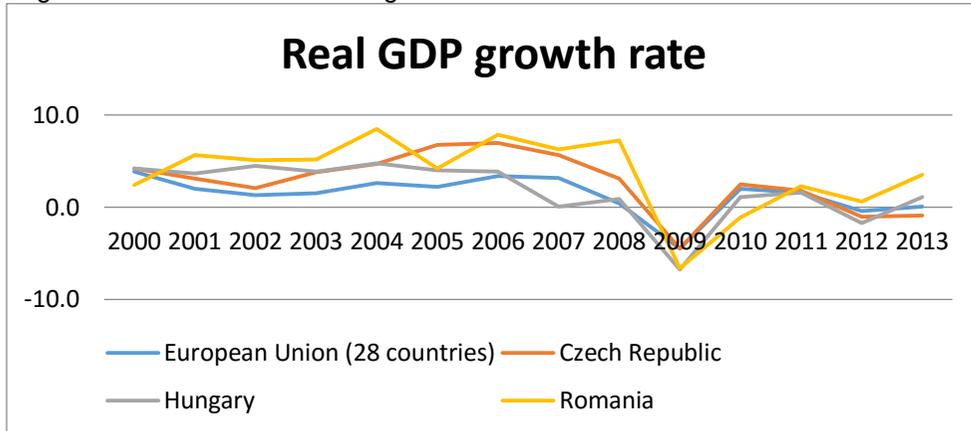


Source: Eurostat database, own graph

The sustainability of this economic growth must be correlated with other markets, governmental equilibrium and external equilibrium. When the economic growth is achieved only based on governmental deficit and/or fiscal balance deficit there is a high risk to experience a recession.

The degree of labour force occupation reveals the equilibrium of production factors market, but also economic growth. It is quantified through the unemployment rate, which is presented in the bellow figure. It experienced a high downturn starting with 2006 with its minimum point in 2008, then followed by a continuous increase.

Figure 2: Unemployment rate

**Unemployment rate**
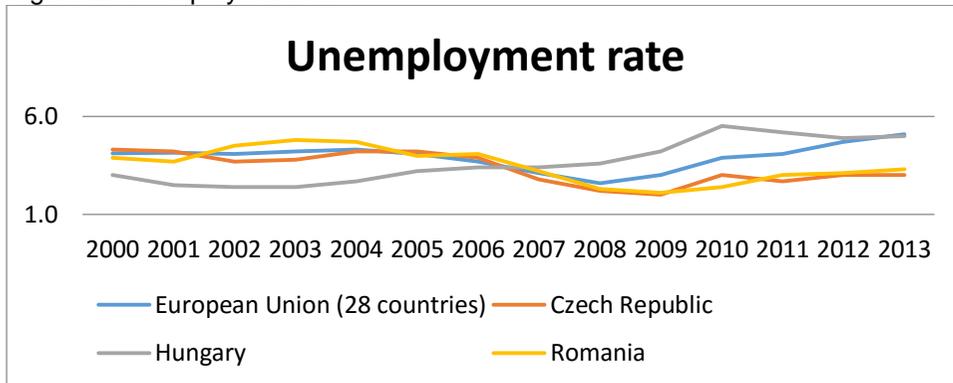


Source: Eurostat database, own graph

Price stability is quantified through inflation rate, which is presented in the bellow figure. The increase of the quantity of money existent in an economy has as adverse effect the increase of prices in that economy, which is reflected through an increase of inflation rate.
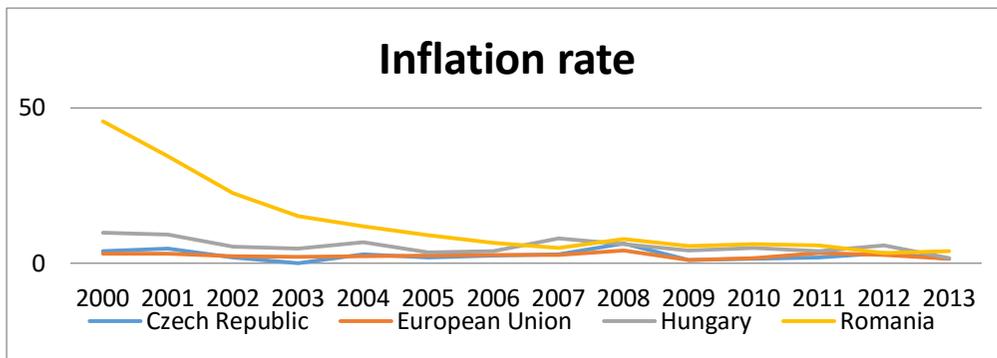
Figure 3: Inflation rate
Source: Eurostat database, own graph

Budgetary deficit generally increases during the expansionary policies, correlated with the sustainability of the public debt through which is financed.

Figure 4: The budget deficit as a percentage of gross domestic product
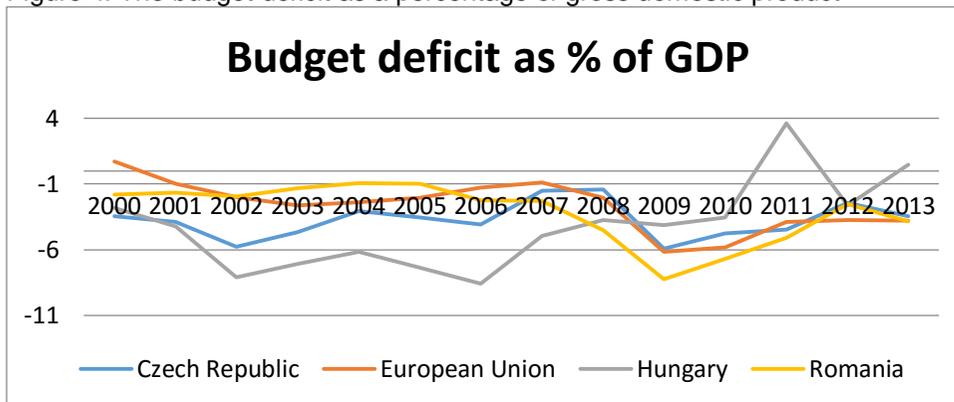


Source: Eurostat database, own graph

Current account balances must be sustainable financed through investments and external borrowings or by decreasing of foreign reserves. On the bellow figure is presented the evolution of the current account balance as percent of GDP, a measure of the quantification of external balance. It is visible a continuous increase of its share in DGP.

Figure 5: Current account deficit of the balance of payments as a percentage of gross domestic product

**Current account balance %GDP**
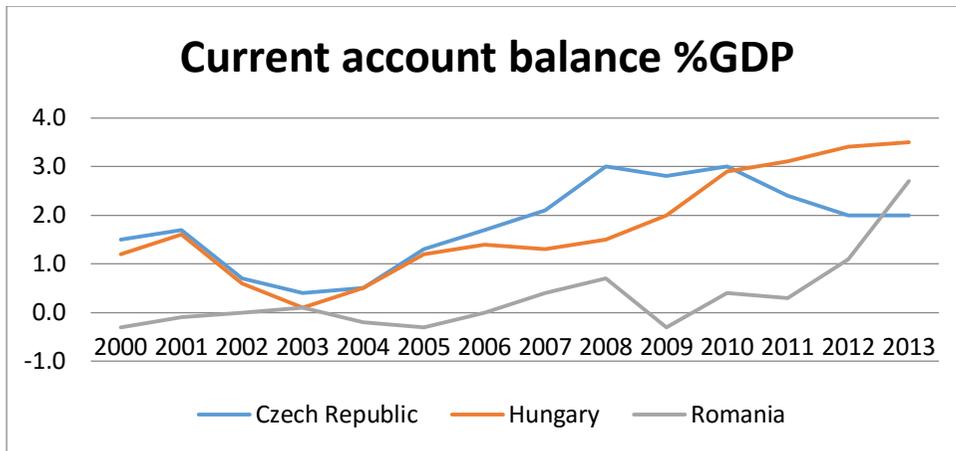
Source: Eurostat database, own graph

## 4. Methodology and results

I have traced on an ad-hoc scale the 5 indicators for the pre-crisis period, crisis period and post-crisis period for each of the analyzed countries to highlight the change of the monetary policy form period to period: pre-crisis period (2000, 2001, 2002, 2003, 2004, 2005, 2006), crisis period (I have considered the years 2007,2008,2009,2010 to reveal all the phenomenon of the crisis appearance) and crisis period (2011, 2012, 2013).

Figure 6: Czech Republic in the pre-crisis period



**Czech pre-crisis period**
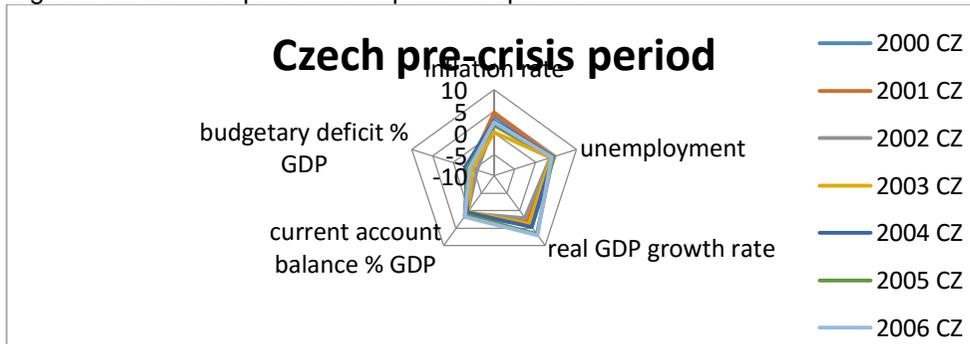
Source: Eurostat database, own computation

Figure 7: Czech Republic in the crisis period



**Czech - crisis period**
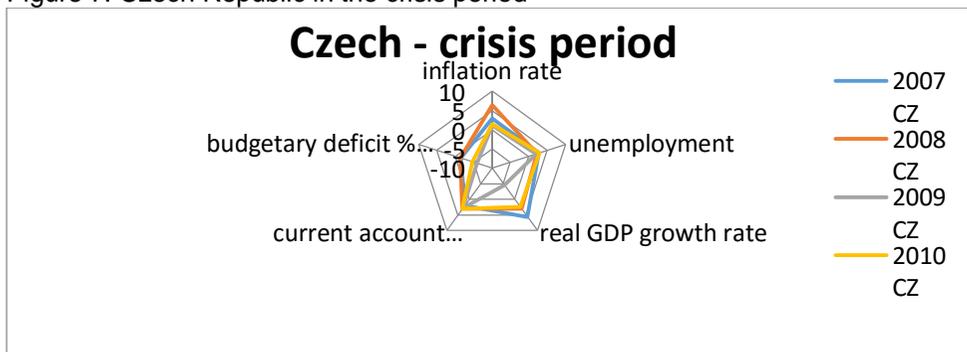
Source: Eurostat database, own computation

Figure 8: Czech Republic in the post-crisis period



Czech - post crisis period
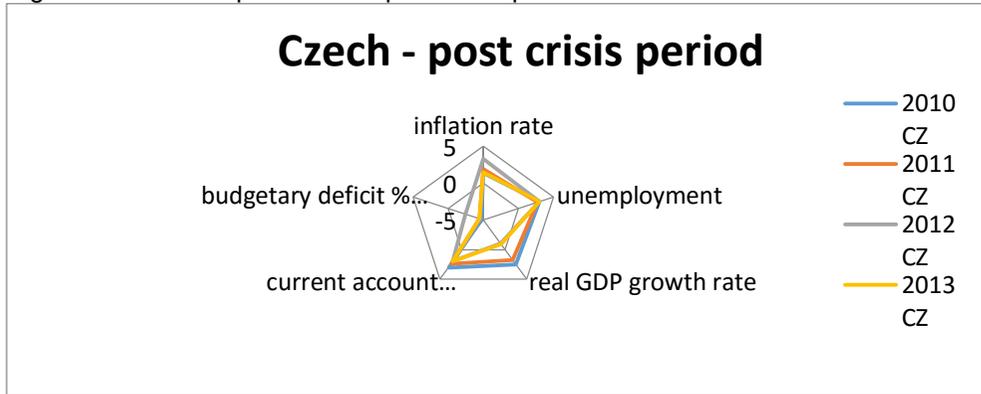
Source: Eurostat database, own computation

Figure 9: Hungary in the pre-crisis period



Hungary pre-crisis period
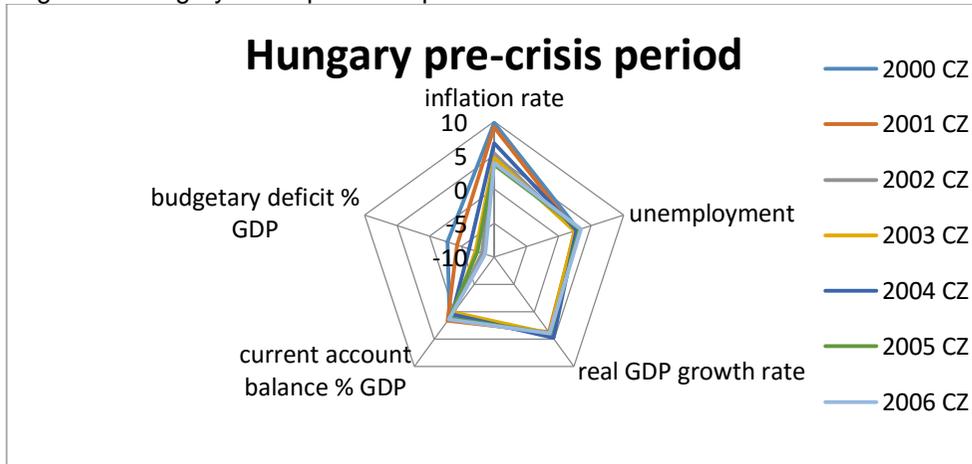
Source: Eurostat database, own computation

Figure 10: Hungary in the crisis period



Hungary - crisis period
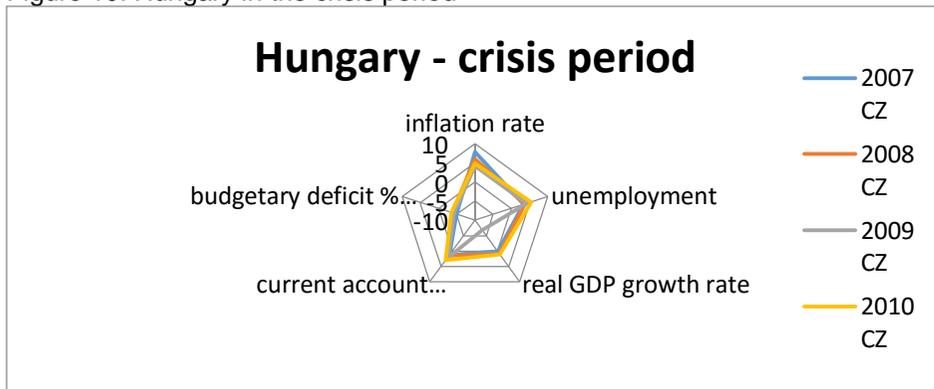
Source: Eurostat database, own computation

Figure 11: Hungary in the post-crisis period



**Hungary - post crisis period**

Legend:
- 2010 CZ
- 2011 CZ
- 2012 CZ
- 2013 CZ

Axes: inflation rate, unemployment, real GDP growth rate, current account balance % GDP, budgetary deficit % GDP
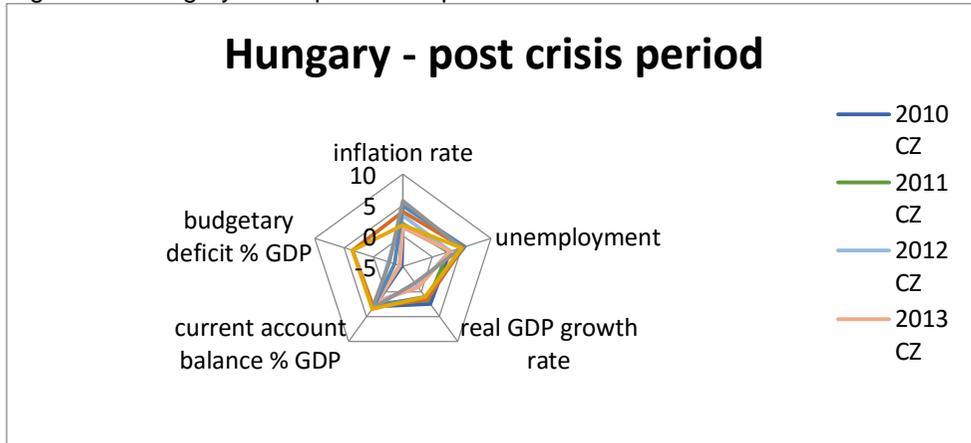
Source: Eurostat database, own computation

Figure 12: Romania in the pre-crisis period



**Romania pre-crisis period**

Legend:
- 2000 CZ
- 2001 CZ
- 2002 CZ
- 2003 CZ
- 2004 CZ
- 2005 CZ
- 2006 CZ

Axes: inflation rate, unemployment, real GDP growth rate, current account balance % GDP, budgetary deficit % GDP
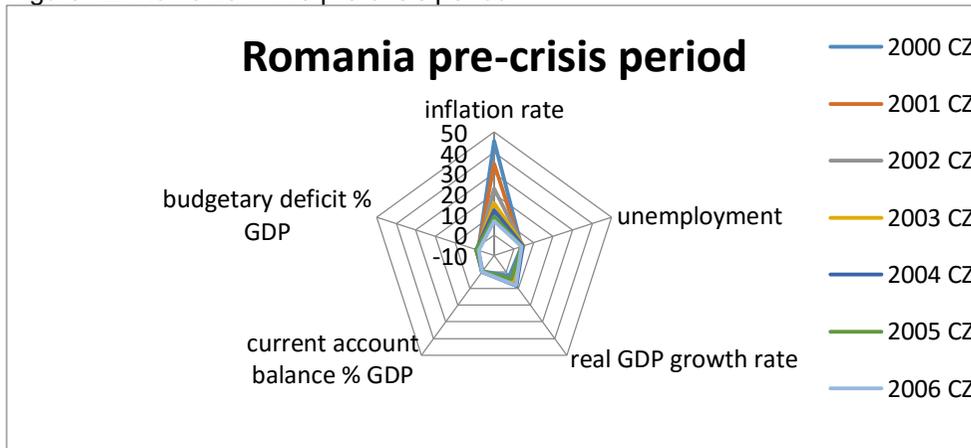
Source: Eurostat database, own computation

Figure 13: Romania in the crisis period



**Romania - crisis period**

Legend:
- 2007 CZ
- 2008 CZ
- 2009 CZ
- 2010 CZ

Axes: inflation rate, unemployment, real GDP growth rate, current account balance % GDP, budgetary deficit % GDP
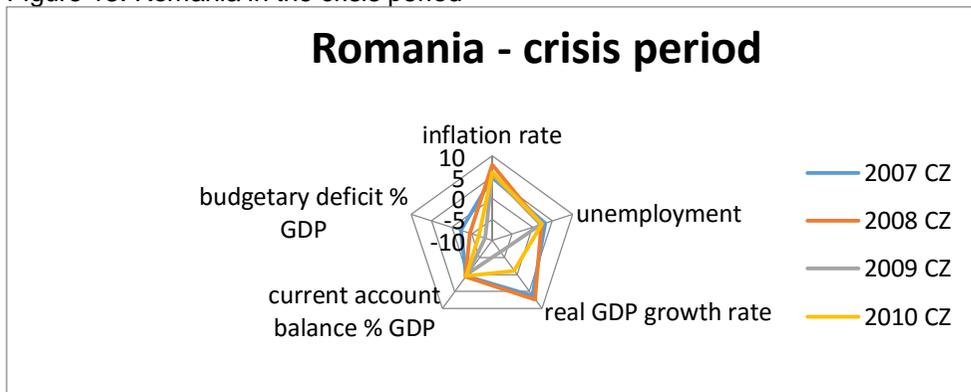
Source: Eurostat database, own computation

Figure 14: Romania in the post-crisis period



Romania - post crisis period
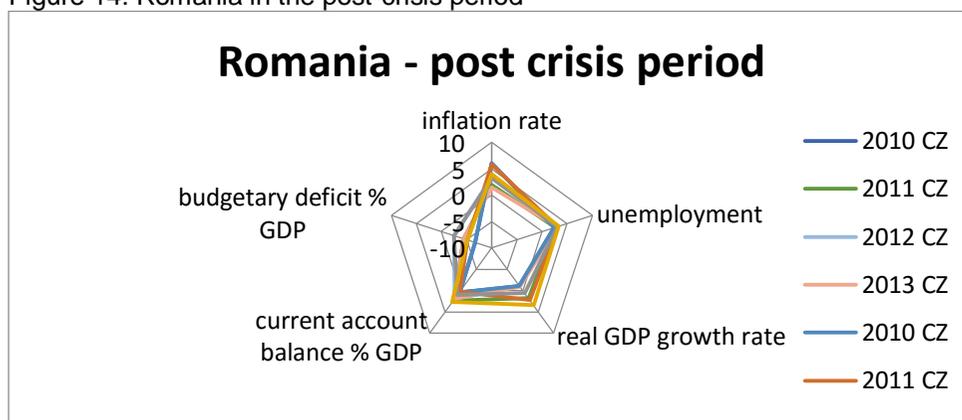
Source: Eurostat database, own computation

## 5. Conclusions

This comparative analysis tool showed the interdependence between inflation and other economic indicators important at the level of the three selected economies. The period of research was chosen so as to obtain a view of the macroeconomic policies in transition from one period to another, in order to highlight the common as well as the main differences in the approach used for economy stabilization. The representation is limited to the fact that it reveals a picture of the economy, without surprising some imbalances that create un-sustainability in the economy.

Because the economic growth does not constitute alone an economic policy objective, in the context of the last economic and financial crisis, monetary policies objectives, grouped within the pentagon of macroeconomic stabilization, follow the increase of economic growth, price stability, reduction of unemployment rate, lower current account deficit and sustainable finances. Obtaining simultaneously the above objectives, is very hard to achieve, therefore monetary policies decisions involve the selections of those objectives considered with priority for a specific moment against the other objectives. In the bellow graphs there are presented the evolutions of the key indicators of each economy in the research period.

In conclusion, the main solutions to overcome the actual economic and financial crisis, should be oriented to the stimulation of economic growth through increasing government expenses. Another objective should be to obtain an increase of GDP per capita which may be achieve through reduction of fiscal evasion, or by increasing the collection level of resources. Other objective should be the priority based allocation of expenses.

## 6. Acknowledgement

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# IMPORTANCE OF APPLYING DATA ENVELOPMENT ANALYSIS IN CASE OF HIGHER EDUCATIONAL INSTITUTIONS

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**Abstract:** *Today, the saying predominates better and better according to which a strong target rationalism has to characterize the higher educational institutions due to the scarce resources and the limitlessness of user demands. Now in Hungary, the funding of higher educational system goes through a total transformation thus the leadership has continuously to reckon with the changes of environment and, in tune with these ones, has to modify the goals existing already. Nowadays, it becomes more and more important to measure the effectiveness of the organizations – organizational units pursuing the same or similar activities relative to each other. Benchmarking helps this procedure. Benchmarking is none other than such a tool of analysis and planning which allows comparing the organizations with the best of the competitors. Applying the method with regard to the higher educational institutions is really nothing but a procedure which focuses on comparing processes and results of the institutions' different functional areas in order to bring to light the opportunities for the rationality as well as the quality and performance improvement. Those benefits could be managed and used as breakthrough possibilities which have been already developed/applied by other organizations and are given by the way leading to a more effective management.The main goal of my monograph is to show a kind of application of Data Envelopment Analysis (DEA) method in the higher education. DEA itself is a performance measuring methodology which is a part of benchmarking and uses the linear programming as a method. By means of its application, the effectiveness of different decision-making units can be compared numerically. In our forcefully varying environment, the managerial decision making can be largely supported in each case by such information that is numerically able to identify which organizational units and activities are effective or less effective. Its advantage is that there is no need to know any of the function-like relations itself for applying this method. The method interprets the effectiveness as a quotient which is defined by the inputs used in the functioning and the outputs arisen from the inputs. The method is already applied in other countries because, beyond its main benefit (being able to work with small element number), it is also suitable for measuring effectiveness of the non-profit sector. In spite of this, DEA methodology has not been really wide-spread in our country yet. The performance measurement forms an important part of the institutions' everyday operation since the resources are barely available and a targeted effective utilization helps to maintain a long-term and competitive functioning in the future.*

**Keywords:** Universities, Benchmarking, Data Envelopment Analysis, Efficiency

**JEL classification: H80**

## 1. Introduction

Almost in each country of the European Union, a comparative analysis method of some kind is used for measuring competitiveness of higher educational institutions. Data Envelopment Analysis (DEA) can be defined as such a linear, nonparametric programming method by means of which the effectiveness of the determined decision-making units can be compared on a totally mathematical basis. (Fenyves and Tarnóczi, 2014)

This study draws attention to that the performance measurement would also be required in case of the non-profit organizations performing same or similar activities and the application of DEA method could be a great support. Now, the biggest problem is caused by the fact that this method is still not widely known in Hungary.

## 2. Performance measurement and its role in the higher education

Performance measurement forms an important part of the controlling processes of higher educational institutions because it has a key role in the preparation, planning and feedback of managerial decisions on distributing the resources. (Lábas, 2014).

It is true that the comparison of plan and fact data to each other is suitable for measuring the performance but it can be considered as partly outmoded, due to the lengthy time range, because a continuous, real-time controlling action is needed nowadays due to the permanent change of environment.

According to the definition of Neely, Gregory and Platts (1995) : Performance measurement is defined as the process of quantifying the efficiency and effectiveness of action.

The categories of efficiency as well as effectiveness can also be defined as internal or external dimensions of the performance itself. The efficiency, the 'external' effectiveness can be grabbed by that the higher educational institutions do what they have to do (to do the right things) while, on the other hand, the effectiveness means that they do as they have to do (to do things right). These two dimensions cannot be separated from each other acutely since the improvement of effectiveness is useful only in that case if it happens in the interest of reaching the appropriate outcome

Consequently, the efficiency of an organization implies whether the organization follows the proper goals, while the organizational effectiveness indicates whether the organization is able to reach the appointed goals and to use the available resources economically. (Dobák, 1996).

## 3. Performance comparison

In 1985, Andrei Shleifer worded the theoretical basis of the regulatory performance comparison which presented that the data of natural monopolies providing same services and acting under similar conditions can be used for regulating other companies as well (Shleifer,1985).

Regarding that the effectiveness can be measured in case of the higher educational institutions as well, Shleifer proved that information resultant from other companies can be used for incentive even if the companies are not homogeneous but an adequate correction of the information originating from heterogeneous companies happens with respect to the observable differences. This is the essence of yardstick regulation.

Based on the logic of method, the followings can be worded in this case; if the applied technologies of the organizational units chosen for pattern are similar then the performance of the organizational units cannot be totally independent from each other, either. Namely, if a higher educational institution performs worse than the other institutions in the pattern then it can be influenced by not merely the technology or the environment.

The reasons lie in totally other matters since the other institutions, which can perform better, are operated among similar abilities.

My monograph is going to present benchmarking including DEA which can support the matching of the performances of higher educational institutions by means of defining the effective level and the deviation from that.

That higher educational unit has a better effectiveness – performance which is able to reach the same output level at a lower input level or able to reach a higher level output at the same level of input.


## 4. Benchmarking

Benchmark means such a reference point which other organizations cannot be matched or compared with. Accordingly, benchmarking determines the procedure when the above-mentioned reference point can be ascertained.

Numerous variants of comparative methodologies examining the relative effectiveness are known in case of the higher educational institutions operating in the environment regulated better and better. These analytical methods determine the current level of effectiveness actually based on data of the pattern. Performance of the individual organizational units included by the pattern is compared to the current level of effectiveness.

The following approaches can be applied to determine the level of effectiveness used for comparison:

- At first, the limit of effectiveness i.e. the maximum available performance needs to be determined and compared to performance of the others.
- Determining the average performance and comparing the others to it.

In practice, the second approach is more realistic because not only the most effective institution subsists in the market but operation of less effective participants can also be maintained. On the other hand, if the given benefits are applied suitably then it will greatly contribute to a long-term sustainable operation.

It can also be stated that whichever method will be applied, a lagging behind from the benchmark score indicates an inadequate performance, a performance deficiency.

However, a deviation from the determined effectiveness could have serious financial impacts so it matters how accurate and undistorted the given method is and what statistical error it works with.

(Pápai et al, 2012)

The consequences stated by the regulator as well as the conditions of application have to calculate with the uncertainty in the results since there is no need to suppose a performance lag behind each seeming backlog. (Pápai et al, 2012).

The regulatory comparative methods can be grouped in severally ways:
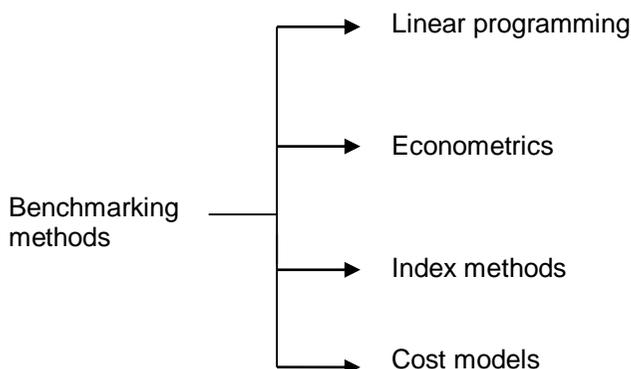


**Figure 1:** Grouping of benchmarking methods

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Source: Own illustration

A kind of grouping possibility for benchmarking methods can be seen on Figure 1, within framework of which four main types have been determined.

Several factors need to be taken into account in order to choose the adequate methodology because it is true for each of listed above that these ones are comparative methods of examination.

A larger amount of data is required for applying the more complex methods, and nevertheless, it can also be ascertained how sensitive the given results are to specification of the model.

If the element number involved in the examination is small then, during the comparative analysis, such a method has to be applied which is less sensitive to the element number. Yet, in this case, a negative impact could arise from that the results are more unreliable and it is not certain that the supposed lag derives from the deviation of effectiveness but it can be possible that this is a consequence of the ignored heterogeneity.

Viewpoints helping to choose the appropriate methodology:

- Robustness
- Practical applicability
- Transparency
- Restrictive assumptions
- Consistency with the economic theory accepted with regard to running of organizations and the markets
- Consistency with statements, analyses having other purposes
- The regulatory burden should have a tolerable degree
- The data cannot be manipulated (Pápai et al, 2012)

In this study, the possibility of applying DEA method based on the linear programming process will be presented only.

## 5. DEA method

Data Envelopment Analysis (non-parametric, deterministic procedure) also known as enveloping surface analysis when an envelope meaning the limit of effectiveness has to be determined based on the functioning data of higher educational institutions.

Charnes, Cooper and Rhodes worked out the DEA methodology first in 1978. (Charnes et al, 1978). Charnes had redefined the method as a mathematical programming problem and, later, this performance measuring methodology unbrokenly developed thanks to the evolution of computers. (Charnes, 1994; Sherman – Ladino, 1995; Cooper et al., 2004a). However, it is important to mention that Farrel worded the basic idea of this analysis method in 1957. (Farrel, 1957)

The elementary aim of the method is to determine which units of the higher educational institutions having more input and output variables are operated efficiently and less efficiently:

- a decision making unit is not effective if there is another unit performing better with regard to every output;
- other decision making units, which can be considered as effective, are appointing a limit of effectiveness represented in an input-output coordinate system.

It can be concluded in summary that the envelope is appointing that limit where the maximum of effectiveness is and the less effective decision making units are located within this. Yet this limit of effectiveness is not fixed since the effectiveness can be improved anytime. In this way, the organizational units are put at performance disadvantage or advantage.

With regard to DEA analysis method, it is of outstanding importance that:
- DEA can also be applied in case of smaller element number because this is a nonparametric method,
- this banks upon input and output data themselves which are observed in reality. Accordingly, the method dispenses with the possible measuring errors and that the results come out not only based on activity of the leadership; thus the input data are not influenced by the unobservable and accidental effects.

Consequently, Data Envelopment Analysis does not take the effects of coincidences into account. The basic essence of this method resides in that it gives the lower enveloping surfaces of the higher educational institutions involved in the investigation by appointing the input and output coordinates in a two-dimensional space.

## 5.1. Advantages of using DEA methodology

Charnes describes DEA as a new way of organizing and analyzing data, which can result in new managerial and theoretical insights. They highlight the following properties of DEA which make it an attractive approach to data analysis:
- Focus on individual observations in contrast to population averages.
- Produce a single aggregate measure for each DMU in terms of its utilization of input factors to produce desired outputs.
- Can simultaneously utilize multiple outputs and multiple inputs with each heing stated in different units of measurement.
- Can adjust for exogenous variables.
- Can incorporate categorical variables.
- Are value free and do not require specification or knowledge of a priori weights or prices for the inputs and outputs.
- Place no restriction on the functional form of the production relationship.
- Can accommodate judgement when desired.
- Produce specific estimates for desired changes in inputs and/or outputs for projecting DMUs below the efficient frontier onto the efficient frontier.
- Are Pareto optimal.
- Focus on revealed best-practice frontiers rather than on central-tendency properties of frontiers.
- Satisfy strict equity criteria in the relative evaluation of each DMU. (Charnes et al, 1994)

## 5.2. Application areas of DEA

Since the first application of DEA for measuring the efficiency of schools the technique has been applied in over 50 industries to date (Charnes, 1978). Some of the application areas include the financial industry, the airline industry, the healthcare industry, the brewing industry, transportation, athletics, the farming industry, the computer industry, the mining industry, the software industry, and the U.S. army and so on. (Paul, 1997)

In my opinion, DEA analysis method could be the most suitable for determining the relative effectiveness between the non-profit oriented budgetary

## 5.3. Possible types of analysis

Data Envelopment Analysis is a nonparametric multivariate statistical method. During its application, we are able to give an answer to the question which is about that how effectively an organizational unit transforms the expenditures ingested as inputs into outputs. Namely, the method is capable of determining which organizational unit has "the best practice" (Albright and Winston, 2007).

Depending on the purpose of the analysis, two main types can be distinguished in case of the method:

- input-oriented,
- output-oriented.

The input- and output orientation is two approaching possibilities of DEA. During the input oriented aspect, the investigation is focusing on that how many and what proportion of inputs are used in order to minimize the cost at the same output level. In case of the approach with an output oriented aspect, we determine that how much the quantity of output can partially be increased without changing the quantity of inputs (Farrel, 1957; Charnes et al., 1978).

At the same time, it is complicated even more by the fact which is about that, when the effectiveness is measured, we have to take into account that not every input is utilized in the same way because, in case of the resources,

- if we assume the same integration then we need to calculate with returns having a constant rate (CRS - Constans Return to Scale),
- if no then we should henceforth calculate with returns having a variable rate (VRS – Variable Return to Scale) (Cooper et al., 2004a,).

So it can be determined that DEA method gives the limit effectiveness. In turn, knowing the curve of limit effectiveness, those parameters can be specified which apply to the non-effective units and the optimum state can be achieved by correcting the parameters mentioned before (Tofallis, 2001).

## 6. In conclusion

Taking the described into account, it can be concluded that Data Envelopment Analysis is suitable for measuring the effectiveness of the higher educational institutions. Many countries already apply it almost routinely for measuring the relative effectiveness of different organizational units doing the same activities. I think that DEA method would successfully be applied and adapted for market segment as well considering the stable mathematical background of the method and the departmental characteristics of the higher educational institutions. My aim is, on the one hand, to perform further researches and, during my researches, to start off and apply DEA methodology with regard to the higher educational institutions in order to make their operation more competitive and to make them capable of reacting upon the changes of environment in time and taking over the already well-operated practices from each other.

On the other hand, establishing a ranking list about the given institutions would be important for the authority and the outside world itself as well in order to acquaint the market outlets as well as the employers with such a ranking list.

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# TAX PAYMENTS DETERMINANTS IN ROMANIA

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**Abstract:** *Using a fixed effects panel data estimation model in order to account for individual firm heterogeneity, the paper investigates the determinants of corporate tax payments for Romanian non-financial companies listed at Bucharest Stock Exchange over twelve years period (2000 – 2011), adopting a new approach, the natural logarithms of corporate income taxes actually paid as dependent variable. This removes the inherent flaws of firm specific effective tax rates, while establishing a more comparable field for subsequent similar research. All the determinants investigated were found as having an impact, albeit at different level of significance. Capital intensity, leverage and labour intensity were found as having a negative effect, while profitability and size have a positive impact. The findings correspond in general to conventional theory. Moreover, the paper produces evidence concerning the impact of loss carry-forward provisions on firm tax payments.*

**Keywords:** tax payments, determinants.

**JEL classification:** H32

## 1. Background

Taxation was always considered a major obstacle in doing business, especially in Romania. A recent survey of Romanian Chamber of Commerce shows that taxation is the first impediment for business in Romania. Moreover, the World Economic Forum Global Competitiveness Reports usually rank tax related issues among the first half of the restraining factors for doing business. For instance, in 2010, tax rates and tax regulations were ranked as the first and respectively the seventh (out of 15) barriers against business, while in 2011, they were ranked on the second and respectively the fifth position.

Under these circumstances, investigating what affects the tax payments of Romanian companies is highly desirable, since it may disclose the underlying factors that play a role in this respect. That is controversial, since Romanian enjoys one of the lowest statutory tax rates in Europe and some some well-established forward looking methodologies, namely Devereux – Griffith (Devereux and Griffith, 1999, 2003) and European Tax Analyzer (Jacobs and Spengel, 2000), rank Romania in terms of corporate effective tax rates on the fifth and respectively on the fourth position among European Union member states, which is consistent with Romania's low statutory corporate income tax rate.

For the purpose of this research, the paper measures the tax payments as natural logarithm of corporate income taxes actually paid by companies. In this respect, the paper adopts a new approach since usually similar research deals with the so-called effective tax rate, which is a ratio of corporate income tax (current or total) to some metrics such as earnings before interest and taxes (EBIT), earnings before interest, taxes, depreciation and amortization (EBITDA), cash-flow, etc. By doing so, I overcome some inherent flaws of the firm-specific effective tax rates, which reside in the fact that some well-established determinants (capital intensity, leverage, etc) influence both the numerator and the denominator, making the interpretation of the results misleading.

The rest of the paper is organized as follows: section 2 presents a brief literature review, section 3 develops the hypotheses, section 4 describes the data, section 5 presents the results, while section 6 concludes.

## 2. Literature review

The literature covering firm-specific tax determinants is developed on different versions of firm-specific effective tax rates. While these have some built-in advantages, they also have some flaws. The topic came into attention of tax researchers in the '80s, in the US, when a debate concerning the fair share of taxes that big companies actually pay had emerged. While at the beginning, the studies were univariate, investigating mainly firm size as determinant of Effective tax rate, gradually the determinants looked upon were extended to many others, among which leverage, capital intensity and profitability are the most common. For instance, Stickney and McGee (1982) considered the extent of foreign operations and involvement in natural resources, Manzon and Smith (1994) considered industry sector and profitability, while Gupta and Newberry (1997) considered firm performance (return on assets) and asset mix (inventory intensity and research and development intensity). The results are mixed especially with regard to firm size, while for capital intensity and leverage it seems that both negatively affect effective tax rate through capital allowances and interest deduction.

With respect to other countries of the world, the research is not so vast. So far, empirical studies covered countries like Netherlands (Janssen, 2005), Australia (Richardson and Lanis, 2007), China (Xing and Cao, 2007; Chiou et al, 2012; Wu et al, 2013), Malaysia (Adhikari et al, 2006; Noor et al, 2010). Moreover, multi-countries studies emerged recently that covers USA and China (Fernández-Rodríguez and Martínez-Arias, 2012) or BRIC countries (Fernández-Rodríguez and Martínez-Arias, 2014). These studies follow closely the approach of Gupta and Newberry (1997), with some variations related to the definition of both dependent and independent variables, as well as to the methodology employed. With regard to dependent variables, differences consist in defining the effective tax rate, either by considering or not the deferred portion of the corporate income tax expense, either by employing different measures for denominator. For instance, Janssen (2005) took into consideration only the current tax expense in the numerator and earnings before interest and taxes (EBIT) and adjusted cash flow respectively in the denominator, while Richardson and Lanis (2007) considered income tax expense without any deferred tax adjustment in the numerator and book income and cash flow from operations in the denominators. As for the dependent variables, the things are much more homogenous in terms of their selection and definitions. However, differences among coefficient signs and significance level also exist. While Janssen (2005) found a positive sign for leverage, Adhikari et al (2006), Richardson and Lanis (2007), Xing and Cao (2007), Noor et al (2010), Wu et al (2013) found a negative relation as prescribed by theory. Also, different estimation methods were used: pooled OLS, fixed effects, random effects or quantile regression.

As a concluding remark, one can easily note the heterogeneity among previous studies mostly in terms of defining and computing corporate effective tax rate. However, a remarkable homogeneity is detected when screening the firm-specific determinants, especially with regard to firm size, capital intensity, leverage and profitability. This renders the results not only difficult to interpret, but often misleading, since some determinants affect both the numerator and denominator, and also makes any comparison between different studies ineffective. Thus, the research provides little useful insights to policy makers, and when it does, these are often controversial and conflicting.

This paper addresses the controversial issue of defining the dependent variable that captures the corporate tax burden, by adopting a simple, straightforward metric of taxes actually paid, namely logarithm of corporate income tax paid. To my knowledge, this is the first study that investigates firm-specific tax determinants in this new setting. By doing so, I

am able to get rid of all the controversies around different measures of firm-specific effective tax rates and provide a viable alternative to subsequent similar research. Results are interpreted accordingly.

## 3. Research design and hypotheses

In order to avoid the problems that firm-specific effective tax rates pose (Lazăr, 2014), the paper introduces a new measure of corporate tax burden, namely the logs of taxes actually paid. While this is new in tax research backward-looking methodology, a similar approach is used in one of the well-established tax research forward-looking methodology, namely European Tax Analyzer (Jacobs and Spengel, 2000), which measures the corporate tax burden by the absolute amount of taxes that companies actually pay (EUR).

With regard to determinants, most of them are based on conventional theory which states that firm size, capital intensity, leverage and profitability are the most common determinants of corporate effective tax rates. They were used in almost all previous studies on the topic. While there is a wide consensus about their impact on the effective tax rates, mixed result exists when it comes to the sign of the relationship. Therefore, we state the research hypothesis in a slightly different approach triggered by the new dependent variable, namely the logs of taxes.

With regard to firm size (logarithm of the total assets at book value), there are two opposing views on how it affects corporate tax burden: the political power theory (Stigler, 1971; Becker, 1983) and the political cost theory (Zimmerman, 1983; Watts and Zimmerman, 1986). According to the former, larger companies are engaging more aggressively in tax planning and are using their influence in order to promote tax provisions that are in their favor, thus achieving larger tax savings. Oppositely, the political cost theory states that given the increased public opinion scrutiny on larger firms, triggered by their visibility and success, they are more likely to be the target of tax provisions that impact more aggressively on them. Consequently, their tax burden are expected to be higher. Given the fact that the dependent variable is not a ratio, but the logs of taxes, I expect a positive sign, since larger firms (in absolute terms) tend to pay higher taxes (also in absolute terms). A negative and significant coefficient would, in turn, provide evidence in favour of aggressive tax planning of large companies.

The capital intensity (depreciable assets to total assets ratio) is another important determinant of corporate tax burden that was extensively used in the previous studies (Gupta and Newberry, 1997, Janssen 2005, Richardson and Lanis, 2007, Wu et al, 2013). Given the tax incentives related to investment in fixed assets (i.e. generous capital allowance such as accelerated depreciation or writing-off the cost of tangible assets over periods shorter than their economic lives), companies should be able to decrease their corporate income tax liability. Therefore, I expect a negative sign.

The leverage (medium and long term debt to total assets ratio) impacts on corporate tax through interest expenses which are deductible for tax purposes, while dividends are not. Thus, companies with higher leverage would tend to have lower tax payments. Moreover, thin capitalization rules and interest stripping rules are not so strict in Romania, and, as a result, I expect a negative sign of the relationship between leverage and tax burden.

Labor intensity (personnel costs to turnover ratio) is a determinant that was not investigated in previous research worldwide, the only exception being Lazăr (2014). Being a high debatable issue in Romania and given the burden triggered by employers' social security charges, documented by World Bank and PricewaterhouseCoopers surveys and other indigenous sources, I decided to empirically investigate if labor intensity really has an influence on firm-specific effective tax rates. Since a full shift of employers social security contributions to employees is hardly to be accomplished, especially in the case of Romania's social security system that is more redistributive oriented than insurance oriented, the burden (at least a part of it) triggered by employers' social security charges falls on the companies themselves (Ooghe et al, 2003). This lowers profitability and

consequently the corporate tax burden (Wilkie, 1988). On the other hand, the inclusion of labor costs in the production costs postpones deductibility to the period in which the underlying products are sold (Spengel et al, 2011), which increases the corporate tax burden. Given the hypothesized lack of shifting for employers' labor related taxes, I expect a negative sign.

Profitability could also exert an influence over corporate tax burden, therefore using return on assets (ROA) measured as pre-tax income to total assets ratio, I can roughly control for changes in book income. This is in line with previous research on the topic (Gupta and Newberry (1997), Buijink and Janssen (2000), Janssen (2005), Richardson and Lanis (2007). Wilkie (1988) showed that holding tax preferences, tax rate and total assets constant, an increase in ROA will lead to an increase in tax burden. Therefore, I expect a positive sign.

Apart from firm-specific characteristics based on data from corporate reports, others determinants may also play a role. For instance, some features of the tax code may exert influence on tax payments. I refer to loss carry-forward provisions that may cause variation in taxes beyond balance sheet and income statement determinants. Since I do not have access to tax return data, I set the corresponding dummy variable LCF equal to1 if the company recorded a net operating loss (NOL) in the previous year and 0 otherwise. With regard to loss carry-back, this was never available in Romania, therefore no tax refunds were possible. I expect that firms with NOLs in previous year to have lower tax payments.

Finally, since my investigation spans over twelve years period in which some tax reforms took place, I set a tax reform dummy variable TREF equal to 1 for the time period from 2005 onwards (when flat tax was adopted)  and 0 for 2005 backwards. As a result of 2005 tax rate cut from 25% to 16%, I expect a negative sign.

In this framework, the multivariate model is:

$TPAY_{it} = \alpha_0 + \beta_1 * CINT_{it} + \beta_2 * LEV_{it} + \beta_3 * SIZE_{it} + \beta_4 * LINT_{it} + \beta_5 * ROA_{it} + \beta_6 * LCF\ \beta_7 * TREF + \varepsilon_{it}$, where $i$ denoted the firm and $t$ the year. $\varepsilon_{it}$ is the error term.

TPAY (*tax payments = natural logarithm of corporate income taxes actually paid*)
CINT *(capital intensity = fixed assets to total assets ratio)*
LEV *(leverage = medium and long term debt ratio)*
SIZE *(company size = natural logarithm of total assets)*
LINT *(labor intensity = personnel costs to turnover ratio)*
ROA *(return on assets = pre-tax income to total assets ratio)*
LCF *(dummy variable equal to 1 if firm recorded a NOL in the previous year, 0 otherwise)*
TREF *(dummy variable for tax reform equal to1 after 2005 onwards, 0 before 2005)*

All variables are computed using data from companies' financial reports. Usual checking did not reveal any concerns with regard to multicollinearity between explanatory variables.

## 4. Data

The dataset contains detailed information from balance sheet and income statement. It follows closely the BACH data scheme and covers all non-financial Bucharest Stock Exchange listed companies for twelve years period (2000 – 2011), thus having 668 complete company-years observations. I used unconsolidated data in order to better capture specific country tax provisions and to provide a longer period of comparable data. The sources of data were financial reports of listed companies available on the Internet sites, both of the companies and of the Bucharest Stock Exchange and National Security Commission. Also, a subscription access to Bucharest Stock Exchange data directory was acquired in order to get the data for earlier years.

The final sample contains only 502 firm-years observation since 111 firm-years are lost due to negative profits (losses) and additionally 55 firm-years are lost when considering the lagged values for net operating losses of the previous year.
Descriptive statistics are reported in Table 1.

Table 1. Descriptive statistics for the final sample

| stats | N | mean | sd | min | max |
|-------|-----|-------|-------|--------|-------|
| TPAY | 502 | 12.39 | 2.15 | 6.49 | 18.99 |
| CINT | 502 | 51.47 | 20.42 | 0.00 | 96.19 |
| LEV | 502 | 6.59 | 10.92 | 0.00 | 73.88 |
| SIZE | 502 | 17.48 | 1.41 | 15.11 | 22.76 |
| LINT | 502 | 21.29 | 11.94 | 0.23 | 76.91 |
| ROA | 502 | 6.04 | 9.36 | -34.91 | 82.26 |
| LCF | 0 (n = 456) | | | 1 (n=56) | |

TPAY (*tax payments = natural logarithm of corporate income taxes actually paid*)
CINT *(capital intensity = fixed assets to total assets ratio)*
LEV *(leverage = medium and long term debt ratio)*
SIZE *(company size = natural logarithm of total assets)*
LINT *(labor intensity = personnel costs to turnover ratio)*
ROA *(return on assets = pre-tax income to total assets ratio)*
LCF (*dummy variable equal to 1 if firm recorded a NOL in the previous year, 0 otherwise*)

## 5. Results

I used panel data fixed effect model in order to account for company heterogeneity through firm-specific intercepts that capture the effects of unobserved or unmeasurable firm characteristics that are relatively constant over time but vary over firms (Gupta and Newberry, 1997). By including firm-specific intercepts, variables which are likely to be correlated with the explanatory variables (ownership structure, managers team, earnings management) may be controlled.
The results are reported in Table 2.

Table 2. Regression results

| | |
|------|------|
| CINT | -0.0141[*] (0.00778) |
| LEV | -0.0137[*] (0.00749) |
| SIZE | 0.795[***] (0.176) |
| LINT | -0.0218[*] (0.0124) |
| ROA | 0.0794[***] (0.0132) |
| LCF | -1.093[***] (0.262) |
| TREF | -0.821[***] (0.164) |
| Constant | -0.0504 |

| | (3.142) |
|---|---|
| Observations | 502 |
| $R^2$ | 0.568 |

Robust standard errors in parentheses clustered on firms
[*] $p < 0.10$, [**] $p < 0.05$, [***] $p < 0.01$

Capital intensity has a negative impact on tax payments according to the conventional theory. One percentage point (p.p.) increase in capital intensity leads to 1.4% reduction of the company's tax payments. Leverage also displays a negative sign as expected. In this case, one p.p. increase of medium and long term ratio triggers 1.36% reduction in profit tax payments. The coefficient for size shows that 1% increase in size triggers 0.8% increase in tax payments, which is in accordance to stated hypothesis. Labour intensity is significant, albeit at 10% and shows that 1 p.p. in personnel expenses ratio leads to 2.15% reduction in corporate tax payments. As for ROA, the positive coefficient shows that one p.p increase leads to 8.26% increase in tax payments. Moreover, the coefficients for the two dummy variables are positive and strongly significant, showing that companies are able to take advantage of the loss carry-forward provisions (reducing tax payments by 66% as compared to the companies that do not have NOLs) and that the tax reform in 2005 triggered a reduction in the tax payments which in average amounts to 56% as compared to the pre-tax reform period. This figure empirically confirms the simulation model European Tax Analyzer, which found that corporate tax burden felt by 34% (Spengel et al 2012a, 2012b).

## 6. Conclusions

The paper investigates the determinants of corporate tax payments for Romanian non-financial companies listed at Bucharest Stock Exchange over twelve years period (2000 – 2011), using for the first time, the log of taxes actually paid as dependent variable. This removes the inherent flaws of firm specific effective tax rates, while establishing a more comparable field for subsequent similar research.

All the determinants investigated were found as having an impact, albeit at different level of significance. Capital intensity, leverage and labour intensity were found as having a negative effect, while profitability and size have a positive impact. The findings correspond in general to conventional theory. Moreover, the paper produces evidence concerning the impact of loss carry-forward provisions on firm tax payments. The results are especially useful for corporate managers who see the ways in which they may reduce the corporate tax burden, for instance by taking more debt or my investing in new assets. However, the results are valid only for Bucharest Stock Exchange listed companies and cannot be extrapolated to private held companies, since they have different investment and financing choices. The results confirm the findings of Lazăr (2014) and show that firm-specific determinants are robust to different measures of corporate tax burden, either in relative forms (effective tax rates), either in absolute terms (log of taxes).

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# PUBLIC FINANCE SUSTAINABILITY IN ROMANIA. RECENT DEVELOPMENTS

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**Abstract:** *The main objective of this paper is to evaluate the sustainability of public finance in Romania and to explore the fiscal threats Romania might face in the future. A sound fiscal policy implies avoiding excessive liabilities of the government, but at the same time delivering the proper public goods and services, including the necessary safety net in times of crisis. An unsustainable fiscal position negatively impacts on macroeconomic stability; moreover, if public finances are perceived to be unsustainable in the long run, the reaction of the international financial markets could generate a fiscal crisis, which might surprise the fiscal planners. The main findings of the paper are the following: i) according to the multidimensional approach of the European Commission, in the short run, it seems that Romania is free from fiscal stress, there is a low risk in the medium term, and in the long run the risk becomes medium; ii) a potential medium-term fiscal sustainability risk derives from the accumulation of losses and arrears in the business and companies sectors in which the state is a majority shareholder; iii) Romania records one of the lowest budget revenues to GDP ratios in EU, while the Romanian tax system is characterized by a poor tax collection, inefficient administration and excessive bureaucracy; iv) the structure of public spending in Romania is characterized by the predominance of wage spending and social assistance, while the poor state of the public pension system is an important vulnerability of the public finance position; v) overall, the degree of tax compliance in Romania was only 55.8% in 2013, and according to the calculations made by the Fiscal Council, tax evasion represented 16.2% of GDP in 2013. All these aspects make up a grim picture of sustainability of public finances, which has to be considered by the public decision makers regarding future fiscal policy actions.*

**Keywords:** public finance; fiscal sustainability; Romania; multidimensional assessment; fiscal risks.

**JEL classification:** H62; H53; H26.

## 1. Introduction

As Blanchard et al. (1991) stated, "sustainability is actually about good housekeeping". Fiscal sustainability refers to the government's ability to assume the financial burden of its future debt; it is essentially a forward looking macroeconomic concept which is related to the solvency of government. Maintaining sustainable public finances has become most important since the recent economic and financial crisis. Indeed, in order to generate a stable macroeconomic environment, it is necessary to ensure a stable long-term relationship between government expenditures and revenues.

A sustainable fiscal policy means that the inter-temporal government budget constraint holds in present value terms, i.e. the current market value of public debt is equal to the discounted sum of expected future primary surpluses. In other words, a sound fiscal policy implies avoiding excessive liabilities of the government, but at the same time delivering the proper public goods and services, including the necessary safety net in times of crisis. An unsustainable fiscal position negatively impacts on macroeconomic stability; thus, fiscal authorities aim at reducing the budget deficit, in order to maintain public debt within

sustainable limits, or to mitigate the rising of the current account deficit (Coroiu, 2015).

In the European context, fiscal sustainability is an acute policy challenge, due to the worsening of fiscal positions and increases in public debt since 2008; to make things worse, Europe is facing an ageing population, which will undergo dramatic demographic changes in the near future, due to the dynamics of fertility, life expectancy and migration rates. According to the 2015 Ageing Report, population ageing is expected to seriously affect economic growth (if fertility rates are lower than expected, then growth rates could be much reduced) and to generate important pressures to increase public spending. This will make it difficult for the Member States to maintain sound and sustainable public finances in the medium and long-term.

Since the sustainability of public finances needs to be addressed at the country level, a country assessment is obviously useful. In this respect, we should note that the borders of sustainability differ across countries and over time. The ability to run high debts depends on several factors, i.e. the degree of financial markets' development, perceived risks, trust in the capacity of a government to implement structural reforms and consolidate deficits, the degree of global risk aversion and the attractiveness of investments alternative to government bonds (Sudharshan et al., 2012). Still, countries recording high debt ratios and large external imbalances are most exposed.

The main objective of this study is to evaluate the sustainability of public finance in Romania, using the most recent data sources. Specifically, the study assesses fiscal sustainability by highlighting the multidimensional approach of the Commission, integrating the longer term with an assessment of more immediate challenges and risks. Also, the second part of the study explores the threats for public finances sustainability, by looking into several sensitive areas, such as: public arrears, tax collection, the efficiency of public spending or tax evasion.

The rest of the paper is structured as follows: Section 2 highlights the literature review; Section 3 presents the multidimensional assessment of fiscal sustainability in Romania; Section 4 explores potential threats for Romania's fiscal sustainability, while Section 5 concludes.


## 2. Literature Review

In the last twenty years or so, there has been a significant work (theoretical and empirical) in public finance regarding the sustainability of fiscal policy, especially since 2008-2009, when the financial and economic crisis has been triggered. The empirical analysis of fiscal sustainability usually tests for cointegration between government revenues and expenditures and/or for the existence of unit roots in government debt and budget deficit series.

Such an empirical analysis was performed by Landolfo (2008), who evaluated fiscal sustainability in the Euro Area (for the period 1966-2004) and USA (for the period 1977-2003), by applying cointegration and unit root tests to public debt, primary surplus and interest rates. On the basis of infinite horizon-tests, the general conclusion is that both regions have a sustainable fiscal policy. Focusing also on the European sample, Afonso and Rault (2010) assess the sustainability of public finances in the EU-15 over the period 1970–2006, using stationarity and cointegration analysis. Despite the fact that their estimations reveal fiscal sustainability being an issue in some countries, they conclude that fiscal policy was sustainable both for the EU-15 panel set, and within subperiods (1970–1991 and 1992–2006).

Another contribution to the literature belongs to Yildiza and Yildirimb (2014) who study the financial viability of the European Monetary Union member countries (a balanced panel including 12 EMU countries, over the period 1995-2011). After testing the existence of panel causality between debt/GDP and primary surplus, the authors conclude that the variables are co-integrated, i.e. there is a statistically significant long-run relationship

between the two variables.

Furthermore, Afonso and Jalles (2012) study the sustainability of public finances in OECD countries, over the period 1970-2010. Using unit root and cointegration analysis, they discover that government revenues and expenditures for most countries are not cointegrated, while government debt Granger causes the primary balance for 12 countries; for some countries, in general, fiscal policy has been less sustainable, and panel data results confirm the time-series findings. Two years later, the same authors, Afonso and Jalles (2014), investigate the sustainability of fiscal policy in a set of 19 countries, this time by taking a longer-run secular perspective over the period 1880–2009. Testing the stationarity of the first-differenced level of government debt and disentangling the components of the debt series using structural time series models, the authors conclude that longer-run fiscal sustainability can be accepted (Japan and Spain seem to be exceptions), since in most cases stationarity can accepted.

Some of the recent papers focus their attention on groups of countries. Such a study belongs to Kapopoulos and Lazaretou (2011), who analyze the case of South-East European countries, given the fact that many of these countries faced debt crisis episodes during the last decades. The authors come to the conclusion that every SEE country tried to consolidate its public finances over the last decade; still, the empirical analysis indicates a weak connection between public debt sustainability and the short-run conduct of fiscal policy, i.e. debt sustainability is not improved by the short-run conduct of fiscal policy.

Regarding fiscal sustainability in Romania, there are several studies that analyze the subject. Talpoş and Enache (2008) use monthly public revenues and public expenditures time series, in order to test for a cointegration relation. Since they discover at least two cointegration relations between the two time series, the authors conclude that in Romania, if the determinants of the public revenues and public expenditures remain unchanged, the public debt will not have a divergent evolution and the fiscal policy will be sustainable in the long run.

Homorodean et al. (2014) analyze the evolution of tax revenues in Romania between 2005 and 2013, as well as the share of tax revenues in the general consolidated budget of Romania. The main conclusion is that Romania is a country with an average level of risk for fiscal sustainability. Finally, Sudharshan et al. (2012) suggest that the costs of financing the Romanian public pension system threatens long-term fiscal solvency all together with negative demographic shifts over the next half of century. Also, tax evasion records high values, the Romanian tax system having one of the smallest efficiency in the European Union.


## 3. Multidimensional Assessment of Public Finance Sustainability in Romania

### 3.1. Methodological Approach

The European Commission (2012) has developed a multidimensional tool for assessing fiscal sustainability, which integrates the longer term with an assessment of more immediate challenges and risks. This multidimensional approach allows the assessment of three types of challenges: i) short-term challenges, based on the S0 indicator ("early detection of fiscal stress"); ii) medium-term challenges, based on the modified S1 indicator ("debt compliance risk") and iii) long-term challenges, based on the S2 indicator ("ageing-induced fiscal risks").

The S0 indicator aims at an "early detection of fiscal stress", through a combination of fiscal, financial and competitiveness indicators. This indicator is designed to highlight shorter-term (one-year horizon) risks for fiscal stress, generated by the fiscal, financial and competitiveness sectors of the economy. There are 28 fiscal and financial-competitiveness variables used in the composite indicator S0.

The medium-term sustainability indicator, the S1 indicator, illustrates "the budgetary

adjustment effort required, in terms of a steady improvement in the structural primary balance to be introduced until 2020, and then sustained for a decade, to bring debt ratios back to 60% of GDP - the debt threshold in the Treaty - in 2030, including financing for any additional expenditure, arising from an ageing population until the end-point date." (European Commission, 2012). In order to evaluate the degree of the sustainability challenge, several thresholds were used: "(i) if the S1 value is less than zero, the country is assigned low risk; (ii) if it is between 0 and 3 (thus requiring a structural adjustment in the primary balance of up to 0.5 p.p. of GDP per year until 2020), it is assigned medium risk; and, (iii) if it is greater than 3 (meaning a structural adjustment of more than 0.5 p.p. of GDP per year is necessary), it is assigned high risk" (European Commission, 2012).

The S2 indicator describes "the adjustment to the current structural primary balance required to fulfill the infinite horizon inter-temporal budget constraint, that is, current and future government revenue matches current, comprising outstanding government debt, and future expenditure, including paying for any additional expenditure arising from an ageing population" (European Commission, 2012). The S2 indicator takes into account the estimated changes in age-related expenditure over a much longer time span (to 2060 and beyond) and it doesn't take into account the required adjustment for high debt countries to reduce their debt below 60% of GDP. In order to interpret the indicator, the general rule is the following: the higher the values of the S2 sustainability indicator, the greater the required fiscal adjustment and thus the fiscal sustainability risk. There are three specific thresholds: (i) if the value of S2 is lower than 2, the country is assigned low risk; (ii) if it is between 2 and 6, it is assigned medium risk; and, (iii) if it is greater than 6, it is assigned high risk.

### 3.2. The Case of Romania

According to the multidimensional approach of the European Commission, in the short run, it seems that Romania is free from fiscal stress (S0), there is a low risk in the medium term (S1), and in the long run the risk becomes medium (S2). The level of government debt was of 38% of GDP in 2013 and 39.4% in 2014, below the 60% of GDP threshold. In case the structural primary balance would return to lower values (similar to the average for the period 1998-2012), then risks would be higher: the S1 indicator would increase from -1.4 to 1.5 (medium risk), while the S2 indicator would increase from 3.7 to 5.9, right next to the upper limit.

Figure 1 shows the structural primary balances, i.e. the cyclically-adjusted primary balance corrected for one-off and temporary measures. It shows both the Commission's autumn 2013 forecast for 2015 and the average over the period 1998-2012.

As can be noticed, Romania recorded a negative structural primary balance during the period 1998-2012, the average being close to -2% of GDP. As for 2015, the Commission's forecast suggests a structural budgetary surplus, which must be treated with caution: in order to positively affect the economy, it should emerge from improved tax collection, current spending cuts and increased investment, and not from the introduction of new taxes or the lack of infrastructure projects.
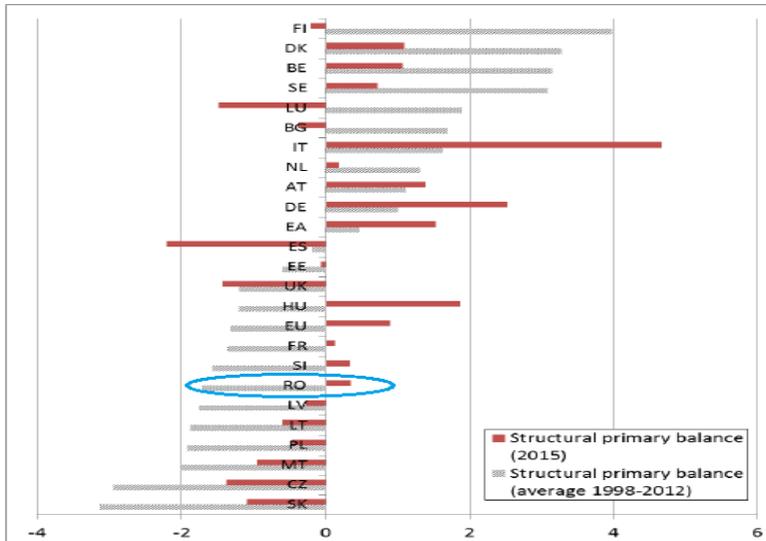
**Figure 1:** Structural primary balance, 2015 and average (1998-2012), % of GDP
Source: Commission Services.

Another key element of the sustainability indicators is the cost of ageing, which covers a longer time horizon (50 years). Its impact derives from the estimated evolution in age-related expenditure, i.e. pension, health care, long-term care, education and unemployment benefits. The most important expenditure type is public pension spending, accounting for about 11% of GDP in the EU as a whole. Public pension expenditure in the EU-27 is projected to increase by 1.5 p.p. of GDP over the period 2010-2060 to a level of 12.9% of GDP, while in the euro area, an increase by 2.0 p.p. of GDP is projected.

Member States display a significant variation in terms of both current expenditure levels and in terms of projected changes in pension spending. This illustrates the different pension systems in place, and also the stage of the pension reform process Member States find themselves in (see Figure 2).
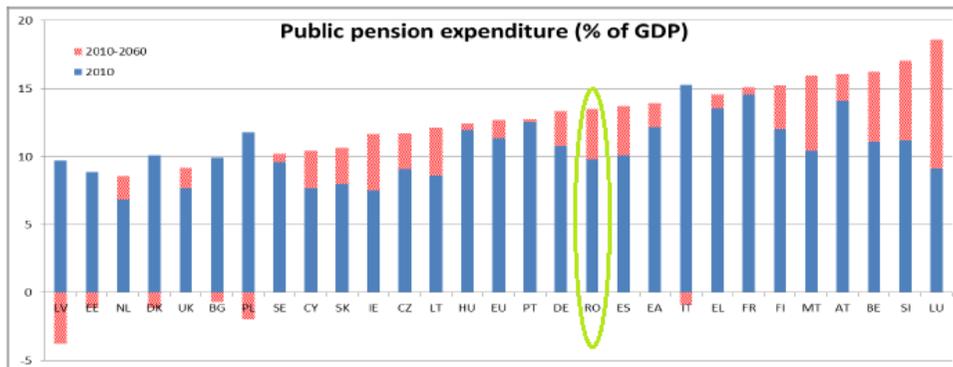


**Figure 2:** Public pension expenditure, 2010 and 2060 (% of GDP)
Source: Commission Services

Health care spending is the second largest expenditure item, accounting for about 7% of GDP for the EU as a whole. Besides health care, attention should also be paid to long-term care. When taken together, these items represent 9% of GDP in the EU. Figure 3 illustrates a more detailed image of this category of expenditures.
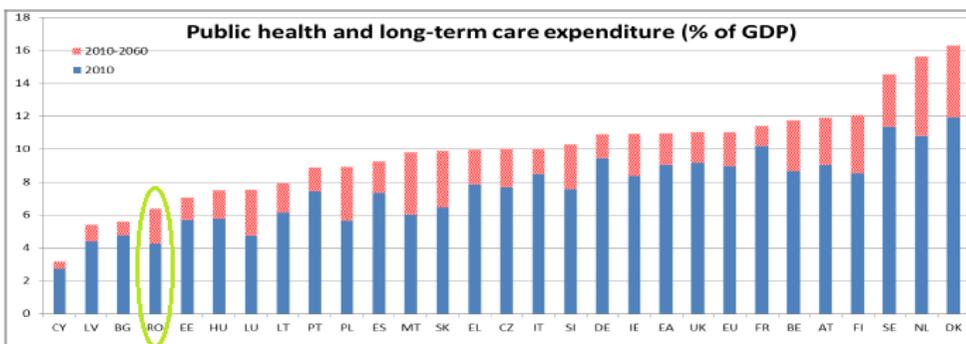
**Figure 3:** Public health care and long-term care expenditure, 2010 and 2060 (% of GDP)
Source: Commission Services.

Both previous Figures (2 and 3) highlight the fact that Romania will record higher future pension expenditures (+3.7 p.p. of GDP), as well as higher health and long care spending (more than 2 p.p. of GDP). This will exert additional pressure on the public budget, thus contributing to the medium and long term fiscal risks.

As stated before, the S0 indicator is used to assess risks for fiscal stress in the following year, its values beyond the threshold indicating potential short-term risks. Countries with a value for the overall indicator above the threshold (0.43) in 2013 are at risk for fiscal stress in the year ahead. Figure 4 indicates that Romania has an "acceptable" value (below the threshold) of the S0 indicator, presenting no fiscal risk in the short run.
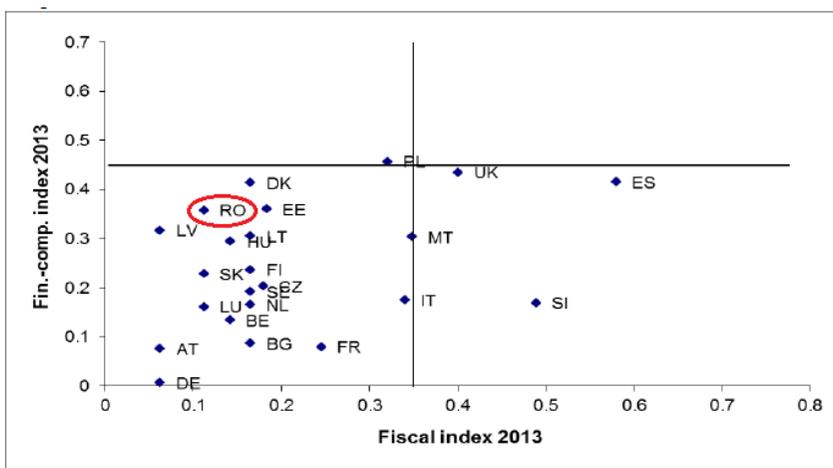


**Figure 4:** The S0 indicator
Source: Commission Services.

With respect to the medium-term challenges assessed by the S1 indicator, Figure 5 shows this indicator in the no-policy-change scenario, taking the budgetary position in 2015 (the last year of the autumn 2013 Commission forecast) as a starting point. Also, it illustrates the values resulting from taking the year 2012 as a starting point, thus showing the size of the adjustment currently planned in the following years, as reflected in the autumn 2013 forecast.

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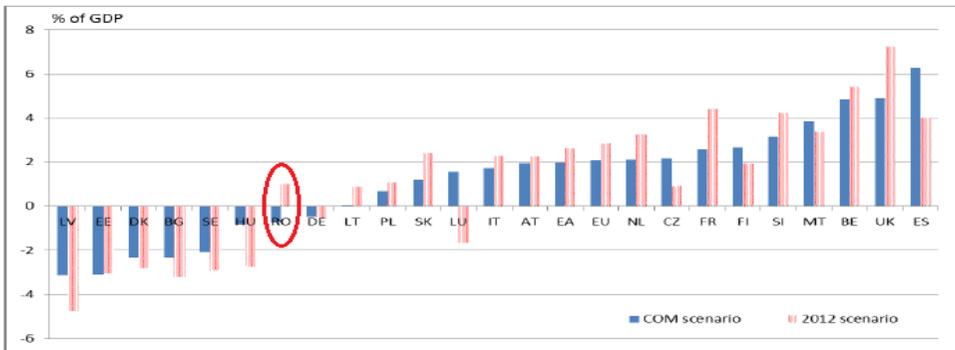
**Figure 5:** The S1 indicator
Source: Commission Services.

As can be observed, the medium-term sustainability gap (S1) is negative (-1.4% of GDP in the baseline scenario), reflecting the low debt to GDP ratio (well below the 60% of GDP threshold). When using the risk scenario, the S1 indicator remains almost unchanged (-1.2%), showing elasticity to higher health care and long term care spending.

The S2 sustainability indicator assesses the size of current and future budgetary imbalances and, consequently, of the size of the challenge placed on public finances. Figure 6 shows on the horizontal axis - the initial budgetary position (IBP) and on the vertical axis - the long-term change in the budgetary position (LTC). A country positioned to the left has a favorable IBP; if it is below zero, it means that the budgetary position contributes positively to fiscal sustainability. A country positioned towards the bottom of the axis has a low long-term "cost of ageing" (European Commission, 2012).

The fiscal sustainability position of the countries from to the upper area can be improved by reforming the pension systems and, thus, curbing the estimated increase in age-related expenditure, while countries to the right can improve their fiscal sustainability position by consolidating their public finances. The further a country is positioned towards the upper-right corner, the higher is the sustainability gap. The horizontal lines indicate the size of the sustainability gap; for example, the EU a whole has a sustainability gap of 2.9 pp. of GDP.

According to the long-term sustainability analysis, Romania has a sustainability gap (S2) of 3.7% of GDP (see Figure 6), which is above the EU average (2.6%). This sustainability gap is almost entirely due to the long-term cost of ageing (+3.6 pp.), which is generated by an increase in pensions (+2.4 pp.) and healthcare and long-term care (+1.3 pp.). The initial budgetary position of Romania, in terms of the structural primary balance, considering the required adjustment to stabilize the debt ratio at the current value, is close to zero (+0.1 pp.).
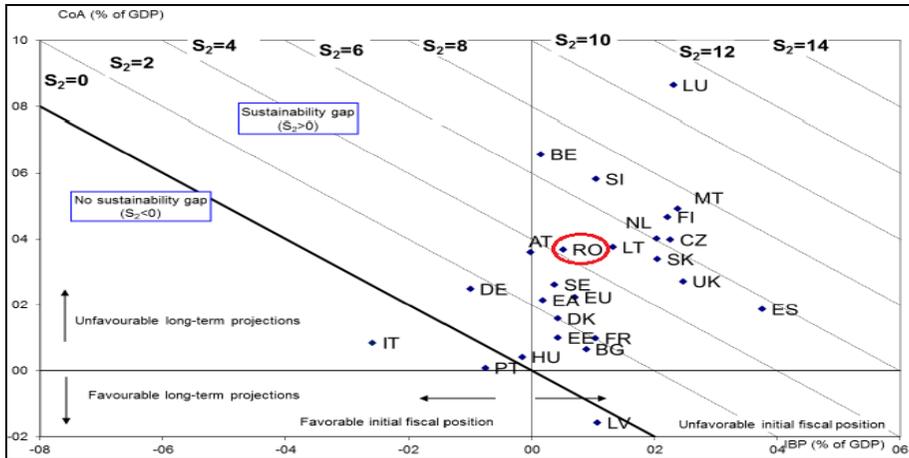
**Figure 6:** The S2 sustainability gap decomposed
Source: Commission Services.

Figure 7 allows for the comparison of Member States by taking into account the three indicators: S0, S1 and S2 and their components. The scale for each variable corresponds to the range of the data in the EU (highest value of all countries: 100%, lowest: 0%). One must note that higher values (closer to the outer area of the chart) mean higher sustainability risks.
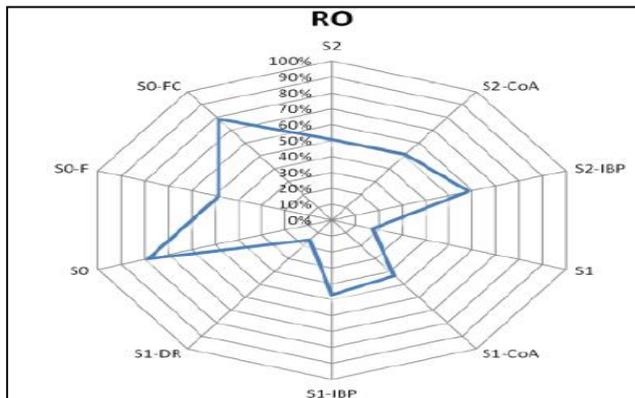


**Figure 7:** Determinants of fiscal sustainability in Romania
Source: European Commission (2012): 124.

Analyzing Figure 7, we can conclude that Romania, compared to the other Member States, "suffers" most in the following areas: financial-competitiveness subindex (S0-FC), initial budgetary position component (S2-IBP) and ageing cost component (S2-CoA). The finest performance belongs to the debt requirement component (S1-DR), since Romania records a value well below the 60% of GDP threshold (39.4% of GDP in 2014, according to the official data presented by the Romanian Ministry of Finance).

## 4. Fiscal Risks for Romanian Public Finances Sustainability

### 4.1. Arrears of State Companies
A potential medium-term fiscal sustainability risk address derives from the accumulation of losses and arrears in the business and companies sectors in which the state is a majority

shareholder: if they fail to streamline their activity, the Government will ultimately be forced to intervene with public resources, which may lead to a deterioration in public finances, with an increased budget deficit.

Although the contribution of public companies in total turnover in the economy was only 4.4% in 2013, the accumulated arrears represented 19.8% of total arrears recorded in the economy (Figure 8), both indicators continuing the downward trend since the peak in 2009 (6% for public companies contribution to the total turnover in the economy and 35.5% for arrears accumulated by state-owned companies in total arrears in the economy). The stock of arrears belonging to the 1086 state companies represented 3.6% of GDP in 2013, following the same downward trend as the indicators mentioned above (6.9 % of GDP peak in 2009). Most of the arrears of public companies are related to the general consolidated budget (50% of total arrears), especially the social security budget, unlike private companies, whose arrears are related to suppliers mostly (52% of total arrears).
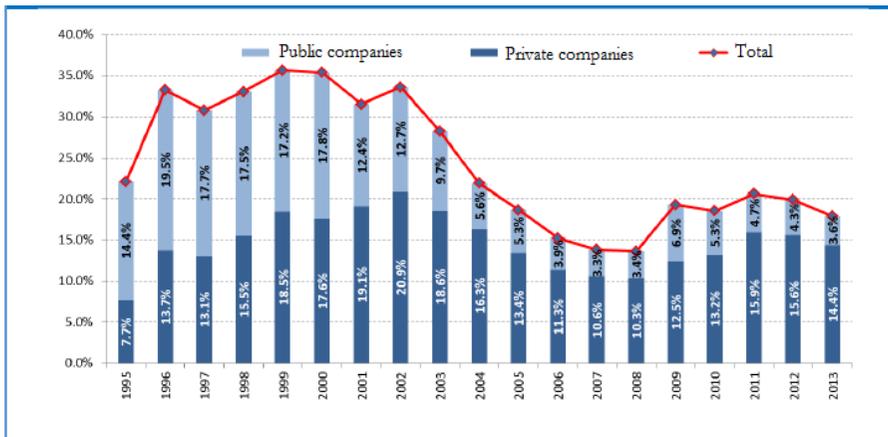


**Figure 8:** The evolution of arrears of public and private companies (% of GDP)
Source: Fiscal Council Report (2014): 103.

### 4.2. Tax Collection

Romania records one of the lowest budget revenues to GDP ratios (tax and non-tax revenue), representing only 32.7% of GDP in 2013, 13 p.p. of GDP lower than the European average. The level of tax revenues to GDP (taxes and social contributions) in Romania was 27.5% in 2013 (Figure 9), also with 13 p.p. of GDP lower than the EU-27 average (40.5%).

In addition, the gap that separates us from the EU average increased in 2013 over the previous year by 1.1 pp of GDP in terms of total revenues and 0.8 percentage points for tax revenues. The share of tax revenue to GDP is significantly lower than in similar economies, such as Hungary (38.6%), Slovenia (37.6%), Czech Republic (35.3%) and Poland (31.8%).
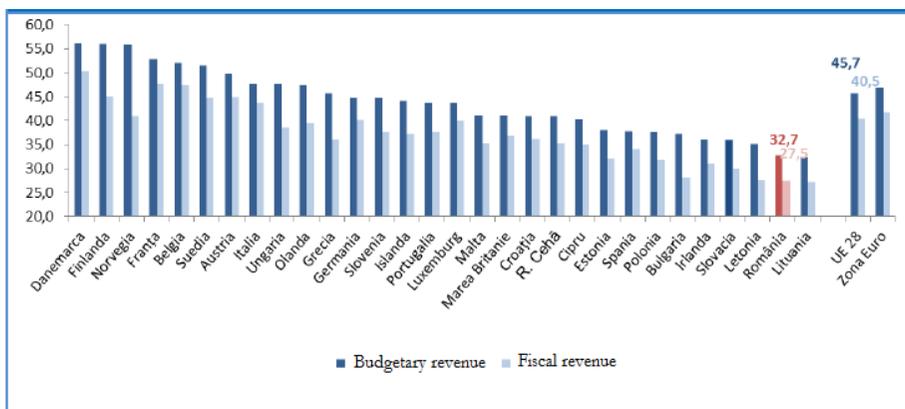
**Figure 9:** The budget revenue and tax revenue (% of GDP, ESA95, 2013)
Source: Fiscal Council Report (2014): 116.

The Romanian tax system is characterized by a poor tax collection, inefficient administration and excessive bureaucracy, a relatively low tax base, with many exemptions and legal deductions, and high tax evasion. However, in recent years there have been initiated a number of measures that led to an improvement, but their impact is likely to be fully observable in future.

According to the World Bank (2014), Romania is ranked 134 of 189 countries worldwide in terms of ease of paying taxes (slightly up from 136, the place occupied in the previous year). The number of payments per year that is required for a company in Romania to pay taxes is 39 (down slightly compared to 41 in 2012), significantly higher than in other surveyed countries. In terms of the number of hours required to pay the tax liabilities of a financial year, Romania is positioned relatively favourable in the sample, with 200 hours required per year.

## 4.3. The Composition and Efficiency of Public Expenditure

The structure of public spending in Romania is characterized by the predominance of wage spending and social assistance (pensions, welfare), but their relative importance has declined significantly in 2010-2013, as a result of fiscal consolidation.

The poor state of the public pension system is an important vulnerability of the public finance position, the relative importance of this category of expenses in total income being still too high. However, the enforcement of the new pension law should support the medium-term objective of reducing this share. Also, in terms of ensuring medium- and long-term sustainability of public finances, it is important that any increase in wages in the public sector in the coming years to be related to the evolution of economic activity and, in particular, of productivity gains.

If during the period 2000-2007, social security budgets (pensions, unemployment and health) were characterized by a relative balance, after the year 2008, deficits have come to represent an important component of the total deficit, (ranging from 68% to 155% in 2010-2013). Basically, in the latter year, Romania would have had a budget surplus if the social security budget would have been in equilibrium. Figure 10 shows how the deficit in the public pension system (-1.86% of GDP) significantly affected the position of public finances, representing a relevant risk to the sustainability of fiscal policy in the medium and long term.
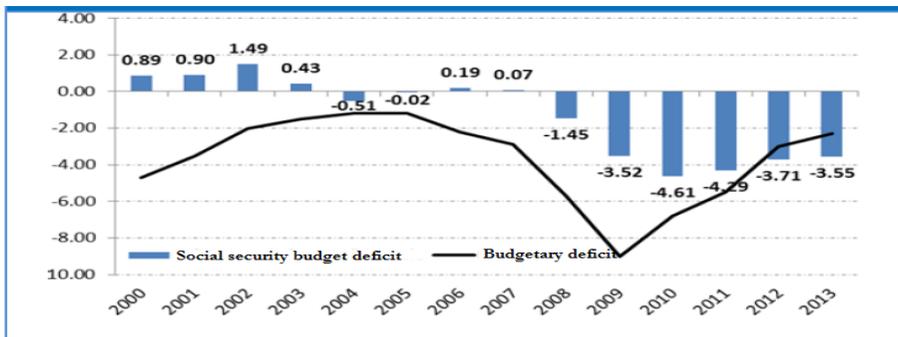
**Figure 10:** Social security budget deficit (pensions, unemployment and health) and total budget deficit - ESA95 (% of GDP)
Source: Fiscal Council Report (2014): 122.

The ineffectiveness of budget expenses is very high. For example, Romania had the largest allocation for capital expenditure as a percentage of GDP (as a percentage of total budget revenues as well) of all EU countries in the period 2002-2013 (as can be noticed from Figure 11), but the results are modest: Romania still has the weakest infrastructure in the EU. This example clearly shows that the money was spent inefficiently.
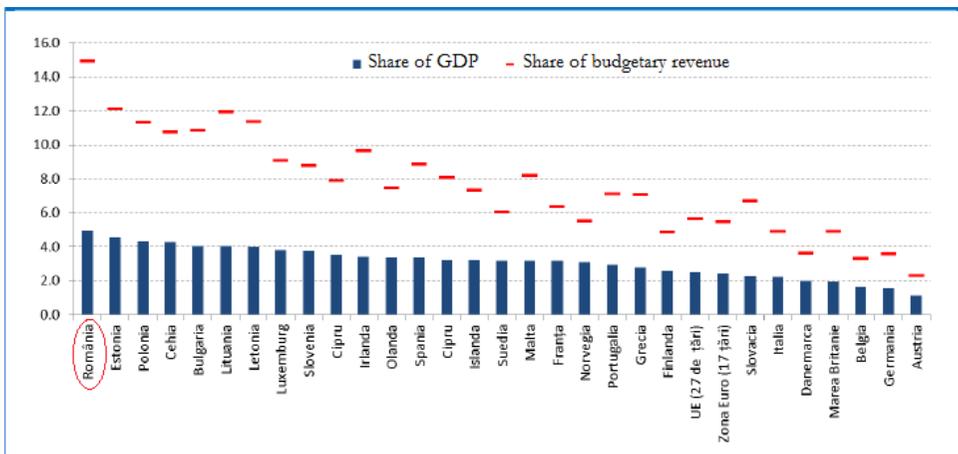


**Figure 11:** The share of investment spending in GDP and total revenue (average 2008-2013)
Source: Fiscal Council Report (2014): 123.

### 4.4. Tax Evasion

According to the calculations made by the Fiscal Council, based on NIS data, tax evasion is very high in Romania, representing 16.2% of GDP in 2013. A profound reform of the administration of taxes in Romania, targeted towards increasing tax collection, is absolutely necessary, thus being capable of creating the fiscal space needed to reduce the tax burden on employment, which displays a very high level today.

Approximately 75% of the evasion is generated by VAT, which reached a maximum of 12.34 % of GDP in 2012, followed by a slight decrease in 2013 (12.21 % of GDP). Note that in 2010, when the legal VAT rate was increased from 19% to 24% in the second half of the year, tax evasion increased from 8% of GDP in 2009 to 9.6% of GDP in 2010, an upward trend that maintained itself in the coming years.

Based on calculations of the Fiscal Council, we can determine the degree of tax compliance, defined as the ratio between the actual collected budget revenue and theoretical income (including tax evasion and revenue actually collected). Overall, the

degree of tax compliance was only 55.8% in 2013 (Figure 12), a slight improvement compared to 2012, when we had a minimum of the last 12 years. The highest degree of tax collection during 2001-2013 was reached in 2006, i.e. 73.9%. The lowest degree of tax compliance is recorded in the field of VAT, only 40.38%.
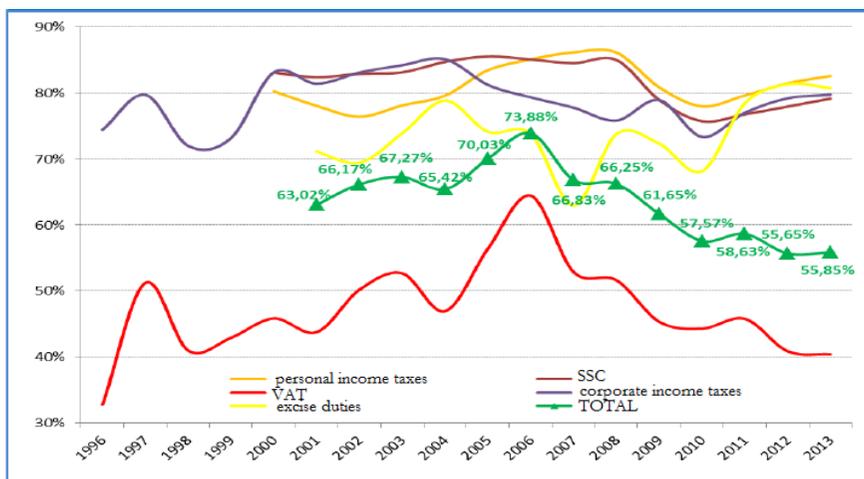


**Figure 12:** Evolution of compliance degree towards payment of main taxes
Source: Fiscal Council Report (2014): 136.

Regarding income taxation, we can notice an improvement in the degree of compliance in 2005-2006, after the introduction of the flat tax rate of 16%. During 2007-2013, there is a stagnation of the degree of compliance and subsequent worsening, reaching levels even lower than the period prior to 2005. Moreover, there is a deterioration of the degree of compliance regarding the Social Security Contribution during 2009-2013, compared to 2008, when the SSC quotas were increased.

## 5. Conclusions
Achieving sustainable public finances is a challenging task, especially if the starting point is one of significant imbalances. The sharp adjustments that took place in Romania, i.e. austerity measures, undermined the trust in the ability of the government to maintain basic safety nets, especially with the recent discovered corruption episodes. The democratic processes involving the use of public money will function properly if there is a greater transparency. Also, since debates on fiscal sustainability can be very complex and hard to understand, a necessary step is the improvement in the financial literacy of citizens, politicians, administrators, journalists and other stakeholders. Greater awareness of the connections between financial markets and public finances can help ensure citizens play a more active role in demanding better long-term fiscal sustainability. Finally, reforms are also critical to improving the management of public resources and to rebuild confidence among citizens regarding the ability oh the government to meet existing commitments and plans for the future. For Romania, growth is not sufficient on its own to achieve sustainability in the long run, without appropriate public sector financial management.

## 6. Acknowledgements

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# KNOWLEDGE IS POWER. IMPROVING TAX COMPLIANCE BY MEANS OF BOOSTING TAX LITERACY

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**Abstract:** *Because empirical investigations entailing classical tax evasion models often reported consistent deviations from perfect rationality, social scientists interested in tax behavior have extended their area of research by focusing on compliance determinants outside the economic spectrum (i.e., tax rate, audit rate, penalty rate, income). Consequently, a manifold of variables from psychology (attitudes, norms, perceptions), sociology (education, gender) or political science (fiscal policy, tax law complexity, voting) were taken into account as determinants of taxpayers' decisions. In addition, behavioral models like the Australian Taxation Office compliance model, New Zealand Inland Revenue compliance model or the "slippery slope" framework have incorporated such variables. Recent empirical developments have indicated that tax literacy can be counted as a significant determinant of tax compliance. Forasmuch compliance strategies exclusively grounded on coercion are rather costly (high monitoring outlays, large staff employed in the monitoring process, etc.), generally yield short-term outcomes and may attract the resistance of otherwise honest taxpayers, authorities worldwide have begun searching for the adequate combination between cooperation and coercion, in which the emphasis on the former should prevail. State budgets are better off when authorities enact compliance strategies extensively built on cooperation, for they generate long-term results, require fewer outlays and secure the support of most honest taxpayers. The current paper draws on the effects of tax literacy (i.e., the level of tax knowledge) on taxpayers' behavior, highlighting miscellaneous strategies employed by national tax authorities around the world. As a general trend, increasing tax literacy among very young and soon-to-be taxpayers is preferred by several tax authorities, because potential contributors have to be accustomed to the requirements of tax systems before entering the economic market as employees, self-employed or employers. The use of media campaigns, tax lotteries and online filling systems are included as well among widely used strategies.*

**Keywords:** tax literacy; tax compliance; tax authorities; knowledge.

**JEL classification:** F30; F62; G18; G28; H26.

## 1. Introduction

Dating back to the 16th century and embedded in the writings of Sir Francis Bacon, a renowned English statesman and philosopher, the "Knowledge is power" dictum stresses the idea that information camps possess the strength of driving historical changes. In modern-day societies, tax authorities have a powerful instrument at hand to amend taxpayers' behavior, i.e., education in general and tax literacy in particular. The relationship between tax compliance and education is complex, as both variables are intertwined: the former's level mirrors the quality of the latter; conversely, the latter predetermines to a certain degree the amount of tax revenues collected by tax authorities.

In the following, we will give an account on how improving citizens' tax literacy level can augment tax compliance on the long run. While enforcement strategies may prove efficient on short term, enhancing tax compliance via coercion entails high monitoring costs and its effects does not surpass the test of time. Is tax literacy a prominent driver of taxpaying? Do

tax knowledgeable citizens comply more with the tax law? Which are the most adequate strategies tax authorities can use to improve tax literacy among citizens and ultimately secure constant or ascending tax revenues? These are few questions that the present study endeavors to answer.

The reminder of the paper is the following. Section 2 draws on recent developments reported in the literature with regards to taxpayers' behavior. Section 3 brings forward worldwide strategies used to increase tax literacy and ultimately the level of collected tax revenues. Section 4 entails concluding remarks.


## 2. Main determinants of tax compliance attitudes and behavior

Ever since classical tax evasion models (Allingham and Sandmo, 1972; Srinivasan, 1973; Yitzhaki, 1974) based on the theory of economic crime (Becker, 1068) have been introduced to the literature, the topic of tax behavior has gained ground among social scientists. Investigating the effect of economic variables (tax rate, audit rate, income, penalty rate) on compliance behavior and noticing consistent deviations from perfect rationality, researchers have started looking beyond economic factors. As a result, *psychological* (attitudes, norms, perceptions, etc.), *social* (e.g., education, gender) or *political* (fiscal policy, tax law complexity, voting, etc.) variables have also been considered as prominent compliance drivers (Kirchler, 2007; Pickhardt and Prinz, 2014).

Moreover, taking into account the complexity of human behavior, several of these factors have been included in tax compliance models, such as:

- **Australian Taxation Office** compliance model (Kirchler, 2007: 100), built on the concept of motivational postures (Braithwaite, 2003). As the theory states, taxpayers can be "committed", "capitulated", "resistant", "disengaged" or "game players" when relating to taxation. Following the responsive regulation approach postulated by Ayres and Braithwaite (1992) and Braithwaite (2007), authorities assign a certain tandem of coercive-regulating strategies depending on the motivational posture adopted by a taxpayer. Generally, strategies based on cooperation target compliant citizens, who pay the fair share on a regular basis because they acknowledge the importance of properly financed public goods. On the other hand, strategies exclusively based on coercion target citizens willing to avoid tax payments. The distinctive feature of the responsive regulation approach is that educating taxpayers concerning taxation (i.e., raising their level of tax literacy) is more important than sanctioning them. Nevertheless, harsh sanctions are to be installed when taxpayers clearly and repeatedly avoid the fair share for personal benefits.
- **New Zealand Inland Revenue** compliance model (Morris and Lonsdale, 2004), also grounded on the theory developed by Braithwaite (2003). According to the model, compliance attitudes are influenced by five categories of variables: business, industry, sociological, economic, psychological (i.e., BISEP).
- "**Slippery slope framework**" (Kirchler, Hoelzl and Wahl, 2008), which explains compliance along two dimensions, i.e., trust in authorities and power of authorities. According to the model, citizens' perception about authorities' willingness to work for the common good represents the trust dimension, while their perception about authorities' capacity to clamp down tax evasion represents the power dimension. The distinctive feature of the framework is that it establishes the nature of compliance behavior. That is, voluntary tax compliance emerges when authorities focus on increasing citizens' trust in their administrative capabilities. Otherwise, power-based strategies yield enforced tax compliance.

As recent empirical studies have indicated (Cvrlje, 2015; Eriksen and Fallan, 1996; OECD, 2013; Park and Hyun, 2003), *tax literacy* or the level of tax knowledge can be considered a significant determinant of tax compliance behavior. When taxpayers possess basic

knowledge regarding the importance of public goods for the functioning of nowadays societies, the financing mechanism for public goods systems (i.e., taxation), the main categories of taxes, the role of fiscal policies, the use of tax money, they are more willing to follow the tax law and declare all revenues.


## 3. Miscellanea of worldwide tax compliance strategies

For a consistent period of time, compliance strategies based solely on coercion have been regarded as effective in generating higher compliance levels among taxpayers. Therefore, countless audits, extensive auditing periods performed by an "army" of tax officers and harsh penalties have been favored by many national tax authorities. But, giving the constant/even increasing shadow economy and corruption levels, researchers have inferred that coercion alone might not entail the expected results. The reason is threefold: coercion translates into high monitoring costs, is effective on short-term and it can drive many honest taxpayers into the shadow economy.

According to the literature, there is a need for an adequate mixture of cooperation and coercion, with emphasis on the former, simply because national budgets are better off when authorities enact compliance strategies extensively built on cooperation. Namely, they generate long-term results, require fewer outlays and secure the support of most honest taxpayers. In my opinion, the most suitable phrase for describing such an adequate combination is that authorities should "hide an iron fist in a velvet glove" (Kirchler, 2007: 168) and use coercion only when imperative.

With respect to enforcement, in an attempt of mitigating tax evasion on cash transaction, authorities from various countries have capped cash payments and enacted mandatory bank transfers for purchases exceeding a certain threshold. For example, taxpayers in Bulgaria can spend a maximum of 7,600 euros in cash on a single purchase, in Italy 1,000 euros, in Lithuania 5,000 LTL (approx. 1,500 euros) or Spain 2,500 euros.

Through an extensive report (OECD, 2013) covering 28 developing countries from Africa, Asia, North and South America or Europe, the Organisation of Economic Cooperation and Development details several compliance strategies meant to increase voluntary revenue disclosure on the long run by education taxpayers. In other words, the OECD emphasizes the importance of "building tax culture" as a permanent catalysts for supporting public systems.

As a general trend, raising tax literacy levels among very young and soon-to-be taxpayers is favored by many tax authorities, because potential contributors have to be accustomed to the requirements of tax systems before entering the economic market as employees, self-employed or employers (e.g., Brazil, Costa Rica, Mexico, Rwanda, Peru).

Several tax authorities have also invested in increasing tax literacy among actual taxpayers through courses, workshops and seminars. It is, for example, the case of Bhutan, where the concept of taxation was introduced to the public only in 2001. Prior to that year, the Bhutanese citizens have not been taxed on their income (either corporate or personal). In order to properly register profits and facilitate income tax collection, small and micro business owners take part in bookkeeping workshops.

The use of media campaigns and online filling systems are included among widely used strategies. For instance, current and potential Turkish taxpayers are taught and encouraged to declare rental income via an e-tax return. In Singapore, the Inland Revenue Authority educates taxpayers via TV advertising, printed press, official webpage and social media.

Similarly to the majority of countries around the world (excepting international financial centers and oil-based economies), the Romanian state budget is overwhelmingly financed via taxation. Consequently, as can be seen from table 1, fiscal obligations (i.e., social security, VAT, income taxes, excise) represent about 25% of GDP.

**Table 1: Tax Revenues Share in GDP**

| Budgetary revenues | % of GDP 2012 | % of GDP 2013 | % of GDP 2014 |
|---|---|---|---|
| Social security | 8.8 | 8.7 | 8.8 |
| VAT | 8.6 | 8.4 | 8.3 |
| Income tax | 3.6 | 3.7 | 3.6 |
| Excise | 3.5 | 3.4 | 3.7 |

*Source*: Own design based on the Romanian Government and the Ministry of Public Finance (2014: 40).

Taxation is the lifeline of the public goods system, therefore the mitigation of tax evasion acts or attempts is essential for the quality of these goods and services publicly provided. In terms of coercive strategies, the government enacted the Law no. 70/2015 to amend financial discipline by capping individual cash payments at 10,000 lei. In terms of cooperative strategies, state authorities have favored the tax lottery principle. Because tax authorities are not omnipresent and cannot secure "a tax agent under the bed of each taxpayer", buyers are instructed to request an invoice from the seller after any cash/credit transaction and keep it (Torgler and Schaltegger, 2005: 2). The invoice is then used as a lottery ticket and may entail a prize (i.e., cash payments) if declared winning during the periodic official drawing. Through this strategy, taxpayers are practically educated to remind business owners that any economic transaction occurring within the country is subject to taxation, according to the national tax law. Of course, lottery participants must not disregard paying taxes on lottery winnings, otherwise they fall in the noncompliant category. Until now, the state tax lottery has generated a lot of interest among Romanian taxpayers.

## 4. Conclusions

Modern-day tax authorities take into account that state budgets are better off when compliance strategies are grounded more on cooperation rather than coercion. The rationale behind this reality is the following: *cooperation* strengthens mutual trust between authorities and taxpayers, it ensures support for the ruling parties, decreases significantly monitoring expenses and, most importantly, it engenders long-term compliance among taxpayers; *coercion* puts high pressure on state budgets, because it might deepen the social distance (Bogardus, 1928) between contributors and regulators, it demands increased monitoring expenses and generates only short-term results. The current article sheds light on how tax literacy influences tax behavior. It compiles a manifold of strategies employed by authorities worldwide in order to boost tax compliance levels via increased knowledge on taxation. Moreover, it brings forward some of the strategies employed by Romanian authorities in their quest to raise compliance level nationwide.

## 5. Acknowledgements

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*SUB-SECTION: CORPORATE FINANCES*

# USING RATIO METHOD IN THE TOURISM INDUSTRY PERFORMANCE ANALYSIS

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**Abstract.** *Ratios represent useful analysis instruments that synthetize a large volume of data in an easier to understand, interpret and compare form. At the same time, they show certain limits that have to be analyzed for each case. When comparing ratios from different periods, one has to take into account the circumstances in which the company performs its activity, as well as the effect of certain changes in the financial reporting, such as : change in the economic circumstances, the productive process, the different production lines or the geographical target markets.*

## 1. Literature review

Ratio method is often used in economic research in general especially in research performance.

Thus some authors believe that financial ratio analysis is of extreme importance. They are widely accepted in business practice of large companies, primarily because of the simplicity of its calculation and use. Bearing that in mind, the subject matter and objective is to indicate the trends and dynamics of some of the most important financial ratios of financial position and business performance of SMEs in the Republic of Croatia. Based on the obtained results, the quality of business performance will be evaluated for this important economic discipline. ( Žager, Katarina, Sačer, Ivana Mamić, Dečman, Nikolina, 2012)

To rate corporate bonds, rating agencies usually use statistical models based on a set of financial ratios. Some academic studies have also highlighted the use of artificial intelligence techniques of neural networks for corporate bond ratings. In recent years, operational research techniques such as data envelopment analysis (DEA) and its applications to financial decision making have attracted the interest of researchers and practitioners. ( Malhotra, Rashmi, Malhotra, D. K., Russel, Philip S., 2010).

Marketing academicians and practitioners have been observing for more than three decades that business performance is affected by market orientation, yet to date there has been no valid measure of a market orientation and hence no systematic analysis of its effect on a business's performance. The authors report the development of a valid measure of market orientation and analyze its effect on a business's profitability. Using a sample of 140 business units consisting of commodity products businesses and noncommodity businesses, they find a substantial positive effect of a market orientation on the profitability of both types of businesses. (Narver, J.C. and Slater, S.F., 1990)

Rates are useful tools of analysis that summarizes a large amount of data into a form more easily understood, interpreted and compared. They highlight the same time, certain limitations that must be considered for each case. When comparing rates from different periods, to consider the conditions under which businesses operate and the impact on the

financial statements of certain changes such as changing economic conditions, the production process of the various production lines or geographic markets served.

Rates is not the end point of the analysis is not positive elements themselves (strengths) or negative (weaknesses, weaknesses) of a business activity or its management. Rates indicate, in our opinion, only areas that require further investigation.

Analysis based on rates constructed by the analyst in the financial statements, the investigation must be combined with other factors, prior to formulate relevant conclusions and make recommendations for measures to be taken by the management company. The appreciation of the fact that a certain index is too high, too low or appropriate depends on the interpretation of the results by the analyst who is considering on the one hand, both the type of activity of the company and the company's position in the sector and on the other hand, the strategy adopted by the company on a particular market. The objective is to determine the rate fluctuation analysis of causes and effects that rates have on the company's ability to repay debt. Analysis of a single-sided or more installments rates may rise, in our opinion, erroneous conclusions on the financial stability of the company. Therefore, a combined analysis of rates with other enterprise information management and information about economic conditions in which the company operates, will certainly highlight the true image of the undertaking. In this respect, the analysis of changes in those rates recorded over a period of time in order to determine changes that may interfere with the company and the possible impact that these rates can have on the company's creditworthiness.

Where an indicator of enterprise value differs significantly from industry averages to be studied the causes that situation to assess, in this way, the effects they produce on the creditworthiness of the analyzed company.

## 2. Method and results

A first aspect followed on the analysis of the company's performance refers to the profitability of own capital that may be shown with the help of the indicator "Return on Equity" that is determined as a report between net profit and own capital:

$$ROE = \frac{NP}{EQ} x\ 100$$

In the technical literature the indicator is also called Return on Common Equity ROCE and measures the profitability degree of the investments made by the shareholders both in the operating activity and in the financial one.

**Return On Equity-ROE** is calcuated as relation between the net result of the fiscal period and the value of the company's own capital, and has connections with Return On Sales, Fixed Assets Turnover and Financial Leverage.

| Return On Equity | | |
|:---:|:---:|:---:|
| ROS | FAT | FL |

**Figure 1.**Factors of ROE
Source: Own Model

In order to highlight the contribution of capital invested in fixed assets, to obtain financial profit, the model presented above can be decomposed as follows:

778

$$ROE = \frac{NP}{S} \, x \, \frac{S}{FA} \, x \, \frac{FA}{EQ} \, x100 = ROS \; x \; FAT \; x \; FL$$

în care:

- ROS represents Return On Sales (ROS) or Profit on Margin Sales (PMS);
- FL    represents Leverage or Equity Invested;
- FAT  represents Fixed-Assets Turnover.

From the analysis the following conclusions:

- where investment in fixed assets financed by capital increases, also increasing the ROE of the company;
- where the fixed assets turnover higher than the previous financial year, this will increase in the ROE;
- if ROS increased compared to the previous period, then there will be an increase in the ROE.

**Table 1:** The evolution of ROE

| Indicators | Symbol | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|
| Return On Equity | ROE | 0.10% | 0% | -5.97% | 1.90% | 6.51% |
| Return On Sales | ROS | 16.08% | 0% | -833.35% | 59.40% | 245.76% |
| Fixed Assets Turnover | FAT | 0.01 | 0.01% | 0.01 | 0.03 | 0.03 |
| Financoal Leverage | FL | 103.37% | 95,71% | 100.30% | 100.08% | 100.15% |

*Source:Own calculus*

At NORD Hotel SA ROE has maximum value in 2013 .

Following the competition, return on equity is at the level of firms. Achieving a high level of return on equity by an undertaking acts as a magnet, attracting competitors and they eager to reach such performance. Over time, this will redirect to medium stiff competition return on equity obtained thriving enterprise.

Return on equity and its influencing factors of the starting point in the analysis of previous systemic financial statements of the company through indicators of profitability, asset utilization and return on equity leverage.

The first aspect to be analyzed endorse return on sales. In general, rates of profitability are used by analyst to assess a company's ability to make profits. Profitability ratios summarizes while business performance reflected in the profit and loss account of the company. A specific financial performance indicator is the profit margin which is a function of both operating leverage and value added throughout the production cycle, synthesizing monetary gains resulting from each unit of sales.

A second coordinate analysis of the financial performance of equity, is the Fixed Assets turnover. Asset performance rates reveal company revenues and expenses or to analyze the cost structure or to correlate sales performance with the volume of assets used in making sales. In general, Fixed Assets turnover focuses on the following targets:

- Firstly, the indicator highlights the effectiveness of the utilization of assets;
- Secondly, the indicator reflects sales of each monetary unit used assets;
- Thirdly, the indicator summarizes the assets of the firm.

A third dimension of analysis is the financial leverage equity. The literature indicator is called "Equity multiplier". An enterprise uses both attracted and borrowed funds and funds

of various types of shareholders. Using these two categories of resources will depend on the company's attitude towards risk and to return. In this leverage highlights the following:
- Firstly, the indicator reflects the size of the enterprise funds used to finance assets;
- Secondly, the indicator summarizes the company's debt;
- Third, leverage is a function of the structure of assets;
- Fourth leverage is a measure of trust creditors the company's ability to generate sufficient cash and cash equivalents necessary for repayment of loans.

**Gross Return On Assets** (GROA)  is determined as relation between the gross result of the fiscal period (GP) and total assets (TA) of the company:

$$GROA = \frac{GP}{TA} x100$$

The indicator shows the contribution of patrimonial elements in obtaining the results.

**Return on Total Assets - ROA** is determined as relation between net profit (NP) and the value of the company's assets (TA). This ratio measures the return of the entire capital invested in the company:

$$ROA = \frac{NP}{TA} x100$$

In the economic English-american literature, the indicator is called  Return on Total Assets-ROA or Return on Investment-ROI). According to some American analysts  the indicator is determined as relation between the operating  profit  and total assets. In this case, the indicator measures the efficiency in using the assets of the company in the operating activity.

**Basic Earning Power - BEP** is calculated as relation between the operating result (Earning Before Interest and Taxes- EBIT) and total assets (TA):

$$BEP = \frac{EBIT}{TA} x100$$

The indicator shows the earning power of the company after using in business its total resources.

**Return On Costs (ROC)** is determined as a percentage ratio between the net result for the year (NP) and its total costs (TC).

$$ROC = \frac{NP}{TC} x\ 100$$

Indicator recorded positive growth in the last year of analysis.

**Return On Assets Operation** indicates the contribution of assets to obtain the results of activity operation and is determined as a percentage ratio between operating profit (OP) and total assets (TA):

$$ROAO = \frac{OP}{TA} x\ 100$$

Indicator values are positive except for the last two years, when there were unfavorable financial results.

Comparing operating profit to sales, operating profit margin indicates how efficient is the company's management in generating income from core business operations.

A high level of profit from operations (operational) may indicate that the entity has effective control over costs and that sales are growing faster than operating costs. Operating profit also offers investors the opportunity to make comparisons between different companies profit margin. Operating profit measured in fact business ability to generate cash income and many experts consider this to be a more reliable measure of performance. Since the operating profit margin takes into account not only the cost of materials and with the labor but also administrative and distribution expenses, margins will have a value lower than the gross profit margin.

*Table 2*.The evolution of return ratios at  NORD HOTEL SA

| Indicators | Symbol | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|
| Gross Return On Assets | GROA | 0.10% | 4.57% | 5.92% | 1.90% | 6.50% |
| Evolution of GRON | dGROA | 100% | 4570.99% | 129,56% | 32.09% | 342.21% |
| Return On Assets | ROA | 0.10% | 0% | -5.95% | 1.90% | 6.50% |
| Evolution of ROA | dROA | 100% | 0% | 0% | -31.94% | 342.21% |
| Basic Earning Power | BEP | 2.27% | 1.46% | 1.51% | 0.95% | 0.66% |
| Evolution of BEP | dBEP | 100% | 64.36% | 103.25% | 63.02% | 68.96% |
| Return On Costs | ROC | 3.30% | 0% | -45.46% | 81.25% | 182.84% |
| Evolution of ROC | dROC | 100% | 0% | 0% | -178.72% | 225.03% |
| Return On Assets Operation | ROAO | 2.27% | 1.46% | 1.51% | 0.95% | 0.66% |
| Evolution of ROAO | dROAO | 100% | 64.36% | 103.25% | 63.02% | 68.96% |
| Return On Equity | ROE | 0.79% | 0% | -21.76% | 4.62% | 16.92% |
| Evolution of ROE | dROE | 100% | 0% | 0% | -21.25% | 366.30% |

Source:Own calculus

**Return On Sales** contribution means to strengthen the capacity of self-financing entities.

$$ROS = \frac{NP}{S} x100$$

where:

ROS    - represents Return On Sales;

NP     - represents net profit.

S      - represents turnover.

This rate is also called net profit margin indicating the relative effectiveness of the economic entity after deducting all expenses and income taxes.

Comparing the company gross margin and net margin we get an indication of uninvolved in production costs and indirect costs such as administrative, financial and marketing.

Return On Sales evolution in the period under review can be represented graphically as follows:
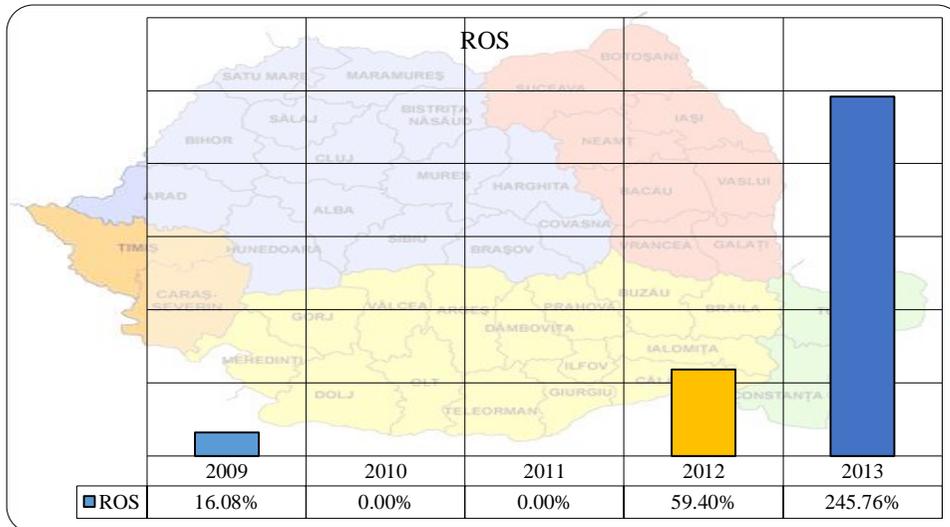
**Figure 2**: The evolution of Return On Sales
Source: Own calculus

It is noted that the rate of return shows a fluctuating trend, followed in 2013, to have an efficient activity. We believe that sales marginally jeopardize the continuation of the operation.

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# CAPITAL STRUCTURE AND VENTURE CAPITAL

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**Abstract:** *Venture capital significantly changes the capital structure of the portfolio company at the time of the investment. Venture capitalists contribute to the company's success through their active involvement in the management and their added value appears in the increase of the value of the equity. At the same time with taking active role in the management, agency problem occurs, that complicates the cooperation and the success of exit. In this article we search the answer for the question whether the preferred equity, that are commonly used in the US for bridging the agency problem, are used and able to help Hungarian venture capitalists to manage agency problems. On the other hand we examined how the venture capital affect capital structure, how the venture capitalists value added appear in the capital structure. During the evaluation of the three case studies, we came to the conclusion, that the venture capital investments have positive effect on the liabilities of the enterprises, as the capital structure indexes show. However, the investors need the ownership, which help them to step up resolutely, when things change for the worse, and companies need the expertise, which the investors bring with their personal assistance. The investor's new attitude also has positive effect on a mature company, which has an experienced leader, because he can show another aspect, as a person who come from outside.*
*During the examination of the capital structure, we cannot disregard the events of the company's environment, which have effects on the firm. The investor's decisions also appear different ways. Because of this, every venture capital investment is different, just as the capital structure of the firms, in which they invest.*

**Keywords:** venture capital; value added, capital structure

**JEL classification:** G24

## 1. Theoretical background of capital structure

For newly founded innovative firms there are few available external funding sources, as start-ups are too young for debt financing, but at the same time the internal sources provided by the founders are not enough to ensure the company's growth. In the early stages usually there are serious problems as a result of the lack of the managerial skills of the inventor-entrepreneur. In the literature these problems are the so called capital gap and knowledge gap (Makra – Rácz, 2006, Nagy 2004). This finance gap should be bridged by venture capital, but sometimes it fails, and does not lead to success. In the capital structure of a company the venture capital increases the equity capital, in case the new owners of the equity carry out by raising the capital. The personal involvement of the investors enables the company to the react more quickly to the unexpected changes of the environment, than companies that have a higher proportion of debt in the capital structure (Karsai, 2012). The IFRS brought significant change in financial reporting for most companies, as using it indicates more requirements in the field of planning, data and information system installation, companies' valuation by investors, customers, shareholders, analysts, rating agencies, or managing the balance sheet and the performance of the company. (Orbán, 2013)

Finding the optimal capital structure is critical for all companies. This question is important not only because of the income maximisation, but also because it impacts the competitiveness of the organisations. Many theories were born in this topic, but noone could define the optimal capital structure (Herczeg, 2014b). Herczeg (2014a) in her study demonstrates that in the process of developing a company's capital structure none of the theoretical models can be used entirely. According to Myers (2001) the theories about optimal capital structure have differences in terms of the emphasis and the interpretation of role of taxes, informational differences and the agency costs. Capital structure theories highlights the importance of these factors, as they have a direct impact on the proportion of internal and external funding sources, however the financing is still an open question. Those economic problems and incentives that affect the theories about taxes, information and agency costs are clearly appear in the financing strategies. Myers (2001) in his study emphasised the present value, because investors invest and develop the human capital in order to generate cash flows in the future. Investment is realised through taking personal risk, working hard and by the utilization of special human capital. A general financing theory should model the investment into human capital and into equity capital.

According to the first theorem of Modigliani and Miller (1958) the value of a firm is unaffected by the capital structure of the firm, so it does not matter whether the firm is financed by equity capital or debt. According to Béza et al. (2007) the companies' ability of generating income is determined by their assets and not by the structure of liabilities, that's why the financing decisions about the capital structure do not determine the value of the firm. At the same time the financers of the company share the returns produced by the assets. Therefore the assets' expected return equals to the costs of funders that is the weighted average cost of capital (WACC). But in terms of the equity capital it is absolutely not indifferent how high the weight of the external capital is in the capital structure (Béza et al., 2007). The second theorem of Modigliani and Miller explains this statement, which applies to the equity return of those companies that involve debt in their capital structure (Modigliani and Miller, 1958). The higher the proportion of the debt in the capital structure is, the higher the equity cost will be, because the equity investors has higher risks in gaining their dividend, as they follow the creditors in the liquidation order. Therefore the growth of the credit is directly proportional to the risk of the investors, that leads to higher expected return that causes the higher cost of equity (Béza et al., 2007). The theorem assumes perfect information, homogeneous expectations and excludes tax considerations. If taxes are also taken into consideration, then the capital structure is better if the external sources' proportion is higher. The best situation is if the firm is financed by debt entirely, because the interest on debt is tax deductible and decreases the cost of debt (Szerb, 2006). Most companies do not finance their investments by their own resources because of the tax savings. At the same time the sole-debt financing is also difficult because the creditors set limits to the credit (Modigliani– Miller, 1963).

According to the current mainstream theories the capital structure should be defined by an optimal equity-debt ratio (Szerb, 2006). The optimal equity-debt ratio is where the benefits from the tax savings are equal to the marginal bankruptcy costs (Béza et al., 2007).

The pecking order theory created by Myers and Majluf (1984) says that the funding sources are ranked according to their cost and the internal sources are the most favourable followed by the debt and at least favourable is equity financing (Szerb, 2006). Venture capital is the most expensive form of finance, because of the high risk and high transaction costs that occur as a result of the active involvement of the investors (Béza et al., 2007).

It is a common feature in all theorems that neither of them deals particularly with venture capital and other types of private equity financing (Szerb, 2006).

## 2. Venture capital in capital structure

The opportunity of venture capital financing is studied by Cumming (2005) in his study, in which he examines the well-known statement that the optimal form of venture capital financing is the convertible preferred equity.

According to theoretical researches (Berglöf, 1994; Bergemann – Hege, 1998; Casamatta, 2003; Cestone, 2000; Cornelli – Yosha, 2003; Marx, 1998; Schmidt, 2003; Trester, 1998) the optimal form of venture capital is investing in convertible preferred equity that was confirmed by empirical researches (Kaplan – Strömberg, 2003; Bergemann – Hege, 1998). This statement is true primarily for venture capital funds in the US, as there the tax law drives the venture capital investors and entrepreneurs to this direction. According to other researches about Canadian companies these features are not prevailed in taxation (Sandler, 2001). In Cumming's opinion (2005) that is the reason why it is worth examining whether the convertible preferred equity is really the optimal form of venture capital financing in venture capital industry or not.

Convertible preferred equity can be optimal by offering higher insurance for venture capitalists in case of bankruptcy, transfering risks from investors to entrepreneurs (Cumming, 2005). In case of an unsuccessful investment losses can be reduced and in case the company performs badly it provides an opportunity for the venture capitalists to take control over the company. The same happens in case the management does not perform well.

In case of a successful investment investors who own convertible preferred equity can enjoy the benefits derived from growing company value. Further benefit of convertible preferred equity is that it helps handling agency problems (Becsky – Fazekas, 2015b). Compared to common equity, convertible preferred equity reduces the dilution of ownership structure, furthermore, compared to a bank credit it enables the company to raise higher funds, as venture capitalists become owners of the company. Another benefit of convertible preferred equity is that it restrains aspirations of window dressing, and provides projects with positive NPV to be financed in the future.

Finally, convertible preferred equity facilitates liquidating illiquid assets, and mitigates the problems in connection to the selling of the company, particularly if we take into consideration the incentives of tripartite agreements (Cumming, 2005).

Other types of securities can also be optimal, because investments in companies are all different (Gompers, 1995), and in different syndicated investment forms agency problem appears differently (Lerner, 1994). Monitoring activity implemented through active participation in the company's management can also be different depending on the expectancies in connection with the agency problem. Therefore it would be surprising to expect that all the companies apply the same assurances independently from the expected agency problem. Furthermore, all the previous academic researches consequently repeat the statement that the only optimal security is the convertible preferred equity.

Cumming (2005) in his research examined 3083 Canadian companies from the venture capital point of view in the period of 1991 and 2000. During his research he observed different types of venture capital investments in different types of companies. The most common financing method was the common equity, followed by simple debt and convertible debt (including mixes of straight debt and warrants).

Convertible preferred equity is ranked only to the fourth place in the hierarchy of venture capital financing methods of Canadian companies. The mix of debt and common equity, preferred equity and other combinations of finance also occurred.

Cumming (2005) in his study determined two important statements. Firstly, a concrete optimal venture capital financing method does not exist, though according to some studies (Cestone 2000; Marx, 1998; Kaplan – Strömberg, 2003) the American practice can easily be considered as one. Besides the US this is a much rarely used financing method.

In the Hungarian venture capital market in cases of investments to private limited companies mainly preferred equity was applied by the investors (28 of 32 investments), where they took active role in managing the companies. At the same time exits were rarely

realized through initial public offerings due to the undeveloped capital market (Becsky – Fazekas, 2015a). There are other rarely applied methods of exits, like selling to financial investors, other venture capitalists or managerial buyouts (Becskyné – Biczók, 2006).

Secondly there is a connection between the chosen type of source and the type of the financed company that leads to the conclusion that the agency problem occurs differently depending on the nature of the financed company. One of the most important results of the study is that for seed stage enterprises venture capitalists more willing to provide preferred equity and convertible preferred equity. This equals to the assumption that preferred equity mitigates agency problems. Investors are not willing to finance seed staged companies by debt, convertible debt or the mix of debt and equity. That is consistent with the statement that debt is less available for companies at the first stages. It was also found that high-tech companies are preferred to be financed by convertible preferred equity that is consistent with the statement of the theoretical studies (Cestone, 2000; Marx, 1998). By summarizing Cumming (2005) study we can concluded that there is not a single optimal form of finance, the chosen security depends on the transaction, and the answer for the agency problem differs in every transaction.

## 3. Case studies form Hungary

We examined the statement of Cumming (2005) – i.e. there is no optimal form of venture finance, and that convertible preferred equities are wide-spread and popular mainly in the USA and in the circle of high-tech firms – through Hungarian-founded enterprises, which were financed by venture capital. The three companies, of which we analysed the capital structure were the Cryo Management Ltd., the Waberer's International Inc., and the LogMeIn Ltd. These case studies are suitable for illustrating what happens in the liabilities of the balance sheet, when the firms get venture capital, but we cannot draw a comprehensive and general conclusion from them.

### 3.1 Cryo Management

The Cryo Management Ltd. was founded in 2010. The enterprise works in the biotechnology industry, within the field of natural science, technological research and development. The Cryo Management Ltd. did R&D activity in the area of human infertility and animal propagation at the same time, and manufactured and sold useful equipment based on this. The OTP Venture Capital Fund I. managed by the PortfoLion Inc. invested into the enterprise. The Fund invested 220 million HUF in January of 2011. A big part of the invested amount (212 990 thousand HUF) was placed into capital surplus, which value increased from 22 318 thousand HUF to 235 308 thousand HUF. The remained 7 010 thousand HUF were placed into subscribed capital, which increased from 13 010 thousand HUF to 20 020 thousand HUF. With the rise of subscribe capital, the OTP Venture Capital Fund I. gained 35,01% ownership. During the period of the investment, the enterprise went through spectacular development, considering the business practice, the organisation and also the achievement. It realized significant increase in the staff numbers and in the sales returns too, already in the first year of the investment. In 2012, the Swedish biotechnological company, VitroLife AB bought the firm for 5 million euro, obtaining overall majority and this way Cryo Management Ltd. became the first company that could realize a successful exit within the JEREMIE investments (Fazekas, 2014). The sale meant 69% internal return for the Fund (I1). Summarizing, the Cryo Management Ltd. received seed stage capital, in the form of subscribed capital increase and capital surplus increase. In this way, the capital fund obtained quite a big ownership, which helped to mitigate the agency problems.

## 3.2 Waberer's

The Waberer's International Inc. works in the field of property management, vehicle repairing, informatics, and mainly international goods transportation. This appears in the company's assets, in the staff numbers, in the sales return and also in the expenditure (Waberer's, 2014). The Waberer's International Inc. obtained venture capital in 2004. Its name was Volán Tefu Inc. at that time, but later the company changed its name to Waberer's Holding Inc. after the AIG new Europe Fund gained ownership. The firms, which were acquired earlier by the Volán Tefu, became the part of the Holding, and Volán Tefu Inc. worked as their parent company and as the leader of the Holding (I8). The AIG New Europe Fund invested almost 2 billion HUF, a part of this amount (243 544 thousand HUF) was placed into subscribed capital, the other part of the amount (1 262 939 thousand HUF) was placed into capital surplus. The Fund had the 21,3% of the subscribed capital, which increased to 1 143 576 thousand HUF through the investment (Waberer's, 2014). In addition to the ownership, the investor delegated two members to the Waberer's board of directors from its Hungarian agency. Through that, it undertook an active participation in the leadership of the company (I8). With the new capital, the enterprise wanted to finance the international expansion, primarily in Poland, in the Ukraine, in Romania, in Slovenia and in Croatia. The AIG New Europe Fund's plans were the increase of the ownership, and to go public in 3-6 years (I8). Finally, the exit was in 2011 because of the economic crisis, but the company did not go public, in contrast with its plans. The AIG's shares were bought by another venture capital investor, called Mid Europa Partners, which increased its capital at the same time, thus, it gained 49,05% ownership (I8, I10). The subscribed capital was increased with 228 704 thousand HUF, the capital surplus was increased with 4 405 413 thousand HUF (Waberer's, 2012). In this year, the company changed its name to Waberer's International Inc. (I10). Summarizing, the Waberer's International Inc. also received the venture capital in the form of subscribe capital increase and capital surplus increase, but this firm was in its maturity stage at the time of the investment. To mitigate the agency problems, the venture capital fund delegated two person to the management of the enterprise, as an extra step to the ownership.

## 3.3 LogMeIn

The main activity of the third examined firm, the LogMeIn Ltd. is information-technology consultation. In part of that, it develops software, which makes the connection to far-away computers possible, and allows managing them. These help the personal mobility and increase business efficiency (Logmein, 2010a). In 2004, three American venture capital investors – the 3TS Capital Partners, the Prism Venture Capital Partners and the Integral Capital Partners – invested altogether 10 million USD (I2). The 3TS Capital invested 3.3 million USD, and gained 13.22% ownership (I6). The condition was that the LogMeIn had to move to the USA, so the headquarters were transferred from Budapest to Woburn, Massachusetts. Development is still working in Budapest (I2). With this step, the investors secured the appropriate control over the company's management, and also the possibility to step in, if it is necessary. The next capital injection was in 2005, when the Polaris Venture Partners joined to the other three invertors, and the firm got 10 million USD again. The last investment was in 2007 by the Intel Capital, which meant 10 million USD again for the LogMeIn (I3). The Intel Capital gained 4% ownership (I7). The capital was provided for the firm in form of convertible preferred equities, which were shown in the company's consolidated annual report. The exit was executed through IPO in July of 2009 on the Nasdaq (I4). The Integral Capital Partners, the Polaris Venture Partners and the Intel Capital executed a partial exit, but the Prism Venture Capital Partners did not sell its shares (I5). The 3TS Capital executed a full exit, and realized 8.5-times profit (I6). At the time of the IPO, 7.67 million pieces of shares were floated, at a quotation of 16 USD/piece, which meant about 83 million USD net profit after the deduction of subscription costs. Counting with the exchange rate of that time (193,27 HUF/USD), it means about 16 billion

HUF. The preferred equities of the venture capital investors were automatically converted to 12360523 pieces of common shares. The owners, who earlier had convertible preferred equities, got a number of votes equal to the number of their common shares (Logmein, 2010b). Summarizing, the LogMeIn Ltd. received seed stage capital from its American investors, in the form of convertible preferred equities. Their stipulation was that the firm had to move to the USA, so they could keep business contact easily. That was the extra step to mitigate the agency problems.

## 4. In conclusion

During our analysis we found that the investors can provide venture capital to firms in different ways. Convertible preferred equities are involved in Hungarian company's financing. We can observe it in the case of LogMeIn, which received the venture capital in this form, and the investor claimed the firm to move to the USA. This example supports the statement of Cumming (2005) and other researcher, that is, the convertible preferred equities has significant role in the venture capital financing in the US market. The case studies also verify the statement, that high-tech firms are often financed in this way. However the case of the LogMeIn Ltd. does not verify the statement that seed-stage firms are less likely to be financed by convertible preferred equity, because the enterprise received the capital injection in this period of its life, and the investment was successful, because investors could realize high profit at time of the IPO.

The other two case studies also verified the statement of Cumming (2005), that firms outside the USA are rarely financed by convertible preferred equities. The Cryo Management Ltd. and the Waberer's Inc. also received capital injection – from European and Hungarian investors – through the increase of subscribed capital and the capital surplus. So the Waberer's is belong to the exception – on the basis of Becsky – Fazekas (2015a) – considering the venture capital financing of the Hungarian stock companies, which work in private. The cause of that probably is that the stock market is much more developed in the USA, than in Europe, especially in Hungary. On the basis of the examined case studies we can see, that this form of venture capital financing is applicable easily in any stages of companie's life cycle, because Cryo Management Ltd. received seed-stage capital, while the Waberer's Inc. received the capital in maturity stage. We can see also, that there is no preferred form of activity, because Cryo Management works in the field of health science, while the Waberer's works in the field of transportation. However, it is true, that the investors give a significant amount of capital to the firms in both ways, increasing their capital strength, in addition, they obtain ownership and influence. The investor of the Cryo Management Ltd. chose the most frequent form of exit, so it sold its ownership to a professional investor, while in the case of the Waberer's Inc., the investor decided to sell its ownership to another venture capital investor, which is – according to Becskyné – Biczók (2006) – a less preferred method. It was because of the pressure of the economic crisis.

During the analysis of the liabilities of the three companies, we also found, that the personal assistance of the investor is also contributes to the increase of the company's own wealth. Its effect can be seen in the net profit of the firm. During the period of the investment some decision could be necessary, which have unfavourable effects on the capital structure on short-term, but because of these decisions the operation of the companies will be more effective, and they can make long-term advantages from them.

It is important too, that in the case of long-term investments, the changes in the economic situation can be a obstructing force in the growth of the company's value, and can hinder the investors in the fulfilment of a successful exit.

During the evaluation of the three case studies, we came to the conclusion, that the venture capital investments have positive effect on the liabilities of the enterprises, the capital structure indexes show that. However, the investors need the ownership, which help them to step up resolutely, when things change for the worse, and companies need

the expertise, which the investors bring with their personal assistance. Through that, they can reach, that the invested capital works well, its value increase, and they can realize a high profit at the time of exit. The investors' expertise is the added value, which has important role especially in the case of starting enterprises, because the creator of the product not necessary can sale this product and manage the firm adequately. However, the investor's new attitude also has positive effect on a mature company, which has an experienced leader, because he can show another aspect, as a person who come from outside.

During the examination of the capital structure, we cannot disregard the events of the company's environment, which have effects on the firm. The investor's decisions also appear different ways. Because of this, every venture capital investment is different, just as the capital structure of the firms, in which they invest.

An additional research direction has also emerged in this study. We argue that, such as (Máté, 2009) determined, the role of financial institutions to reduce information asymmetries increases. Hence, further researches, in accordance with the impact of venture capital on SMEs' performance, could be more fruitful.

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# RISK AND FIRM VALUE IN EUROPEAN COMPANIES: A DYNAMIC PANEL DATA APPROACH

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**Abstract**: *Recent uncertainties in financial markets and several company bankruptcies reinforce the relationship between risk and return as a cornerstone in corporate finance. Enterprise risk management theories offer unambiguous predictions about the relation between firm value and risk. The main aim of the paper is to provide new empirical evidence on the risk as a driver for company value creation process for European developed countries over the period 2001-2011. Using dynamic panel data model with two-step GMM-SYS method and enterprise multiple as a new approach to measure for firm value the results suggest that firm value is negatively related with risk, which is consistent with Bowman's risk and return paradox. The negative relation between firm value and risk is robust through alternative measures, but it does not hold for companies from civil law countries. Additional control variables included in the model are significant and suggest that both growth and capital structure are negatively related with firm value.*

**Keywords:** firm value, risk, growth, profitability, capital structure, dynamic panel models

**JEL classification:** G 32, G 33

## 1. Introduction

Recent uncertainties in financial markets and several company bankruptcies reinforce the relationship between risk and return as a cornerstone in corporate finance. However, the classical debate is centered on the sign of this relation, i.e. if is positive, negative or curvilinear. According to this topic, company's creation value process arouses a considerable concern by researchers and practitioners. This increasing topic is related to the business strategy which is not only about survival, but about creating and maximizing value. In this way, a lot of emphasize is focused on which factors could either create or destroy value.

Much of the empirical works concluded that wealth is maximized when company maximizes its total market value. According to the capital structure theory, which assume that companies use both equity and debt for financing, would lead to the conclusion that total value is not only the value of the equity but also includes the market values of all other financial claims, such as debt, preferred stock, and warrants. Thus, the total value of a company is reflected better by gathering values of equity and debt.

The desiderate of maximizing the stockholder's wealth has been widely accepted by strategic management through what is called value based planning. Value based planning provides a framework for using company value as a strategic performance measure. Value based planning includes among others parts understanding what create and affect the value of the company. Companies, as complex organizations, could not act directly on value, rather it could act indirectly, through issues that can have influence, called value drivers. Value drivers are either tangible or intangible elements which improve the perceived value of the company. There can be identified two types of value drivers, external which are considered to be out of the firm's control and internal which can be controlled by management. Thus, it is essential to highlight value drivers closely related to

strategies and explain the causal impact of the economic environment that leads these changes.

The agency theory states a positive relationship between risk and return which arise from risk-averse behavior (Ross, 1973). This theory is supported by several empirical works, whereas the using of beta from capital assets pricing model (CAPM) suggest a positive relationship with return (Maurer, 2008).

Another strand of the literature, starting with empirical works of Bowman found a negative relationship between risk and return. This is known as Bowman's paradox which state that decision makers are risk-seeking and assume higher risk for lower return (Bowman, 1980 and 1982). Bowman's paradox was also confirmed by other empirical works (Andersen et al., 2007).

Most of empirical works have focused on the relation between risk and return rather than the relation between risk and firm value and use variables such as ROA or ROE to measure return. At the same time, here is a large literature focused on company value creation process, both in emerging and developed markets. While most of empirical works tested for growth and profitability as main drivers for firm value, there is little investigation on the relation between risk and firm value. For companies from emerging markets empirical evidence highlight a positive relation (Pandey, 2005). On the contrary, for companies from developed markets, particularly USA, the results exhibit that an increase in total risk is associated with a fall in firm value (Shin and Stulz, 2000).

Based on previous studies, a strikingly question emerges regarding the risk-firm value relation: what is the pattern for companies from European developed markets? In this respect, the main aim of the paper is to provide new empirical evidence on the risk as a driver for company value creation process for European developed countries over the period 2001-2011. In order to avoid misspecification and to check if the sign of risk-value relation remains unchanged, four control variables were added. Lastly, dynamic panel data model with two-step GMM-SYS method was employed, and enterprise multiple as a new approach was used to measure for firm value. The results suggest that firm value is negatively related with risk, which is consistent with Bowman's risk and return paradox.

The paper is organized as follows. The next section reviews theoretical considerations and empirical findings regarding what are the drivers that explain company value creation process with a focus on risk. The third section describes the data, variables used in the model, and methodological framework. Section four presents the results for dynamic panel model, whilst section five concludes.


## 2. Literature review

The literature of company value creation is large, debatable and contradictory, especially when is referred to the most significant determinants. Nevertheless, there is no doubt that the firm's goal is maximizing the stockholder's wealth (Ben Naceur and Goaied, 2002). Value based planning models require the assumption that value is created if market value exceeds book value, value is destroyed on the opposite situation, and value is sustained in an equality relation between market value and book value. In order to highlight the strategy of a company, it is essential to determine the factors that drive the value of a company.

It is standard in literature that risk is closely related with return but, at the same time, risk is assumed depending on decision maker behavior. Decision theory acknowledges three behaviors towards risk (Tobin, 1958). First is referred to risk-averse where at the same level of expected return less risky investments are selected. Second is referred to risk-seeking where at the same level of expected return riskier investments are selected. Third is referred to risk neutral where investment selection is independent of risk level.

Starting from previous behaviors and empirical findings there were developed three major theories regarding the relationship between risk and return. Basic risk management theory states that in perfect markets firm value is independent of risk (Modigliani and Miler, 1958).

In practice, the efficient market hypothesis is rejected, and risks can lead to deadweight costs (Nocco and Stulz, 2006). The agency theory, based on hypotheses of rational behavior and economic utility, state a positive relationship which arise from risk-averse behavior (Ross, 1973). This theory is supported by several empirical works, whereas the using of beta from capital assets pricing model (CAPM) suggest a positive relationship with return (Fletcher, 2000; Maurer, 2008).

Another strand of the literature, starting with empirical works of Bowman found a negative relationship between risk and return. This is known as Bowman's paradox which state that decision makers are risk-seeking and assume higher risk for lower return (Bowman, 1980 and 1982). Bowman's paradox was also confirmed by other empirical works (Fama and French, 1992; Andersen et al., 2007).

Within the studies, there are two approaches for explaining the paradox, decision maker behavior and the strategic position firm respectively. From economic theory it was developed "Prospect Theory" while from organizational theory it was developed "Behavioral Theory" in order to explain decision maker behavior approach (Nickel and Rodriguez, 2002). Prospect Theory highlights a dual behavior for decision makers (risk seeking and risk averse). In this respect, there is a reference point in assessing risky projects and risk-seeking behavior is adopted below reference point while risk-averse behavior is adopted above that reference point (Kahneman and Tversky, 1979). Behavioral theory states that the level of risk assumed by managers depends on the expected performance in relation to the aspiration (Greve, 1998). In this respect, managers use two measures of performance (aspiration level and expected level) and depending on which one is higher differentiate between failures and success.

Recall that agency theory suggest that deadweight costs are supposed to maximize firm value while Bowman's paradox focus on managers' private utility which may decrease value. By reducing taxes, financial distress costs and avoiding underinvestment issue, risk management could provide a competitive advantage and create value. At the same time, an increase in total risk by passing up profitable projects could end up in destroying firm value.

It worth to be noticed that most of empirical works have focused on the relation between risk and return rather than the relation between risk and firm value and use variables such as ROA or ROE to measure return. However, few empirical works focused the relation between risk and firm value provides similar unambiguous results. On a US sample, it was found that an increase in total equity risk is associated with a fall in firm value, proxied by q Tobin (Shin and Stulz, 2000). Further, firm value is positively associated with systematic equity risk and negatively associated with unsystematic equity risk. These results are consistent with the Bowman's paradox.

On the other hand, Pandey (2005) wants to find if growth and profitability have an impact in value creation process, by employing an improved model proposed by Varaiya et al. However, the results for Malaysian companies are consistent with the constant growth model. Higher profitability is associated with higher value, and higher growth is associated with lower value. Their results also indicate a positive relation between firm value, business risk and financial risk which is consistent with the agency theory hypothesis.

## 3. Data and methodology

Data were collected from Bloomberg and Capital IQ databases and express firm level information. Variables were computed by merging annual companies datasets based on financial statements. It is also noteworthy that several criteria were applied for sample construction. First, there were selected only companies from developed European countries. The reason for this approach is related to the potentially large regional, country and sectoral factors between companies from developed markets versus emerging markets, factors that are likely to contribute to differences in value creation. Second, I

select companies which have available information for period from 2001 to 2011 and exclude financial firms. Third, to remain consistent with other papers, firms with negative book value of equity or negative EBITDA are removed. Thus, the final sample includes 7210 observations, with 721 companies from 16 European developed for the period 2002-2011.

Next, I'll focus on describing the variables used in the model. The dependent variable, the ratio used to determine the value of a company is referred to a new approach in valuation, i.e. enterprise multiple (EM). EM is calculated as the enterprise value (equity value + debt – cash) divided by operating income before depreciation (EBITDA). Firms with higher EM are high valuation firms while firms with lower EM are selling for a lower multiple of earnings (Loughran and Wellman, 2011). There are at least two main advantages for using this measure instead of other popular measure such as market-to-book ratios or q Tobin ratio. First, EM can be compared more easily across firms with different level of debt ratio (Damodaran, 2006). Second, by using EBITDA as earning variable at the denominator, EM will lead to a more accurate and less manipulable measure that allow to compare firms across industries (Koller et al., 2010). Therefore, natural logarithm of EM was used as a proxy for firm value.

According to the main aim of the paper, that is to test the relation between risk and firm value, standard deviation (STDEV) is used as a proxy for risk. STDEV account for volatility in a firm' earnings and value and is computed as 5 year standard deviation in monthly stock prices. If debt is positively related with equity volatility, then firm value is negatively related to equity volatility, i.e. STDEV. According to the main findings from the literature and the purpose of the study, the following hypotheses can be stated:

**Hypothesis 1:** *"Higher risk is associated with lower firm value, i.e.* $EM = f\left(\overline{STDEV}\right)$ *"*

In order to avoid misspecification and to check if the sign of risk-value relation remains unchanged, four control variables were added. Among these, profitability, growth, size and capital structure are of great interest. To remain consistent with other empirical works, I use sustainable growth rate (SGR) as a proxy for growth opportunities, natural logarithm of sales (SALES) as a proxy for size, debt ratio (DR) and square of debt ratio ($DR^2$) as a proxy for capital structure.

SGR is computed by multiplying ROE by reinvestment rate, (1-payout ratio) and the impact on firm value is affected by spread (ROE-ke, cost of equity). Thus, a positive spread will lead to a positive relation while a negative spread will lead to a negative relation between SGR and EM.

Sales reflect the firm's competitive strength and power staying in the market. Sales also provide information about size of the company and are expected to be positively correlated with value, given that larger companies have a lower probability of bankruptcy. On the other hand, larger companies are tempted to focus on stability rather than growth, which can lead to a negative relation between size and firm value.

Capital structure, through its most meaningfully variable, debt ratio, triggers a misleading signal for money suppliers. In other words, this behavior indicate a non-linear relation between capital structure and value creation because increasing the proportion of debt would decrease value up to a point, but beyond that point, further increases would increase company value.

In terms of the methodology employed, in my empirical work, I use panel data models since the sample contains data across firms and over time. Panel data, unlike cross-section data, allow controlling for unobservable heterogeneity across firm effect. When the hypotheses for consistency and efficiency hold, the coefficients are BLUE and OLS may be used (Baltagi, 2008). It has been widely discussed in literature the identification and using of fixed (FE) or random effects (RE) models, in one-way or two-way error form (Pitelis and Vasilaros, 2010). FE and RE models control for unobservable effects, but also they follow

different assumptions and approaches. FE models can reduce the omitted variable bias since are eliminated firm specific factors that are constant over time. On the other hand, RE models includes unobservable effects in the error term.

A major weakness of static models is referred to endogenous variables that are likely to appear in the model. Dynamic models correct for this problem, the advantages of using them being (i) effective control of endogeneity; (ii) greater control for possible collinearity between the regressors; (iii) control of the effects of possible omitted regressors and (iv) elimination of unobservable firm effects.

The simple dynamic OLS model corrects for omitted variables by using lagged dependent variable while GMM model control for endogeneity by using instrumental variables (Wintoki et al., 2012). An additional reason for using dynamic panel models is related to the theoretical background of company value creation, which suggests a dynamic specification. In my opinion, value creation is based on an accumulating process, with high correlation between current and previous periods.

The common dynamic models are GMM-in-first-differences (GMM-DIFF) and GMM-in-system (GMM-SYS). GMM-DIFF was proposed by Arellano and Bond (1991) and supposes estimation of the equation in first differences and use as instruments the lags of dependent and independent variables, at levels (Arrelano and Bond, 1991). Further, it has been demonstrated that in several situations GMM-DIFF may not be very efficient because the instruments used may not be valid. Blundell and Bond (1998) proposed a new estimator, i.e. GMM-SYS, where the variables at levels are used as instruments in first differences, and on the contrary when the variables appear transformed in first differences in the equation to estimate, they are used at levels as instruments (Blundell and Bond, 1998). Nevertheless, the consistency of GMM-SYS depends on two conditions, (i) validity of instruments and (ii) non-existence of second order autocorrelation.

As a consequence, two-step GMM-SYS method is preferred since it uses orthogonal conditions on the variance-covariance matrix and thus control for the correlation of the errors over time, heteroskedasticity across firms, simultaneity and measurement errors. In order to construct a complete and consistent dynamic panel model that allows for the possible effect of the AR process on the stochastic term, a one-period lagged dependent variable ($EM_{i,t-1}$) is included in the model. Overall, the empirical testable model can be expressed as:

$$EM_{i,t} = \alpha + \beta_1 * EM_{i,t-1} + \beta_2 * STDEV + \beta * X'_{i,t} + u_{i,t} \qquad (1)$$

with $X'_{i,t}$ - set of control variables (SGR, SALES, DR, DR$^2$) and $u_{i,t} = \mu_i + \lambda_t + \nu_{i,t}$ where $\mu_i$ denotes the unobservable firm effect to allow for unobserved influences on the value creation for each firm, $\lambda_t$ denotes the unobservable time effect that control for the effect of macroeconomic variables on the enterprise multiple and $\nu_{i,t}$ is the idiosyncratic error component.

## 4. Results

Descriptive statistics for the variables aforementioned and used in the model are reported in Table 1.

**Table 1:** Descriptive statistics

|         | EM     | PBV   | STDEV | BETA   | SGR     | SALES     | DR    |
|---------|--------|-------|-------|--------|---------|-----------|-------|
| Mean    | 10.947 | 2.878 | 0.350 | 0.962  | 0.107   | 5,794.222 | 0.268 |
| Median  | 8.260  | 1.986 | 0.320 | 0.890  | 0.083   | 846.800   | 0.224 |
| Minimum | 0.353  | 0.023 | 0.000 | -0.423 | -11.868 | 0.528     | 0.000 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Maximum | 867.864 | 73.103 | 1.886 | 4.591 | 29.889 | 423,528 | 1.302 |
| Standard Deviation | 19.742 | 3.479 | 0.160 | 0.504 | 0.485 | 17,544.284 | 0.225 |

Source: Author's calculation

In average, it could be noticed that European companies create value since PBV is higher than 1 (2.878) prefer equity as financing sources, since DR=0,268 and are less volatile than the market, since BETA is lower than unit (BETA=0.962). Furthermore, EM, PBV, SGR and SALES present some volatility while for remaining variables (STDEV, BETA, DR) volatility is not pronounced. A correlation matrix was performed too and led to the conclusion that none of the pairs has a very high correlation. This conclusion suggests that the estimation equation may not be affected by multi-collinearity problem. Further, the relation between DR and STDEV is positive which induce the potential negative relation between EM and STDEV.

Table 2 reports results for the model from equation 1, when dynamic panel methods are employed. Hence, these methods are ordinary least squares (OLS – columns 2 and 3), the fixed effect model (FE – columns 4 and 5) and GMM-system (GMM-SYS – columns 6 and 7). For each of these methods, the model was employed twice: a specific model when only variable of interest was considered and a general model when control variables were added. However, OLS and FE models are only informative since they are biased and inconsistent.

For GMM-SYS method, it is worth to establish if variable of interest is endogenous or not. I examine this assumption with a series of tests which involve OLS regressions, first of the current level of STDEV and second of changes in level on lagged EM. The results evidence that there is significance relation between STDEV and lagged EM and thus EM is treated as endogenous and variable. Furthermore, a second test of strict exogeneity suggested by Wooldridge which require estimating regressions on current EM against current and future STDEV confirms the endogeneity issue (Wooldridge, 2002).

Overall, the assumptions for GMM-SYS are that I (i) include one lag of EM in the dynamic model; (ii) use variables lagged three as instruments for all endogenous variables and (iii) treat STDEV as endogenous variable.

**Table 2:** Risk-firm value relation

| VARIABLES | MODELS | | | | | |
|---|---|---|---|---|---|---|
| | OLS | OLS | FE | FE | GMM-SYS | GMM-SYS |
| $EM_{t-1}$ | 0.513*** | 0.495*** | 0.230*** | 0.219*** | 0.403*** | 0.421*** |
| | (0.017) | (0.017) | (0.019) | (0.020) | (0.069) | (0.070) |
| STDEV | -0.303*** | -0.275*** | -0.462*** | -0.223** | -0.520** | -0.639** |
| | (0.053) | (0.056) | (0.065) | (0.083) | (0.237) | (0.276) |
| SGR | | -0.083*** | | -0.109*** | | -0.066*** |
| | | (0.020) | | (0.029) | | (0.020) |
| SALES | | -0.032*** | | -0.115*** | | -0.043*** |
| | | (0.004) | | (0.023) | | (0.007) |
| DR | | -0.308*** | | -0.450* | | -0.365** |
| | | (0.091) | | (0.197) | | (0.152) |
| $DR^2$ | | 0.200 | | 0.024 | | 0.585** |
| | | (0.123) | | (0.231) | | (0.234) |
| CONS | 1.150*** | 1.463*** | 1.810*** | 2.673*** | 1.465*** | 1.813*** |
| | (0.042) | (0.053) | (0.051) | (0.169) | (0.168) | (0.198) |
| R-squared | 0.274 | 0.291 | 0.074 | 0.116 | | |
| RMSE | 0.534 | 0.528 | 0.481 | 0.470 | | |

| VARIABLES | MODELS | | | | | |
| | OLS | OLS | FE | FE | GMM-SYS | GMM-SYS |
| --- | --- | --- | --- | --- | --- | --- |
| F-statistic | 565.583 | 233.248 | 128.602 | 67.177 | 133.821 | 111.491 |
| AR(2)[a] (p-value) | | | | | 0.804 | 0.656 |
| Sargan[b] test (p-value) | | | | | 0.592 | 0.471 |
| Diff-in-Hansen[c] test (p-value) | | | | | 0.632 | 0.495 |
| # Instruments | | | | | 14 | 18 |
| # Groups | 721 | 721 | 721 | 721 | 721 | 721 |
| # Observations | 7210 | 7210 | 7210 | 7210 | 7210 | 7210 |

Source: Author's calculation

Notes: OLS (columns 2-3), Fixed Effects (columns 4-5) and GMM-System (columns 6-7) estimations for dynamic panel models. Significance level at which the null hypothesis is rejected: [*] $p < 0.1$, [**] $p < 0.05$, [***] $p < 0.01$. [a] AR(2) test for second order autocorrelation of residuals. [b] Sargan test of over-identification restrictions. [c] Difference-in-Hansen test of exogeneity of instrument subsets.

The consistency of GMM system is proved by the hypotheses that there is no serial correlation in the error term and the validity of instruments. The first hypothesis is confirmed since the residuals in first differences is correlated (p-value for AR(1) is 0.000), but there is no serial correlation in second differences (p-value for AR(2) is 0.656). The second hypothesis regarding the validity of instruments is confirmed too, the Sargan test revealing a p-value of 0.471. Moreover, GMM requires an additional exogeneity assumption, respectively any correlation between endogenous variables and the unobserved fixed effect to be constant over time. Difference-in-Hansen test does not reject the hypothesis, with a p-value of 0.495.

Since the negative relationship between STDEV and EM is significant in both models, (columns 6 and 7) hypothesis 1 is not rejected. Regarding control variables, all appear to be significant with SGR, SALES and DR having a negative relation and $DR^2$ having a positive relation with EM. However, the results reveal that STDEV has the greater impact on firm value, suggesting that risk is a fundamental driver in explaining firm value creation process.

To sum up, my empirical results are consistent with other findings. Risk is one of the most fundamental value driver and like Shin and Stulz (2000) risk negatively associated with firm value. Regarding control variables, the results are either similar or contradictory to those obtained by a number of previous studies. Capital structure has a negative effect on company value, according to Fama and French (1998) and others but require additional research for testing the non-linear relation. For size, the findings are various either significant (negative and positive) or insignificant, my results being similar with Liow's (2010).

## 5. Conclusions

The main aim of this empirical work was to explore the significance of risk as financial internal driver in explaining value creation process for European companies. The results suggest that firm value is negatively related with risk, which is consistent with Bowman's paradox. Further, the negative relation is robust to alternative measure for both firm value and risk, i.e. PBV ratio and BETA, but it does not hold for companies form civil law countries.

Additional control variables included in the model are significant and provide support for pecking order theory of capital structure and for the existence of a negative spread (ROE-ke) for companies from European developed countries.

This paper contributes to the existing literature in several ways since it has fundamentally different approaches on the topic. First, I use a unique sample consisting of 721 companies from European developed countries which allow examining whether results from previous findings could be generalized for developed markets. Second, I use EM as a valuation measure which is extensively used by practitioners and perform better than classical measures such as q Tobin or market-to-book ratio. To my best knowledge, this is the first empirical study which examines the relation between risk and firm value through enterprise multiple variable. However, in sensitivity analysis section classical approach market-to-book ratio was used to test if there are different results.

Nevertheless, the paper success in the main task and further research is relevant for a better understanding of what are the most significant drivers for company value creation process and also what are the most suitable methods to measure firm value.

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# FINANCIAL FUTURE PROSPECT INVESTIGATION USING BANKRUPTCY FORECASTING MODELS IN HUNGARIAN MEAT PROCESSING INDUSTRY

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**Abstract:**
Our main research topic is the analysis of leading companies in the Hungarian meat processing industry in terms of liquidity criteria. We examine this scientific subject by application of financial indicators and several important bankruptcy forecasting models. In our thesis the emphasis is placed on the presentation and evaluation of business failure models.
The topicality of the research subject is rooted in the economic crisis and recession, which made solvency a key issue. Maintaining the competitive position in the market and the ability to stay in competition depend on the capability to generate an appropriate level of net operative cash flow.
The most important research questions are the following. Which financial methods can be used to predict and estimate the situation when a company is facing bankruptcy? Do bankruptcy forecasting models provide accurate forecasts and what conclusions can be drawn based on these results?
In our study we present the actual economic situation and the main problems of the sector, select the sample companies, calculate and compare the applied financial ratios and the most relevant bankruptcy forecasting models. On the basis of annual reports concerning 2010-2013 interval we investigate the financial position of leading pork processing companies. We make a comprehensive and comparative analysis concerning capital structure, liquidity, and profitability; consequently identify risky processes and companies having high probability of insolvency. Finally, we demonstrate and evaluate the results of three traditional bankruptcy forecasting models (Altman, Springate, and Fulmer) and four modern models (DA, LR, industrial DA and industrial LR).

**Keywords:** financial analysis, bankruptcy models, meat processing industry, Hungary

**JEL classification:** G30; G33; M21; L66

## 1. Introduction and research question
The main research topic of this paper is comprehensive and comparative analysis of leading companies in the Hungarian meat processing industry in terms of liquidity criteria. This scientific subject is examined by using specially selected financial indicators and the most relevant (traditional, modern and industrial) bankruptcy forecasting models. The topicality and novelty of the research field and applied methods can be substantiated by the fact that solvency became a key issue during economic crisis and recession. Maintaining the competitive position in the market and the ability to stay in competition depend on the firms' capability to generate an appropriate level of net operative cash flow. The most important research questions are the following:

- Which financial methods can be used to predict and estimate the situation when a company is facing bankruptcy?
- Is the complex analysis of financial indicators appropriate and sufficient to evaluate liquidity situation, probability of insolvency and bankruptcy situation in the selected

special field of Hungarian food-processing industry suffering from several insolvency problems?

- Do business failure models provide accurate forecasts, and what conclusions can be drawn based on these results?

First of all, we review the major economic and financial process in this industry. Special problems of Hungarian pork meat industry is analysed in detail by Bartha (2012). The study lists four main points as the sources of the problems: lack of capital and marketing, separation of land ownership and farming and continuous changes in consumer habits. She points at weak creditworthiness, solvency and financing problems. Consequently, this sector is in a situation where there is no possibility for investment, product development and innovation. High VAT (27%) effective up till January 2014, the official fees and compliance with animal welfare and environmental standards together caused the formation of the sector's black economy. Additional problems are caused by the decrease of pork population. According to the Hungarian Central Statistical Office Journal, so-called Statistical Mirror, the pig population in 2014 is approximately only 70% of the 2004 level (Statistical Mirror, 2014. Volume VIII., Issue 15., Figure 2). Other problems are the reduced domestic demand, and the one-year Russian export ban put into force in 6 August, 2014. These processes mean economic and industrial background that is essential to assess the financial performance of the selected companies.

The database was defined on the basis of the main activity of companies. Among the activity codes of Hungarian Central Statistical Office we selected the "1011'08 Meat Processing and Preserving (Main activity)" code of NACE. Currently, 325 companies are listed for this industry in the so-called Opten corporation information database. We used annual reports of all the 325 companies in order to calculate industry rates for applying modern industrial bankruptcy forecasting models.

We selected the research sample according to the following criteria: same activity (pork processing and trade), similar product structure (salami, chitterlings, ham and bacon, etc.), annual report format, and average revenue level over 1 billion HUF. Based on these filter conditions we identified nine market leader companies – which have the largest revenue – as research sample, and denoted them as follows (according to revenue level of 2012): 1,2,3,4,5,6,7,8,9.

**Table 1**: Revenue, operating profit and net profit of 2012 concerning the sample

| Data/Company | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| Revenue | 17655 | 13657 | 11148 | 5505 | 4944 | 4781 | 4126 | 2204 | 1048 |
| Operating profit | -1756 | -1281 | 362 | -1183 | -566 | 420 | 20 | 49 | -73 |
| Net profit | -2260 | -1795 | 241 | -1214 | -614 | 446 | 0,6 | 52 | -74 |

Source: own data collection from www.e-beszamolo.kim.gov.hu and Opten corporation information database (data in million HUF)

Publication of the name of these companies might strongly affect their competitive position, so we chose anonymity. We constituted a control group containing companies 2 and 5 which are already insolvent in practice (bankruptcy and liquidation proceedings are pending). Research methods were applied for the 2010–2013 interval except the control group, because in this case the liquidity problem limited the comparability of data, so we used the methods for only 2010–2012 interval. We analysed the companies from property and financial point of view and by application of seven bankruptcy forecasting models. Firstly, three traditional models (Altman, Springate, Fulmer) and then four modern models were run down (discriminant analysis (DA), logistic regression model (LR), and industrial adjusted version of DA and LR). Our most important research question is: are bankruptcy

models able to provide additional information in this industry or does they simply confirm the probability of insolvency situation derived from the comprehensive financial analysis concerning the riskiest firms of the sample?

## 2. Methodology and literature review

During the first phase of the research complex financial analysis was performed. To select the indicators and to verify the further analyses methodology of Droj (2012), studies of Rózsa and Tálas (2012), Rózsa (2014a and b) and book of Virág and Fiáth (2010) were used. These research projects also apply complex financial analysis methodology in sectoral approach by using well-selected index series. These publications fulfil comparative financial analysis based on combined analysis of capital structure, balance sheet-based and cash flow-based liquidity position, and traditional and/or modern indicators of profitability.

Firstly, we investigated the risks in balance sheet and capital structure: we calculated indebtedness ratios, and analysed the proportion and content of short-term liabilities; so the financial risks were identified. Then the financial solvency situation was analysed on the basis of Tarnóczi and Fenyves (2011) and the above mentioned publications. After that the overall liquidity ratio, the quick ratio and change of operating cash flow/ short-term liabilities values were examined. Finally, we calculated profitability indicators such as return on sales (ROS), return on assets (ROA), and return on equity (ROE) which are uniform in the domestic and international literature. By comprehensive and comparative analysis of these companies we identified the riskiest ones. We focused on the corporations, where all of the main types of indicators signed a potential of insolvency situation.

During the second phase of the research we had to select from the bankruptcy forecasting models. Thereinafter, we describe the types and development of the different bankruptcy forecasting models forming the basis of this research. Imre (2008) examined 126 models, and classified them according to their methodology and developmental periods. Bellovary et al. (2007) also chronologically compared the main bankruptcy models from 1930 to 2007. According to the authors four stages can be distinguished in the development of the evolution models:

   *0.   The period of conception of bankruptcy research (1931-67)*
   This period did not result in bankruptcy model in modern sense; it was more the examination of the bankruptcy as an economic forecasting event; so this period can be regarded as an initial stage.
   Studies of Ramser, Foster, Fitzpatrick, Winakor, Smith as well as Merwin and Beaver belong to this stage.
   *1.   The period of discriminant analysis (1968-79)*
   According to Imre (2008), this period can be characterized by the name of Altman (the first model developer) and by spread of discriminant analysis. Although univariate analysis still occurred, discriminant analysis clearly became the dominant methodology. The most remarkable researchers of this period are: Altman and co-authors, Deakin, Blum, and Edmister.
   *2.   The period of logistic regression penetration (1980-1989)*
   The logistic regression concepts were introduced in the methodology of bankruptcy forecasting models by Ohlson. This method quickly spread, and it is one of the most frequently used modelling methods up till now; it can be considered as „best practice".
   Among others, Ohlson, Pantalone, Zavgren, and Keasey created models by using logit method (Imre, 2008; Imanzadeh et al., 2011)

*3. The period of appearance of artificial intelligence (from 1990 to our days)*

The artificial intelligence is represented by neural network technology in bankruptcy literature. In 1990 Odom and Sharda introduced this technology, and today it is the most important topic in methodological research of bankruptcy models. Most of the research suggests that results and predictive power of neutral networks is better than that of the models which use former methods. Models based on neural networks have been developed for example by Odom and Sharda, Coats, Fant, Back and co-authors, Olmeda, Fernandez, Kiviluoto, Laitinen (Rácz, 2012).

Some important studies concerning practical applications of the bankruptcy models have to mentioned, too. Imanzadeh et al. (2011) reviewed business failure literature since the 1930s. The authors compared the Altman model variants and logistic regulations, and finally they used the Springate and Zmijewski model for the selected firms of the Tehran Stock Exchange. After a comprehensive literature review, Pervan et al. (2011) applied discriminant analysis (DA) and logistic regression (LG) methods by using canonical discriminant function coefficients for Croatia's 156 companies. Boritz et al. (2007) emphasized that most of the experts generally prefer business failure models of Altman (1968) and Ohlson (1980). However, Altman and Ohlson models were developed using US data thus data fitting problems occurred for Canadian researchers working with domestic data. Moreover, the business environment in US and Canada has changed in the more than twenty-five years since the Altman and Ohlson models were estimated. Boritz and his co-authors applied three Canadian bankruptcy prediction models made by Springate (1978), Altman and Levallee (1980), and Legault and Veronneau (1986). Results of these models were compared to that of Altman and Ohlson models to express the robustness of all models over time and to investigate applicability of the Altman and Ohlson models in the Canadian economic circumstances (Boritz et al., 2007). Finally, Fenyves and Nagy (2014) examined the importance of business failure models in controlling accounts toolbars from theoretical point of view.

## 3. Results

### *3.1. Analysis of financial indicators*

Before investigating the results of bankruptcy forecasting models it is important to examine the financial situation. First, capital structure of the company is investigated, and then we analyse the liquidity situation using balance sheets and cash flow statements. Concerning property investigation, we analysed asset and capital structure including main group of balance sheet/total assets or sources and internal structure. We focused on the indicators of total liabilities/total assets (Debt/Assets) and short-term liabilities/liabilities (STL/Debt). We considered a company to be risky if its indebtedness ratio is high (over 70%) and if the short term credits ratio is also high.

According to these criteria, we concluded that the control group (firms 2 and 5) and the companies 1, 3 and 4 are the riskiest ones on the basis of the capital structure.

**Table 2**: Capital structure of the control group concerning selected indicators

| Companies | 2 | | | 5 | | |
|---|---|---|---|---|---|---|
| Year | 2010 | 2011 | 2012 | 2010 | 2011 | 2012 |
| Debt/Assets | 88% | 96% | 79% | 65% | 70% | 166% |
| Short term liabilities/Debt | 39% | 46% | 48% | 67% | 72% | 100% |

Source: calculated by the authors using annual reports

**Table 3**: Capital structure of other risky firms of the sample

| Companies | 1 | | | | 3 | | | | 4 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | 2010 | 2011 | 2012 | 2013 | 2010 | 2011 | 2012 | 2013 | 2010 | 2011 | 2012 | 2013 |
| Debt/Assets | 75% | 75% | 73% | 62% | 21% | 34% | 49% | 70% | 75% | 123% | 74% | 75% |
| STL/Debt | 84% | 90% | 80% | 81% | 100% | 100% | 100% | 88% | 81% | 45% | 100% | 81% |

Source: calculated by the authors using annual reports

After examining the capital structure we focused on exploring the liquidity situation of these firms. Applying standard definitions of international literature we used the general liquidity ratio, the quick ratio, the loan-to-pointer and net working capital indicators, and then the ratio of operating cash flow (OCF) and short-term liabilities (STL).

**Table 4**: Liquidity situation of the control group concerning selected indicators

| **Companies** | 2 | | | 5 | | |
|---|---|---|---|---|---|---|
| Year | 2010 | 2011 | 2012 | 2010 | 2011 | 2012 |
| Quick ratio | 0,46 | 0,67 | 0,83 | 0,22 | 0,19 | 0,10 |
| OCF/Short term liabilities | 1,3% | -13,1% | 8,6% | 11,4% | -1,7% | 5,6% |

Source: calculated by the authors using annual reports

**Table 5**: Solvency situation of other risky firms of the sample

| Companies | 1 | | | | 3 | | | | 4 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | 2010 | 2011 | 2012 | 2013 | 2010 | 2011 | 2012 | 2013 | 2010 | 2011 | 2012 | 2013 |
| Quick ratio | 0,39 | 0,31 | 0,26 | 0,40 | 0,72 | 0,55 | 0,52 | 0,36 | 0,43 | 0,47 | 0,34 | 0,43 |
| OCF/STL | 10% | 4% | -1% | -14% | 9,7% | 0,9% | 0% | -1% | -12% | 7,9% | -61% | -14% |

Source: calculated by the authors using annual reports

In terms of liquidity the final conclusion is that companies 1, 2, 3, 4 and 5 are the riskiest ones according to balance sheet based indicators. Summarising the capital structure and solvency ratios it can be stated that the riskiest companies are the member of control group (companies 2 and 5) and firms 1 and 4. Moreover, we identified two companies of fluctuating financial risk. In our opinion company 3 may have serious solvency problems in the future, consequently, it is important to test the potential insolvency situation by using business failure models. In the case of firm 9 the selected indicators sign reasonable situation, so our expectation is that bankruptcy prediction models will suggest solvency situation.

According to the comprehensive and comparative financial analysis, our preliminary expectations concerning the expected results of seven different business failure models are the following.

- The control group (firms 2 and 5) will represent insolvency situation for every year by every model.
- In the case of companies 1 and 4 insolvency situations are also expected by the results of selected bankruptcy forecasting models.
- In our opinion, company 3 will probably show insolvency according to the three traditional bankruptcy models, but we think that modern models might indicate different results.
- In case of firm 9, in accordance with the advantageous capital structure and balance sheet based ratios, we expect that all of the models will show solvent situation.

### 3.2. Analysis of bankruptcy models

Altman created his model in 1968, and he determined this model's cut of point at 1.23. It means that a cut-off point (Z) less than 1.23 indicates that the company is bankrupt; if the value of Z is between 1.23 and 2.90, the company faces to uncertain future; and if the value of Z higher than 2.90, the company is solvent (Virág et al., 2013). The riskiest firms where we expected insolvency on the basis of business failure models were companies 1, 2, 4 and 5. This hypothesis was confirmed except company 2 that were listed in the grey zone in all the three years. In case of company 3 we supposed insolvency according to the traditional models, however, according to Altman's model this company was in grey zone at this time. Surprisingly, the company 8 was classified in uncertainty zone by Altman's model, although it had not been expected on the basis of comparative financial analysis. All the companies not mentioned in this paragraph were classified in solvent category by the model. So thus company 9, too, about which we did not have definite expectation.

Using financial data of Canadian industry companies Gordon Springate created his bankruptcy forecasting model based on discriminant analysis in 1978 (Boritz and Kennedy-Sun, 2007). The model cut off point value is 0.862, consequently, if Z value is less than 0.862 the company is classified as insolvent. We expected insolvency for the control group (companies 2 and 5) and for companies 1 and 4. Our expectations were confirmed. For company 2, however, the model supported our assumption only in the year 2010. For company 9, which we defined uncertain and risky based on financial analysis, the model indicated insolvency in 2011 and 2012. Although Altman's model did not show bankruptcy for this company, it noteworthy that it showed poor financial figure and ratios in last three years. But in case of company 3 – which can be regarded as disadvantageous on the basis of capital structure and liquidity – the model shows solvency in the examined three years. Another surprising conclusion is that the Springate model indicates insolvency in 2010 for company 8, although financial analysis produced excellent results for this firm in the whole investigated interval.

According to Virág et al. (2013) the Fulmer-model was finalized in 1984. This model uses 9 indicators. The model determines H value as the cut-off point; the company is solvent if it is higher than 0. Unfortunately, the model could not be run for several companies because of logarithmic formula could not be calculated in the case of negative operating income (concerning company 1, 2, 5, 7, 9). In accordance with the expectation company 4 was predicted to be insolvent by the model. However, company 8, which could not be considered to be risky on the basis of its capital structure or liquidity, is indicated as insolvent by the model. Because three models suggested at least a partly insolvency situation for company 8, contrary to the results of complex financial ratio investigation, it seems that even traditional bankruptcy forecasting models may provide additional information comparing to the conclusions derived from financial analyses.

The discriminant analysis model was made by Hajdú and Virág (1996) based on indicators deriving from balance sheet data of 1991. The cut-off point value is 2.61612, and the classification accuracy is 77.9%. Using this model, companies 1, 3, 4 and 8 could be considered to be insolvent. Results concerning companies 1 and 4 are in accordance with that of the other models; similarly, company 3 was proved to insolvent by the Fulmer and Altman models, respectively. In cases of company 2 and 5, however, where the financial analyses showed a high risk of capital structure and liquidity, results of the bankruptcy prediction model did not meet our expectations. Surprisingly, company 8 showed insolvency according to this model, too. This result also supports our earlier opinion that additional information can be obtained by using business failure models.

The logistic regression model's cut-off point is 0.525. Companies having a value higher than the cut-off point value belong to the insolvency group; otherwise, it is a member of the

control group (Virág, 2004). Results coming from using this model results are very similar to that of the Fulmer model. It is not surprising, because both models based on logistic regression. According to this companies 1, 2, 4 and 5 are insolvent. Only this model indicated company 2 as insolvent. Company 5 was classified as insolvent by every model except the Fulmer model, and this confirms risks detected by the financial analysis. These results are supported by the fact that the company 5 is currently under liquidation in practice. The model indicated insolvency for companies 3 and 9, too. This model also showed insolvency for company 8 although it could not be considered to be risky on the basis of financial indicators.

Hungarian experts, Virág and Kristóf identified six indices for industry indicator adjusted discriminant analysis. The cut-off point is 1.06252. Using the industry average adjusted financial indicators in the equation a Z value can be obtained. If it is higher than 1.06252, the company is classified as insolvent, otherwise as solvent (Kristóf, 2005). We calculated the industry indexes considering the overall industry data series. Annual reports data of 325 companies were used, which were downloaded from the Opten system. Based on this model, number of the insolvent firms reduced, and companies 4, 5, and 8 would become insolvent in the future. It is noteworthy that results of company 8 is excellent on the basis of financial analysis concerning liquidity, however, the industry indicator adjusted discriminant analysis indicated insolvency for it. Furthermore, in the case of the company 1, contrary to most of the models, this one did not indicate insolvency. Similarly, neither company 3 nor company 9 did show bankruptcy, although these firms were generally uncertain.
Value of cut-off point of the industry indicator adjusted logistic regression model is 0.48; if this value is greater than 0.48, the company classified as solvent. Based on our calculation this model has proven to be the most permissive one because this model occurred least insolvency in results. The outcome of this model is the following: companies 2, 4, 5 show insolvency situation. Common result of the indicator adjusted models is that companies 1, 3, 6, 7, and 9 are solvent firms. In all cases the absolutely solvent one is firm 6, and firm 7 has also relatively safe operation.

## 4. Conclusions
Performing the detailed calculations of selected business failure models we concluded that companies 1, 4 and 5 have the highest probability of insolvency. Companies 2 and 3 are uncertain, and firms 6, 7 and 9 can be regarded as solvent.

**Table 5**: Results of bankruptcy predicition models

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| Altman | Insolvent | Uncertain | Uncertain | Insolvent | Insolvent | Solvent | Solvent | Uncertain | Solvent |
| Springate | Insolvent | Solvent | Solvent | Insolvent | Insolvent | Solvent | Solvent | Solvent | Insolvent |
| Fulmer | Undefined | Undefined | Insolvent | Insolvent | Undefined | Solvent | Undefined | Insolvent | Undefined |
| DA | Insolvent | Solvent | Insolvent | Insolvent | Solvent | Solvent | Solvent | Insolvent | Solvent |
| LR | Insolvent | Insolvent | Insolvent | Insolvent | Insolvent | Solvent | Solvent | Insolvent | Insolvent |
| Industrial DA | Solvent | Solvent | Solvent | Insolvent | Insolvent | Solvent | Solvent | Insolvent | Solvent |
| Industrial LR | Solvent | Insolvent | Solvent | Insolvent | Insolvent | Solvent | Solvent | Solvent | Solvent |
| Consequence | Insolvent | Uncertain | Uncertain | Insolvent | Insolvent | Solvent | Solvent | Insolvent | Solvent |

Source: own calculation using annual reports and total industrial data series downloaded from Opten corporation information system and www.e-beszamolo.kim.gov.hu

Our expectations deriving from the complex financial analysis were confirmed in the case of firms 1, 4 and 5. Bankruptcy prediction models supported the risk of insolvency situation revealed by ratio investigation as well. According to financial analysis we regarded insolvency situation as probable for firm 3, but we felt running down bankruptcy prediction models necessary to refining future prospects. According to our results, it is not obvious that firm 3 will bankrupt, thus the company fell into grey zone.

Moreover, our expectation was also verified in the case of company 9. However, we could not support our preliminary conception concerning company 2. The results of the bankruptcy forecasting models did not provide clear answer to the current insolvency, although the company is recently under liquidation. Thus, it is imaginable that company 2 can arrange a mutually acceptable payment condition for itself and its suppliers.

Finally, it can be stated, that bankruptcy forecasting models can provide additional information comparing to conclusions coming from comparative and comprehensive financial analysis. In one case, the results of models did not indicate the risks suggested by financial analysis (company 2); while in another case, the financial analysis indicated normal financial conditions, but majority of bankruptcy forecasting models referred to insolvency risk (company 8). Therefore, the bankruptcy forecasting models are also useful to identify short-term risks; consequently, they draw attention to the necessity of more efficient control of short-term solvency processes.

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# VALUATION METHODS- LITERATURE REVIEW

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**Abstract:** *This paper is a theoretical overview of the often used valuation methods with the help of which the value of a firm or its equity is calculated. Many experts (including Aswath Damodaran, Guochang Zhang and CA Hozefa Natalwala) classify the methods. The basic models are based on discounted cash flows. The main method uses the free cash flow for valuation, but there are some newer methods that reveal and correct the weaknesses of the traditional models. The valuation of flexibility of management can be conducted mainly with real options. This paper briefly describes the essence of the Dividend Discount Model, the Free Cash Flow Model, the benefit from using real options and the Residual Income Model. There are a few words about the Adjusted Present Value approach as well. Different models uses different premises, and an overall truth is that if the required premises are real and correct, the value will be appropriately accurate. Another important condition is that experts, analysts should choose between the models on the basis of the purpose of valuation. Thus there are no good or bad methods, only methods that fit different goals and aims. The main task is to define exactly the purpose, then to find the most appropriate valuation technique. All the methods originates from the premise that the value of an asset is the present value of its future cash flows. According to the different points of view of different techniques the resulted values can be also differed from each other. Valuation models and techniques should be adapted to the rapidly changing world, but the basic statements remain the same. On the other hand there is a need for more accurate models in order to help investors get as many information as they could. Today information is one of the most important resources and financial models should keep up with this trend.*

## 1. Introduction

In the last few years valuation and calculation of firm value became more and more important because of the changes in the business environment. Thus nowadays firms have the possibility to go directly to financial markets. To achieve this the information about the value of the firm is needed. Theoretically managers control the firm's property keeping in mind the stakeholders' interest, but actually the investors' decisions form the distribution of capital. Another need for business are present in nowadays business environment (Rogers, 2002).

The main purpose of a firm is to invest into assets that generate the biggest cash flows, to form production in order to have more and more incomes and profit, thus managers would like to increase firm value (Damodaran, 2006).

In order to calculate the changes in the value, first they have to be able to calculate the initial value and to define those factors, indicators which can have effects on it.

## 2. Basic terms

According to Natalwala, 2011 value is the present value of the future cash flows that originate from the analyzed possessions. Price, as he considers, the amount of money what a buyer paid for a property. Price is not equal to value, but in certain conditions they can be the same. Value depends on the valuation technique, which is determined by the purpose why the value is defined. One of the purposes is to create buy or sell agreements for which the value of the firm is indispensable. In the case of valuation process time is one of the most important parameter. The value calculated during the valuation process is valid at a definite point of time. Before or after this date another sum of money is the actual value of a property (Natalwala, 2011).

## 3. Traditional discounted cash flow models

Natalwala, 2011 introduces three approaches to valuation (the asset approach, the income approach and the market approach). From these the income approach uses the discounted cash flow model for valuation. With the help of the free cash-flow to firm the firm value could be determined, while with the help of the free cash flow to equity, the value of the firm equity could be calculated (Natalwala, 2011).

The free cash flow to firm is the free money that remains after paying the operational costs and taxes, meeting the working capital need, and fulfilling the capital reinvestment. The free cash flow to firm can be determined using the net income or the EBIT. The main goal of calculating the free cash flow is to define the amount of money which can be freely used by the debt and equity owners. Thus the earnigs before interest and taxes are corrected by some items in order to calculate the free cash flow. Such items are depriciation, amortization and all the other costs that were subtracted from the income in order to calculate profit, but did not involve actual cash outflows. Another item that should be taken into consideration is the so called capital expenditures, those investments that are necessary for the business. The type of the investments depends on the activity of the firm. The last main category of the items that are used to modify the EBIT is the working capital needs. The depriciation, amortization and other items that did not involve cash outflows should be added to the earnings before interest and tax, and the capital expenditures and working capital needs should be subtracted from it (Allman, 2010).

Net income is used for calculating not only the free cash flow, but this is the basis for the profitability ratios as well. These ratios are often used for comparing firms to each other within an industry. For example in the analytic framework of Rózsa, 2014 profitability ratios are included in order to compare firms with each other in Hungarian building industry. (Rózsa, 2014).

There are two main methods of value calculation based on free cash flows depending on the expected growth of the company. If one period of extraordinary growth is expected, then the company's growth rate reduces to a stable, lower long-term rate for the further period of time. In this case a multi-period model is used. Another case is when there is only one expected growth rate, then a single-period model is used based on the formula of the present value of perpetuity with stable growth rate (Natalwala, 2011).

Figure 1 shows the general corporate valuation model using free cash flows.
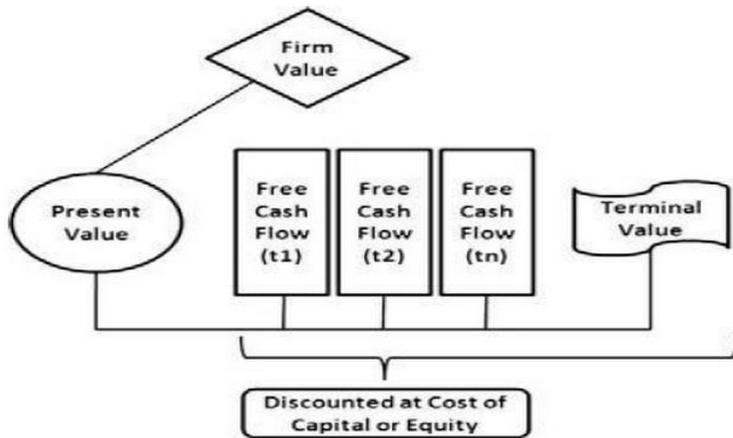
**Figure 1**: Corporate valuation process based on free cash flows
Source: Allman, 2010

Zhang, 2014 shows three finance approaches to evaluate a firm. He confirms that these approaches are a matter of choice but their main theoretical background is the same. The first approach is the dividend discount model, which essential is that the main payoff from the asset is the dividends, thus these cash-flows should be discounted in order to calculate the value of equity. This model is inappropriate when the forecasting of dividends is problematic because of a firm's less developed dividend policy (Zhang, 2014).

If the firm does not have a clear dividend policy, a kind of solution can be another model, which is based on the free cash flows. Theoretically the two approaches should result in the same outcome. Because of the fact that the dividend is the amount of money that is distributed and the free cash flow is the amount of money that can be distributed. Thus theoretically these two values should be equal to each other. But this situation emerges only when all the free cash flows are paid off as dividends or from the remaining surplus zero net present value investments are financed (Zhang, 2014). All the models belong to the discounted cash flow- based models.

The third model is using the investments for calculating the value. In this approach the value consists of two parts. The first is the capitalization of current earnings (which represents the value of the existing assets), the other is the capitalization of positive net present value investment possibilities. (Zhang, 2014)

To my mind using free cash flows to calculate value is the best effective method, because the amount of the dividends depend on many subjective parameters, like the managerial decision. Thus calculating all the capital that can be divided between the shareholders can show the value more effectively. On the other hand the cash flow which a firm can generate reflects its value better than its assets in my opinion.

According to Damodaran, 2013 one of the most useful approach to value a firm is using the free cash flow to firm. On the same basis for the valuation of equity free cash flow to equity should be used. He wrote down that the value of a firm is equal to the free cash flow to firm (FCFF) discounted by the weighted average cost of capital (WACC). This is the so-called intrinsic valuation, more precisely the discounted cash flow approach (Damodaran, 2013).

There are cases when the free cash flow to equity could not be calculated, for example in the case of financial service firms. In these cases not the cash flows, but the dividends will be discounted for calculating value (Damodaran, 2013).

For making the value calculation, there are several parameters that should be estimated. The first parameter is the cash flow, then the discount rates and the expected growth (how the calculated cash flows will change over time) should be evaluated (Damodaran, 2013).

A special issue is when a firm has got common and preferred stocks. If its free cash flow to firm is calculated using the net income to common stocks, then the dividends on preferred stocks should be added to it in order to get (beside other modifying factors) the free cash flow (Pratt, 2002).

Each of the discounted cash flow methods makes an assumption that the price of a company's stock embeds the expectation of the market how much rate of return can be expected from investing into the subject stock. The multistage DCF models (as above mentioned) use two or more expected growth rates for different periods of time (Pratt, 2002).

The analyst should choose such a discount rate for valuation that reflects the risks in the expected cash-flows (Damodaran, 2006).

According to Damodaran, 2006 there are four types of discounted cash-flow models. In the first model the expected cash flows should be discounted by a risk-adjusted discount rate, the main purpose in the second model is to get a certainty equivalent cash flow which is discounted at the risk-free rate in order to value an asset. The third model is the adjusted present value model. The last type of the discounted cash flow model calculates the value of a firm by using the excess returns that are expected from its investments (Damodaran, 2006).

There is a technique to get a final, conclusive value that is when an appraiser gives different weights to different techniques (Natalwala, 2011).

In my opinion this is not the most applicable method, because the different techniques have different purposes and premises, and the essence is to find a methodology that fits perfectly for the reason the analysis would serve.

One of the main problems of the discounted cash flow based approaches is that the decision should be made at the present, while the value of the cash flows are estimated for the future. Thus these models can many times underestimate the value of a firm. Another problem is that these models are static thus they do not calculate with the possibly changing business conditions (Abrams, 2010).

By contrast real option approach demonstrates the value of flexibility through taking into account the capability of the firm and its management to adapt to the variable conditions and environment (Rózsa, 2004).

Real option method is used for valuing assets that have similar attributions like options (Damodaran, 2006).

The discounted cash flow model can be complemented by the real options methodology which causes another aspect of valuation. Thus when a firm value is calculated, first the traditional methods should be used then the additional analysis can consist of value-adding analytics for example Monte Carlo simulation, portfolio optimalization and real options analysis. This process can result in a more appropriate and real value (Abrams, 2010).

Real options can complete traditional methods through being able to value assets in an uncertain business environment (Tarnóczi et al., 2011).

In my opinion the traditional methods are well-usable for valuation, but the value-adding processes take parameters and premises into consideration, that cannot be included in other valuation methodology. Thus the result can be more accurate and more realistic, and the investors can get more useful information for decisions.


## 4. Adjusted Present Value Approach

The adjusted present value (APV) approach is mentioned by Damodaran, 2006 as the third model of discounted cash flow-based valuation.

It separates the expected debt financing costs and benefits from the value of the assets. While in the traditional discounted cash flow models this effect is included in the discount rate, in the APV approach firm value is expected in three steps eliminating the debt effects. First the estimation of firm value without leverage should be conducted, then the positive and negative effects of borrowing money is taken into consideration through the present value of tax savings and the expected bankruptcy cost. The latter is subtracted from the sum of the firm value with no leverage and the present value of tax benefits. According to Natalwala, 2011 the asset approach is the one from the market, income and asset approaches that use the less objective parameter and assumptions. But the most important criterion is to choose a method that fits the most to the final goal and to choose the premises and standard sin order to serve the purpose of valuation (Natalwala, 2011).

**5. Residual Income Model**
Besides the above mentioned models there is another one which estimates equity value on the basis of the book value of equity and the expected future residual income (Zhang, 2014).

The Residual Income Model is considered an accounting-based valuation process, because the required elements can be acquired from the financial statements preparing by the firm. In this model the total firm equity consists of the book value of equity and the present value of residual income (Thomas and Gup, 2010).

Compared to the above mentioned approaches the new term is residual income which can be calculated as the difference between forecasted accounting earnings and normal earnings. The latter can be calculated using the book value of equity and the cost of capital (Thomas and Gup, 2010).

The so called normal earning is the multiplication of the book value of equity and the cost of capital for a firm (Thomas and Gup, 2010).

This residual income is calculated as the difference of earnings and cost of equity capital. This is a kind of net income which means the net value a firm generates during a period of time after it pays all the operation costs including the cost of equity capital. In the income statement there is a term „net income" but that is different form the one used in the Residual Income Model, because the former does not take into consideration the cost of equity capital. This approach is not fully new, previously the term „residual income" was mentioned (Zhang, 2014).

The first big difference between the discounted models and the residual income model is that the latter does not calculate the earnings for time of infinity because it considers this kind of calculation and forecasting impracticable. Meanwhile the discounted cash flow models calculate the present value of dividends and free cash flows if only they were infinite cash flow series (Zhang, 2014).

The residual income model is appropriate for firms that have only operating activities. The basic concept is that the financial assets are traded on markets that price these assets correctly, thus these are investments with zero net present value. But the operating assets are traded on less perfect markets thus they generate profit or loss. From the attributions of the two types of assets results that the book value of equity can be generated as the sum of the book value of financial assets (which show the exact value of these assets because of the perfect markets) and the book value of operating assets (which can be expressed as the present value of the free cash flows originating from operating activities). This kind of residual income model can be only used when the analyzed firm does not make its accounting on accrual basis (Zhang, 2014).

Thus there is a strict limitation on the use of this version of residual income model which can be used in the case of pretty few companies in Hungary for example.

The model of residual income has a feature that makes the accounting measures irrelevant to the valuation process. This can be conducted through a so called self-correction

process. This is regarded as a favourable feature by some researchers (e.g. Bernard in Zhang, 2014). But on the other side there are some experts who presume that this cause that the firms will not motivated to make correct and global financial reports. Kothari (in Zhang, 2014) mentions that this feature of the model is unfavourable from his point of view (Zhang, 2014).

In my opinion this feature is useful for the prediction and the valuation because self-correction makes it possible to correct the accidental misleading or unrealistic information. If we consider the free cash flow model, in that case investors also have to make calculations besides the financial statements, thus this is not an additional work for them, they only have a choice to make better calculations with this method.

The Residual Income Model has two basic conditions, DDM and the clean surplus relation (CSR), which is the only one that is needed for the transformation of DDM into RIM. Through this condition, in the equation of calculating the value instead of forecasted dividends, accounting variables are used (Zhang, 2014).

DDM is the dividend discount model, which estimates equity value as the present value of expected future dividend payoffs. This method can be efficiently used if there are no unexpected events and if the firm has got a predictable and well-planned dividend policy on the basis of which investors can forecast exactly when and exactly how much dividend will be paid (Zhang, 2014).

According to Damodaran, 2006 the basis for RIM is the assumption that lays behind net present value calculation as well. When net present value is defined, experts presume that only those investments increases the firm value that have positive net present value. Thus cash flows and earnings will only be calculated into the value (i.e. increases firm value) if they have got a bigger return than their cost (Damodaran, 2006).

Damodaran, 2006 highlights one of the weakness of the discounted cash flow models, that they do not make an explicit relationship between reinvestment and growth rate, while in the case of firms if they use their assets more effectively or they buy new assets and operate them, they can expect a higher growth rate. This weakness is corrected in the residual income model which link the two mentioned parameters (Damodaran, 2006).

In my opinion this feature makes the residual income model more accurate because there is an obvious relationship between the higher growth rate and innovation. Firms make new investments in the hope of higher earnings, thus the valuation model should take this relationship into consideration.

According to some researches the residual income model has better results, it can more precisely estimate the value than the models based on the discounted dividends or discounted free cash flows (e.g. Sougiannis in Zhang, 2014, Courteau et al. in Zhang, 2014, Francis et al. in Zhang, 2014). Other researchers (e.g. Lundholm and o'Keefe in Zhang, 2014) declare that there is no sense in comparing these methods because they have theoretically common basis, thus if one model gets a more precise value, it cannot be stated that this model is more effective or more precise than another one (Zhang, 2014).


## 6. Conclusion

All the mentioned models and techniques attempt to calculate the firms' value. All of them is based on the assumption that basically the value of a property is equal to the present value of the money it will generate in the future. The newer methods try to adapt to the new demands, the constantly changing world and the resulted new information claims.

There are several methods and techniques with which experts can evaluate a firm, but the most important criterion for choosing among them is the main purpose of valuation. All the techniques can be used for different aims, simultaneously they use different assumptions and premises.

Thus the first important task before starting a valuation process is to define the exact goal of it. Then the valuation method should be selected, and the premises have to be formed on the basis of the purpose and the model.

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# STUDY REGARDING THE PROFITABILITY INDICATORS FOR THE ROMANIAN COMPANIES OPERATING IN THE TOURISM AND LEISURE SERVICES SECTOR IN THE PERIOD OF 2010-2013

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**Abstract:** *The current paper deals with an issue of absolute importance for the shareholders, managers and creditors of the Romanian companies: the analysis of profitability indicators. The study concentrated over 10 companies which are registered in the Bucharest Stock Market and which are operating in the field of leisure and tourism. These companies can be considered the most significant in the field based on both their history: founded before 1990, previously state owned and later transformed into private company, and on their financial sustainability. The profitability indicators were selected to be analyzed in the current paper since they are considered to be the most significant indicators which guide the financial decisions of managers, investors and creditors alike. While addressing the issues of performance indicators most of the authors concentrate on the profitability indicators. These indicators provide first-hand information regarding the company's bottom line and its return of value towards the investors. While the other ratios from the managerial finance provide some information about the way the firm is operating, the profitability indicators are considered to combine the effects of liquidity management, asset management and debt management on operation results. The paper is organized in three chapters. In its first chapter the paper deals with the theoretical and practical concept of profitability for Romanian companies and defines several profitability indicators. In the second chapter a case study is realized and three profitability indicators are tested and interpreted. Later aggregate results are calculated and analyzed. The last chapter draws the conclusions of the current paper and is analyzing the results both on individual and also on aggregate level.*

**Keywords:** profitability analysis, ROA, ROE, RONA, corporate finance, financial analysis

**JEL classification:** G32, G11, G17

## 1. Introduction in the issues of profitability of companies

As mentioned by Gitman and Zutter(2013) the ratio analysis of a firm's financial statements is considered interested by both shareholders, creditors, and also by the firm's own management. For the companies which are registered at the stock market, the "present and prospective shareholders are interested in the firm's current and future level of risk and return, which directly affect share price"(Gitman and Zutter, 2013). The concerns of the firm's creditors and of the stockholders are slightly different the first are interested primarily in the short-term liquidity of the company and its ability to be able to cover the interest and principal payments and only afterwards on profits. While the management, like stockholders, is concerned with all aspects of the firm's financial situation, and will attempt to produce financial ratios that will be considered favorable by both owners and creditors with the primary goal towards profitability indicators.

While addressing the issues of performance indicators most of the authors concentrate on the profitability indicators. These indicators provide first-hand information regarding the company's bottom line and its return of value towards the investors. Profitability is considered by Gibson(2012) as the ability of the company to generate earnings. As Gibson(2012) further considers that the analysis of profit is "of vital concern to stockholders because they derive revenue in the form of dividends".

On the other hand an increased profit can lead to an increase in market price, also leading to further capital gains. Profits are also important to creditors because profits are considered to be the source for the funds used for debt coverage.

Other authors such as Besley and Brigham (2008) draw attention that profitability is a result of a large number of policies and decisions at the level of the company. While the other ratios from the managerial finance provide some information about the way the firm is operating, the profitability indicators are considered to combine the effects of liquidity management, asset management and debt management on operation results (Besley and Brigham, 2008). Since they are several measures to achieve profitability of a company there are also a large number of profit based indicators. In order to study the profitability of the leisure and tourism sector from Romania were selected four representative profitability indicators based on the work of Droj(2012), Pierre(2004) and Brealey et all (2013). The selected indicators are as presented in Droj(2012) are:

- The **Return of Assets (ROA)** reflects the difference between an economic result: net profit, known in specialized literature as EBIT and the assets used for its achievement (Pierre, 2004).

ROA= $\dfrac{Net\,\Pr ofit}{Total\,assets}$

- The **Return on Equity (ROE)**, also known in French economic literature as "financial return rate", and abbreviated in the specialized literature as ROE. This indicator shows the efficiency of the capital invested by shareholders. ROE constitutes one of the most important return indicators, being used by company owners and potential investors in the investment decision-making process.

ROE= $\dfrac{Net\,\Pr ofit}{Equity}$

- **Return on Net Assets (RONA)** which is a derivation for ROA but does not include the analysis of the Total assets and only includes the fixed assets and the newt working capital. As known the fixed assets are tangible property used in production and include buildings, land, other properties, equipment, machineries, etc.. The net working capital is calculated by eliminating the current liabilities of the company from its current assets.

RONA= $\dfrac{Net\,\Pr ofit}{Fixed\,assets + Net\,Working\,Capital}$

Using these indicators and the financial results for the years 2010-2013 we tested the biggest ten companies which are operating in the field of leisure and tourism and are registered in the Bucharest Stock Exchange (Bursa de Valori București).

## 2. Profitability analysis of the most important Romanian leisure and tourist companies

As mentioned in the previous chapter the goal of this paper was to identify the biggest ten companies operating in the leisure and tourism sector which are registered on the Romanian Stock Market and to analyze their profitability in order to establish the potential for profitability of the entire leisure and tourism sector. The companies were selected based on the reports published by the Bucharest Stock Exchange (www.bvb.ro) and by classification of this field of activity.

Since were selected from the Romanian Stock Exchange these companies can be considered representative for the tourism and leisure field of activity in Romania. The study was based on analysis of the three profitability indicators presented above. The data used for the analysis was collected from the financial reports of these companies as they were submitted on their websites and on the official Bucharest Stock Exchange Portal: www.bvb.ro.

Considering the size of the companies and the reports from the stock market the companies proposed for this study are: Arta Culinară Cluj SA, Bega Turism SA, SIF HOTELURI SA, Casa de Bucovina Suceava, Covasna Estival, Regal Galați SA, THR Marea Neagră SA, Turism Felix SA, , Tusnad SA, Turism Covasna SA. These companies are owned by both individual shareholders, investment fund and specialized Financial Investment Societies, which in Romania are called SIF. The investment funds and the Financial Investment Societies are well involved in the field of leisure and tourism and are considered prime investors. Their main concern is the profitability of companies and to ensure the biggest profit and paid dividends in order to maximize the shareholder value. For these companies the results of the profitability indicators are considered prime decision making materials for their current and future investment policies.

The period of analysis proposed for this study is the period of 2010 and 2013, since the data for 2014 were not finally approved, until the end of this paper in the General Shareholders Meetings from April and May 2015.

The calculation was realized by the author and is presented below in a graphical form below:

The companies will be presented and analyzed in an alphabetical order and later will be presented the aggregated results for the entire lot of companies obtained through simple median assessment. The first two companies presented are Arta Culinară Cluj SA and Bega Turism SA. Arta Culinară Cluj SA which is currently operating Restaurants after several years of positive evolution has witnessed a significant decrease in all analyzed indicators, mainly due to its net loss in 2013. Bega Turism SA had declined its profitability indicators in the period of 2010-2012, when its profitability indicators were negative, but had a major recovery in 2013 when obtained the best profitability results in the entire analysis period.

Table 1 Profitability Indicators for Arta Culinara Cluj SA and Bega Turism SA

| Arta Culinară Cluj | | | | | Bega Turism SA | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Indicators | 2010 | 2011 | 2012 | 2013 | Indicators | 2010 | 2011 | 2012 | 2013 |
| ROA | 0.017898 | 0.023012 | 0.028117 | -0.05096 | ROA | 0.003069 | 0.001519 | -0.00971 | 0.011945 |
| ROE | 0.018933 | 0.023881 | 0.028967 | -0.05676 | ROE | 0.004926 | 0.002482 | -0.01562 | 0.017311 |
| RONA | 0.018134 | 0.023309 | 0.028503 | -0.05154 | RONA | 0.003138 | 0.001542 | -0.00981 | 0.0121 |
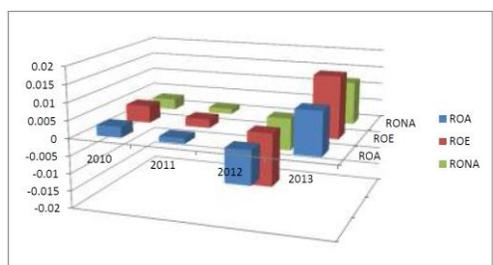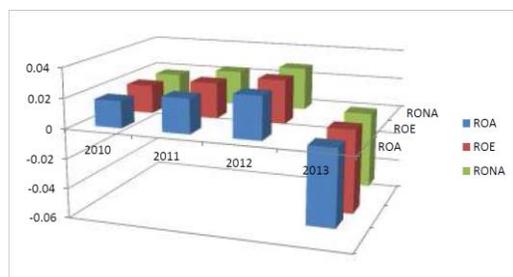


Source: Calculation of the author based on the data from www.bvb.ro

Covasna Estival SA and SIF Hoteluri SA(former Calipso) were the next two companies which were analysed. Their evolution is totally contradictory: while Covasna Estival SA had several difficulties at the beginning of the analysis period with a negative ROE in 2010, and low results in 2011 the evolution of this company is on the rise in 2013 having one of the biggest ROE in the industry.

On the other hand SIF Hoteluri SA had spectacular results in 2010 and 2011 but their results collapsed in 2012 and 2013 mainly due to the high level of investments and the inauguration of their top investment: the Hotel Double Tree by Hilton from Oradea. The specialists expect that the company will rise again in the following years after the initial period of setback.

Table 2 Profitability Indicators for Covasna Estival SA and SIF Hoteluri SA

| Covasna Estival SA | | | | | SIF HOTELURI SA | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Indicators | 2010 | 2011 | 2012 | 2013 | Indicators | 2010 | 2011 | 2012 | 2013 |
| ROA | 0.003425 | 0.004449 | 0.002437 | 0.053772 | ROA | 0.020742 | 0.013833 | -0.03512 | -0.06726 |
| ROE | -0.00743 | 0.067533 | 0.084054 | 0.731955 | ROE | 0.022332 | 0.018332 | -0.05809 | -0.10716 |
| RONA | 0.00401 | 0.004542 | 0.002516 | 0.054085 | RONA | 0.020823 | 0.014109 | -0.03529 | -0.06771 |
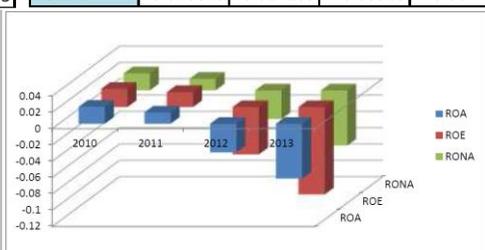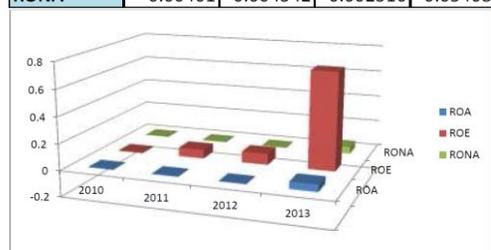


Source: Calculation of the author based on the data from www.bvb.ro

Casa Bucovina Suceava SA is a company which performed decently in the entire period of analysis having moderate results in the entire period. Regal Galați SA a company which is specialized in managing restaurants and leisure facilities had phenomenal profitability results in 2013. As can be seen these results are one of the best in the industry and had also a great contribution in the increase of 2013 industry median results.

Table 3 Profitability Indicators for Casa Bucovina Suceava SA and Regal Galati SA

| Casa Bucovina Suceava SA | | | | |
|---|---|---|---|---|
| Indicators | 2010 | 2011 | 2012 | 2013 |
| ROA | 0.020989 | 0.018957 | 0.021863 | 0.015561 |
| ROE | 0.021269 | 0.01923 | 0.023543 | 0.016626 |
| RONA | 0.021198 | 0.019123 | 0.022156 | 0.01573 |

| Regal Galaţi SA | | | | |
|---|---|---|---|---|
| Indicators | 2010 | 2011 | 2012 | 2013 |
| ROA | 0.0595 | 0.002737 | 0.035414 | 0.495404 |
| ROE | 0.063777 | 0.002865 | 0.039206 | 0.558319 |
| RONA | 0.064615 | 0.003005 | 0.041292 | 0.934335 |
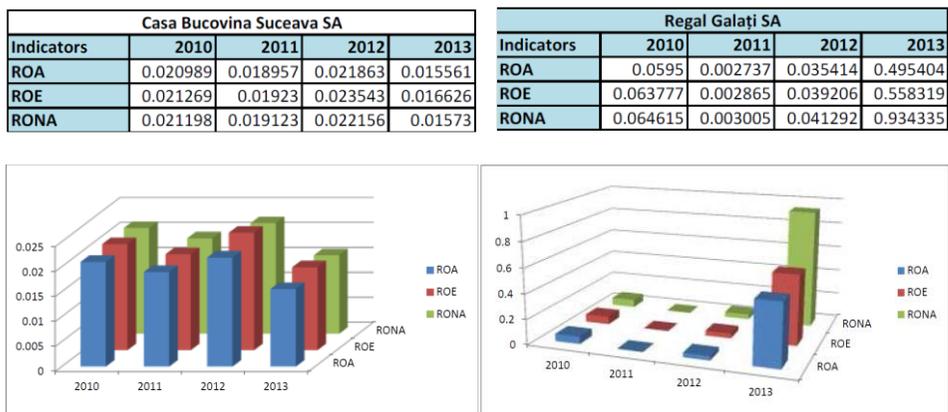


Source: Calculation of the author based on the data from www.bvb.ro

One of the biggest tourist company in Romania: Turism Felix SA owns several hotels, restaurant and leisure facilities in Felix Spa Romania and has constantly good results in the analyzed period, way over the median results of the industry. With the results from 2012 in a mild decrease the company came back to excellent values in 2013, and is considered to be prime target for investment in the years to come, especially after finishing their investments in new hotels and leisure facilities. On the other hand THR Marea Neagră SA, a company operating at the seaside had constant results as well in the analyzed period. Considered to have an equilibrated company policy THR received the best profitability results in 2012 with a slight decrease in 2013.

Table 4 Profitability Indicators for Turism Felix SA and THR Marea Neagra SA

| Turism Felix SA | | | | |
|---|---|---|---|---|
| Indicators | 2010 | 2011 | 2012 | 2013 |
| ROA | 0.023789 | 0.034711 | 0.015258 | 0.020606 |
| ROE | 0.027069 | 0.038941 | 0.016788 | 0.022373 |
| RONA | 0.023933 | 0.035006 | 0.016269 | 0.021994 |

| THR Marea Neagră | | | | |
|---|---|---|---|---|
| Indicators | 2010 | 2011 | 2012 | 2013 |
| ROA | 0.005796 | 0.010944 | 0.013187 | 0.002953 |
| ROE | 0.006198 | 0.012553 | 0.014281 | 0.003237 |
| RONA | 0.005972 | 0.011415 | 0.013852 | 0.0031 |
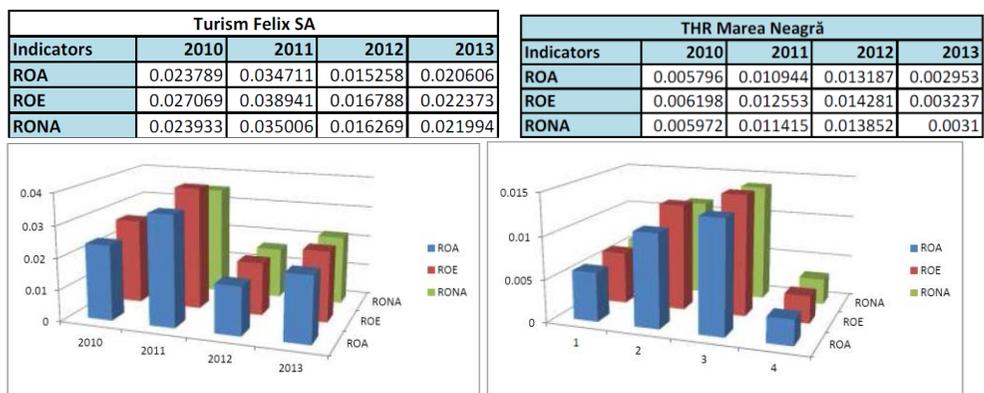


Source: Calculation of the author based on the data from www.bvb.ro

The last two analyzed companies: Turism Covasna SA and Tusnad SA had negative values of their indicators at the end of the analyzing period especially in 2013 when both companies registered net losses. Their situation seems on the brinks of collapse and urgent measures must be taken to improve their financial standing and their profitability indicators in order to be more appealing for potential investors.

Table 5 Profitability Indicators for Turism Covasna SA and Tusnad SA

| Turism Covasna SA | | | | |
|---|---|---|---|---|
| Indicators | 2010 | 2011 | 2012 | 2013 |
| ROA | 0.02261 | 0.004704 | 0.002579 | -0.02107 |
| ROE | 0.03168 | 0.007938 | 0.004362 | -0.04507 |
| RONA | 0.022711 | 0.00479 | 0.002655 | -0.02138 |

| Tusnad SA | | | | |
|---|---|---|---|---|
| Indicators | 2010 | 2011 | 2012 | 2013 |
| ROA | 0.001899 | 0.015237 | -0.05762 | -0.11441 |
| ROE | 0.002119 | 0.016599 | -0.07589 | -0.16992 |
| RONA | 0.002026 | 0.015965 | -0.05946 | -0.11809 |
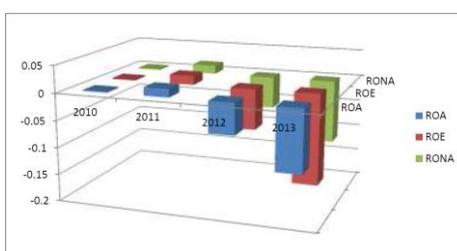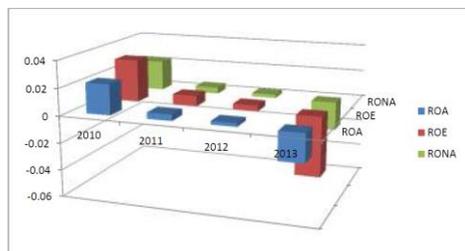


Source: Calculation of the author based on the data from www.bvb.ro

When analyzing the aggregate results a mixed evolution can be witnessed. The results in general had a significant increase in 2013. Mostly brought be the consolidation of profitability indicators of several companies: Turism Felix SA, THR Marea Neagră SA, Casa Bucovina Suceava SA and especially Bega Turism SA and Regal Galați SA. On the other hand 2013 has been a very dark year, from the profitability point of view, for several well-known companies: Turism Covasna SA, Tusnad SA, SIF Hoteluri SA and Arta Culinară Cluj SA. If we want to draw a general conclusion for the entire sector we cannot since the profitability indicators are suggesting us mixed results.

Table 5 Aggregate Profitability Indicators for Romanian Leisure and Tourism Companies

| Aggregate Profitability Indicators - Romanian Leisure & Tourism Companies | | | | |
|---|---|---|---|---|
| Indicators | 2010 | 2011 | 2012 | 2013 |
| ROA | 0.01797169 | 0.01301 | 0.00164 | 0.034654 |
| ROE | 0.01908731 | 0.021035 | 0.00616 | 0.09709 |
| RONA | 0.01865616 | 0.013281 | 0.002269 | 0.078263 |
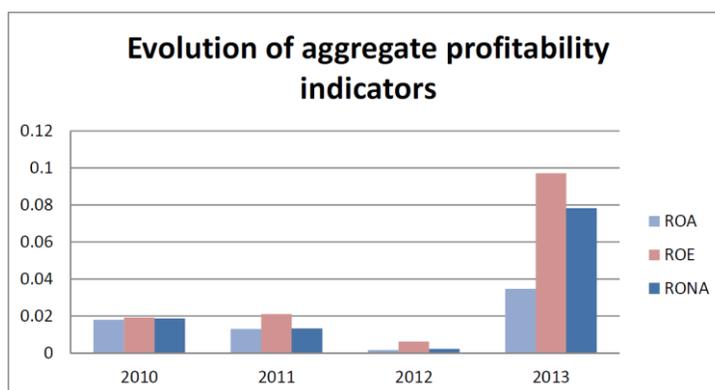
Source: Calculation of the author

### 3. Conclusions

As mentioned by Gibson(2011) "profitability is the ability of a firm to generate earnings". An therefore the analysis of profitability indicators constitute a major concern to stockholders which expect to obtain revenues in the form of dividends.

Otherwise an increase in the profitability indicators can bring rises in the market prices, leading to capital gains. For the creditors profits are also important to because profits are one source of funds for debt coverage(Gibson, 2011). For the management of the company the profitability is a prime performance measure instrument.

Based on the current study the leisure and tourism sector from Romania seems to have an increasing profitability in 2013. This is caused by both the efficient measures taken in 2012 and also by the continuous professionalization of management. All analyzed companies were state-owned companies in 1990 and since then reformed all their operations and now have mostly private ownership.

As a general conclusion of the study we can mention the following aspects: the aggregate results show us a mixed evolution of profitability indicators. The results, in general, had a significant increase in 2013, after a very bad year in 2012.

On the market were seen two currents: consolidation of profitability indicators of several companies: Turism Felix SA, THR Marea Neagră SA, Casa Bucovina Suceava SA and especially Bega Turism SA and Regal Galați SA.

On the other hand 2013 has been a very dark year, from the profitability point of view, for several well-known companies: Turism Covasna SA, Tusnad SA, SIF Hoteluri SA and Arta Culinară Cluj SA. If we want to draw a general conclusion for the entire sector we cannot since the profitability indicators are suggesting us mixed results. Since most of the results compare the profit/loss with different types of assets we have to mention that in 2012 most of these companies re-evaluated their assets based on new IFRS standards which brought significant changes to their balance sheets. In the next years, and especially in the period 2014-2015, these companies have to make efforts in correcting the profitability indicators in order to be a target for the investors in the years to come, especially since other private leisure and tourism companies have expressed their interest in being quoted on the Bucharest Stock Market.

We close this study with the conclusion from Gibson(2011) which considers that: "in profitability analysis, absolute figures are less meaningful than earnings measured as a percentage of a number of bases: the productive assets, the owners' and creditors' capital employed, and sales."

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# THE ROLE OF VENTURE CAPITAL IN THE BRIDGING OF FUNDING GAPS – A REAL OPTIONS REASONING

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**Abstract:** *Funding gaps occur when for a particular group of enterprises there are not enough available funds to finance their growth. Such enterprises are typically young, innovative and technology-oriented startup companies. These companies do not have significant revenues or collaterals; hence they are not suitable for bank financing. On the other hand the information problems decrease their chances to attract investors and also there is high uncertainty involved in these companies. The method of venture capital financing was established to operate in this financing gap and to provide funds for these technology-oriented, young startup enterprises. There is an extensive literature that highlights that venture capitalists are capable and willing to provide financing for these enterprises as a result of their special expertise and business experience and their sophisticated value creation methods. In this article the authors introduce a real options reasoning in order to give an interpretation of venture capital decision-making method and why venture capital is willing to operate in funding gaps and how it is able to bridge them. With the involvement in the operation of the invested companies venture capitalists create options that increase the value of the firm. Also in option-valuation the higher the uncertainty of the asset is, the higher the value of the option is. That is the reason, why other passive funding forms reject the financing of startup enterprises, while venture capital is willing to provide funds for them. In this article we will describe the problem of funding gaps, than we will introduce real options and their effect on investment decision. In the last part of the article we will demonstrate how real options appear and are created in venture capital financing as a result of its special characteristics and how the real options approach can explain the ability of venture capitalist of bridging funding gaps.*

**Keywords:** venture capital; real options

**JEL classification:** G24

## 1. Funding gaps and venture capital

We can define funding gaps as the hiatus of the supply and demand of financial sources (Nagy, 2004). Funding gaps occur usually in cases of companies in a given point of their life and with special field of activity. The problem of funding gap is prevalent in young, technology-oriented startup enterprises. As a result of the funding gaps, companies with huge growth potential are not able to obtain the necessary capital for their operation; hence they cannot live up to their growth potential.

Funding gaps evolve in case of startup companies as a result of their special characteristics. In the seed and early stages of their lives these companies are in the phase of product development or they have just made their market entry. They are in the lack of collaterals or significant revenues; hence they are unable to obtain bank financing. The capital structure of these enterprises affects their competitiveness and the dominance of loans in their capital structure would result in a heavy burden on their cash flows (Herczeg, 2009). On the other hand the 3F funds (family, friends and fools) are not sufficient to finance the further growth of these enterprises.

Also these companies have high risk and uncertainty. Becsky-Nagy and Fazekas (2015) discusses the special risks and the sources of uncertainty that plays an important role in case of young, innovative companies. There is a high business risk involved in startup companies. Cochrane (2005) showed, that in case of venture capital investments that aims innovative, young companies, the returns are strongly positively skewed that suggests that most of the companies generate low and even negative returns but few enterprises are able to reach extremely high returns. Cochrane (2005) also showed that the risk of these enterprises is company-specific idiosyncratic risk and not systematic risk.

The high uncertainty also derives from imperfect information. As these companies do not have a track record and their activity is specific it is difficult to evaluate them, hence adverse selection described by Akerlof (1970) occurs. Furthermore, as these enterprises need external financing the principal-agent problem described by Jensen and Meckling (1976) also occurs and the uncertainty derives from this relationship contributes to the funding gaps as well.
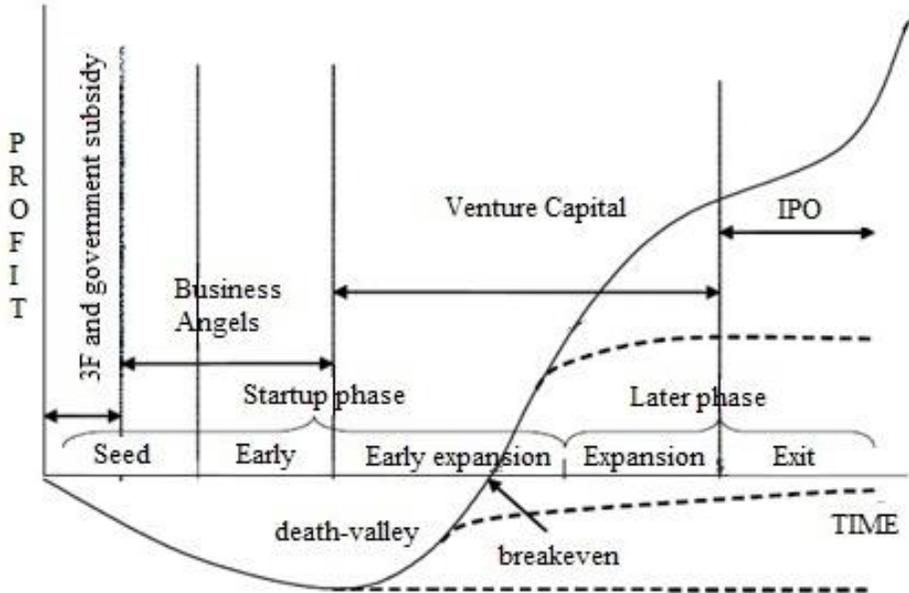


**Figure 1:** The available equity-funding for young enterprises in their different stages of growth
Source: Szerb (2006)

As we can see on Figure 1, venture capital is the main external funding source of enterprises. Venture capital appears in the early stages of the life of companies when they are generating losses and the faith and viability of the company is doubtful. In the so called death-valley, before the market entry the uncertainty of these enterprises is high, but provided that adequate capital and knowledge is available for these enterprises they can achieve high growth rate and reach the point where an IPO is feasible.


## 2. Basics of real options reasoning

The role of uncertainty plays a crucial role in option valuation. In the traditional investment analyses methods the higher the uncertainty is the lower the value of the investment is. On the other hand in options valuation the higher the volatility of the underlying asset is the higher the value of the option is. The reason of this relationship of volatility and options is,

that in case of options the losses are limited (we do not exercise the option, when it is out of the money so we only lose the price of the option), while in case of favourable changes in the price of the underlying asset we can gain profit (in case of put option, the maximum of our profit is the strike price, while in case of call options the profit is unlimited in theory). Volatility increases the value of options because the downside risk and the probability of loss are eliminated while the chance of high profit increases.

The role of uncertainty appears similarly in case of real options. In an uncertain business environment the management of the company has the ability to react to the changes of the environment and the occurring problems and possibilities. The traditional DCF (Discounted Cash Flow) based investment analyses methods are not able to incorporate the value of managerial flexibility into the evaluation, although in strategic investments this flexibility of the management can increase the value. Rózsa (2004) based on the literature describes the following options that managers may have in the implementation of an investment:

- deferment
- rejection
- expansion
- staging
- switch
- alteration
- learning

Real options integrate the traditional DCF based evaluation methods with option valuation and provide a strategic approach of investment analyses where the value of the management flexibility appears. Figure 2 shows how real options change the DCF based NPV's (Net Present Value) distribution.

As we can see on Figure 2, the presence of options changes the distribution of NPV in two ways. First of all, the expected value of the investment increases as a result of the added value of the options. On the other hand the distribution will be positively skewed. The reason of the changed skewness is that options can mitigate losses and enhance the positive outcomes. The design of the option allows its holder to benefit from uncertainty in the occurrence of favourable events (McGrath, 1997).
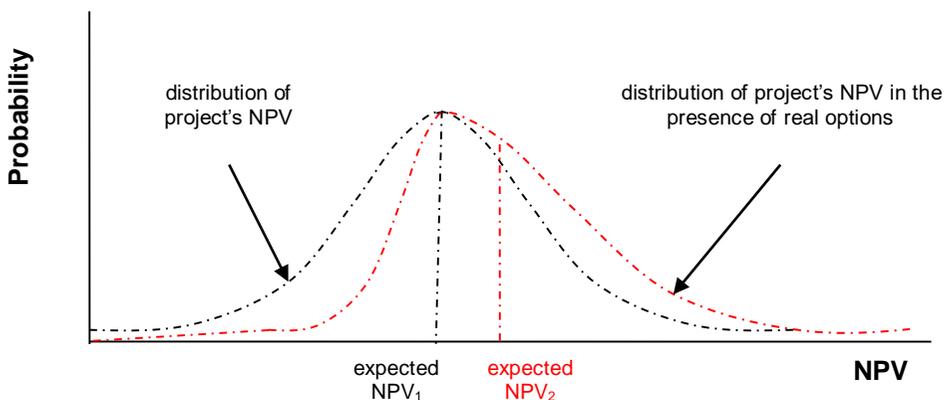


**Figure 2:** The effect of real options on the distribution of investment's NPV
Source: Yeo, K. T. and Qiu, F. (2003)

### 3. The role of real options reasoning in venture capital financing

Compared to other funding forms venture capital is willing and more successful in managing risks and uncertainty. The literature explains this feature of venture capital with the special expertise and business experience of the venture capital investors that enables

them to increase the value of the firm in order to realize profit via exiting the invested companies (Becskyné Nagy, 2006). As they provide equity type financing, the investors become owners of the invested companies and as owners their priority is to maximize their wealth via increasing the firm's value (Rózsa and Tálas, 2012). As a result of their expertise they can select the invested companies more efficiently and they can also provide non-financial value added services after the investment in order to increase the value of the invested companies (Chemmanur et al., 2011).

The real options approach of venture capital investments also relies on the special expertise of venture capital investors. Real options can be viewed as a decision-making method and valuation technique, a logic for strategic planning (Driouchi and Bennett, 2012). The reason why real options can be applied in venture capital investments is that the investors provide managerial assistance as well; hence they can influence the operation of the invested companies (Nagy, 2002; Becsky-Nagy, 2014). This feature of venture capital creates real options in the investments. As Copeland and Keenan (1998) shows, the uncertainty and the future opportunities of investments alone does not create real options. They emphasize the role of the management's capabilities to recognize the options. It is also crucial how effectively the management can respond to the changes of the uncertain environment. Miller (2002) also highlights the competence of the management as a determinant of the value of the options. Rangan (1998) describes that the value of options can be realized only if there is adequate knowledge, tools and resources.

Venture capital investors have the necessary expertise and knowledge to realize options. Venture capitalists establish their managerial networks in order to match enterprises with the suitable managers who have the necessary skills and business experience (Carvalho et al., 2005). The literature emphasizes the role of the invested company's management and according to many studies the management team of companies are more important in the investment decisions than the idea or the activity of the enterprises itself (Kaplan et al., 2009). These features of venture capital are consistent with real options reasoning as the knowledge provided by the investors and what makes it possible to utilize the options in the companies.

Venture capitalists use special methods and tools that allow them to create and take advantage of the options of investments (Becsky-Nagy and Fazekas, 2015). The practice of multi-staged financing is generally used by venture capitalists hence the option of staging occurs in these investments. Staging plays an important role in the risk management of venture capital. The first financing round can be viewed as a test period, where the investors can gather more information about the invested companies without committing the full amount of capital that is needed to the investment. Staging can mitigate losses in case of unviable companies while keeping alive the potentially successful ones.

Convertible securities are also widespread in venture capital financing as they can decrease downside risk of investments as they can function as debt-like financing if the value of equity is lower than the face value of the securities while in case of high equity value the securities can be converted hence the investors have the benefits of the increased value of the firm's equity (Hellmann, 2006).

Monitoring and participation in the operation of the company is also important in the real options approach. The information provided by the operation is crucial in the management of the companies (Fenyves et al., 2014), because the uncertainty connected to the invested companies is endogen to the enterprises and generated by the investment process itself (Rózsa, 2007). Monitoring is essential in order to be able to gather this information and react to the possibilities of the companies.

It is also important on the long run that each investment provide information for the investors so they become more experienced. The role of this information has high importance especially in a rapidly changing technical environment (Orbán Mrs. Tamás Dékán, 2013). Investors can harness this knowledge in their future investments and they

can increase their efficiency. That is the reason why learning options, described by Yeo and Qiu (2003) occur as well, because the knowledge gained by the investment process has value.

As it is discussed above, real options occur and are created in venture capital investments. If we apply real options reasoning to venture capital financing we can see why venture capital is willing to finance companies that other funding forms are not, and why venture capital can bridge the funding gaps. First of all, the options value increases the expected value of the investments; hence investments rejected by traditional DCF-based analyses methods will be accepted if we incorporate the value of options into the valuation method. The role of uncertainty in real options approach plays an even more important role. In options valuation volatility increases the value of options as the downside risk can be eliminated while the upside part of the volatility creates the chance of high returns. In the companies that are in the focus of venture capital financing there is a high uncertainty and that is the reason why most funding forms are averse to provide them capital. On the other hand, as venture capitalists are able to create and recognize options and they can realize the benefits of the high uncertainty while minimizing its negative consequences.

## 4. In conclusion

The young, innovative technology-oriented startup enterprises that bring novelty to the market often cannot obtain capital in order to finance their growth, hence funding gaps occur. As a result of the high degree of asymmetric information and uncertainty in these companies the more risk averse funding sources are not willing to provide capital for them, on the other hand venture capital has a unique approach towards risk that can be described via real options reasoning.

Via the involvement in the operation of the enterprises, special expertise and risk management techniques venture capitalist can create and utilize options in the investments. Real options reasoning gives an explanation of venture capital's investment activity and why this funding form is willing and able to bear and manage higher risks more efficiently than other funding sources. In options reasoning the higher volatility of investments become a favourable feature and that is the reason why venture capital provides primarily funding for startup enterprises and why venture capital can bridge funding gaps.

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# IMPLEMENTATION OF CORPORATE VALUATION TECHNIQUES IN PRACTICE

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**Abstract:** *This paper focuses on the main tools and techniques of firm valuation. One of the objectives in this paper is to present the reasons for such differences in value across different models, and to help in choosing the right model for a specific task. In today's management literature there are a lot of evaluation models, which based on the different approaches. The most important dimensions in the evaluation are the past performance analysis, the current value of the firm based on the forecast period and the appraisal of future opportunities. Nowadays it is quite problematic that these concepts regarding the valuation methods used in practice are not homogeneous. In view of the major principles is equal, but the details are different. In this paper my goal is to categorize the methods in the right section and to demonstrate the characteristics, advantages and disadvantages as well. This study proceeds as follow. The first section classifies and categorizes the different valuation approaches, which are the ratios based on accounting data, the asset-based approach, the income-based approach within the discounted cash flow models and the value added methods, the relative valuation, at last the real options. The second part presents the main features and implementation of the methods. Finally, the third section concludes what might be learned from this study. Based on the related literature reviewed and my previous researches I conclude that, in the evaluation, the problem is not that there are not enough models to complete the task but on the contrary, the selection of the appropriate model is the first challenge in the work. The different approaches lead to significantly different values. The other main finding of this work that, professionals involved in the assessment task explained the reason for the differences, and selection the correct model which is the best fit for the job. Considering the models described below a best model cannot be identified. This study also concludes that selecting the applicable model depends on the current situation and characteristics of the company or assets.*

## 1. Introduction

Grouping and presentation of the company's valuation methods with regard to the literature is not uniform. In view of the major principles is equal, but the details are different. In this paper I write a single way I designed the different methods in which Rappaport (1998), Copeland et al (1999), Damodaran (2006), Ulbert (1997), Fónagy-Árva et al (2003) and Takács (2009) study build on.
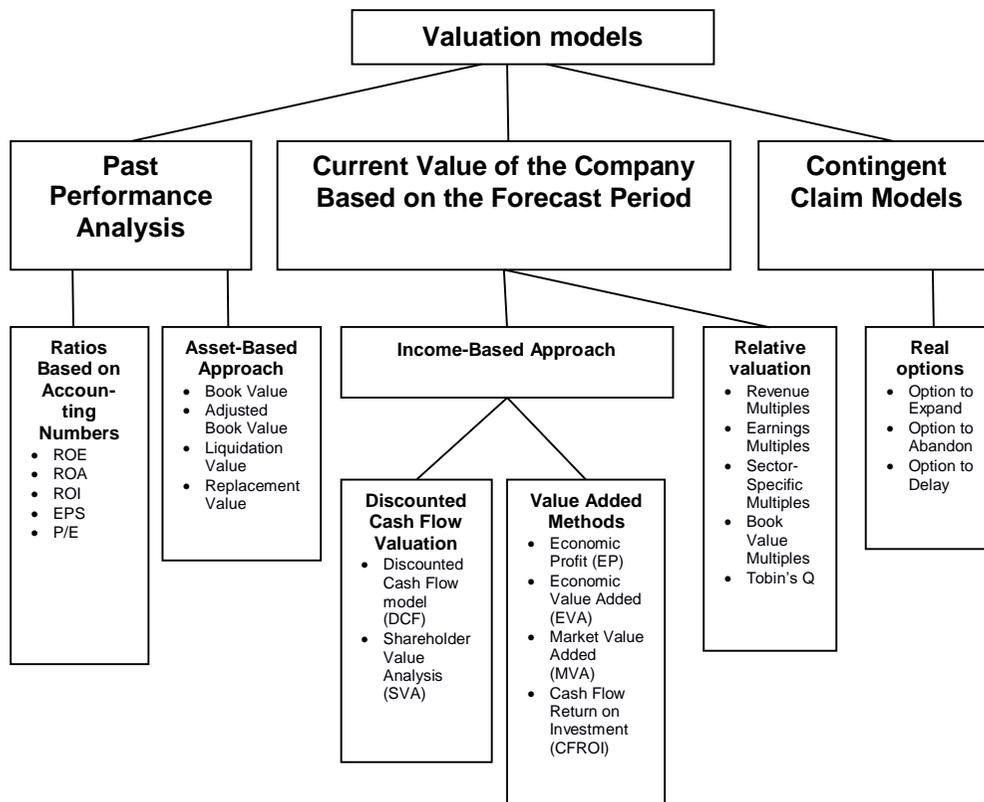
**Figure 1**: Valuation models
Source: edited by the author based on Rappaport (1998), Copeland et al. (1999: 135), Damodaran (2006: 1015), Ulbert (1997: 19-32), Fónagy-Árva et al. (2003: 383), Takács (2009: 15).


## 2. Ratios Based on Accounting Data

Accounting numbers provide a large amount of information and data for use in evaluation. Accounting is, however, oriented to the past, and does not aim to make predictions or determine the value of the company in the future, and thus cannot be called to account in this sense. The main goal of firm evaluation, on the other hand, is to estimate the value of a firm, and to build the predictions regarding the future into the value of the firm, with the help of forward-looking functions (Kozma, 2001).

The greatest advantage of the rates of earnings (ROA, ROE, ROI) lies in the fact that they are comprehensive, easy to determine and to understand, that the numbers have a value in themselves, and that the performance of different firms is directly comparable and can be used as a basic reference point. The main failing of the indicators, however, is that their maximums do not necessarily maximise the shareholder value and therefore cannot in themselves represent the basis for a decision (Anthony-Govindarajan, 2009: 289-312).

The accounting numbers, which concentrate mainly on profit, are not able to reliably measure the changes in the economic value of firms. Rappaport (1998: 13-31) believes that the reason for this is that different firms use different accounting procedures and leave the time value of money out of their calculations. This cannot be regarded as a failure. The problem rather lies in the fact that business managers in many cases only use these accounting indicators in their analyses (Black et al., 1999).

Copeland et al. (1999: 126) also come to the conclusion that the market possesses a long-term approach and cannot be tricked by accounting techniques. In strategic decisions the market behaves as if it were employing the DCF and not the accounting approach.

Economic analysts also conclude that there is a low correlation between the past accounting profit of a firm and the market exchange rate (Black et al., 1999).

Despite all these failings, for the accounting report the evaluation of the firm's value represents a good starting point, and can be profitably used in cases where the activities of the firm cease (cf. Pratt, 1992: 17).

## 3. Asset-Based Approach

According to the valuation of asset-based concept, the internal value of the firm can be analysed as the value of assets which appear in the material and non-material elements of the firm's property. This asset value can be acquired from the accounting information and it shows what value is represented by the property of a firm of a certain composition and age. It does not take into account the income-generating capacity of the element of the asset, nor does the valuation of the asset represent the object of the valuation of the immaterial property of the firm. The asset-based valuation concept can be understood in many ways; there are cost-approach asset valuations, asset valuations based on daily value principles, and adjusted asset valuations, and according to Takács (2009), there are also valuations based on book correction which eliminate the book errors. All four of these asset valuation procedures assume the continuous, undisturbed operation of the firm in an unchanged environment. This approach is useful in circumstances where future changes are difficult to predict, for example in times of economic crisis or high inflation (Ulbert, 1997).

## 4. Income-Based Approach

According to the income-based valuation concept the internal value of the firm is the result of the expected, future utilization of the asset element, given from the expected future cash flows. It does not take into account the division of the firm's assets according to age and composition, concentrating exclusively on the returns which can be predicted from their operation. The definition of return in the literature is not un-ambiguous. According to the classic conception return is equivalent to profit, in the case of the clash flow approach it is the same as cash flow, while in the shareholder approach it is the shareholder return, i.e. the dividend and the share-price appreciation (Ulbert, 1997).

An analysis of the two conceptions allows us to establish that while the conception of asset-based valuation is a past-oriented process, the income-based valuation conception can be considered as a future process, and that the former has become widespread in the Continental European school, while the later dominates in the Anglo-Saxon school. Neither of these conceptions is able on its own to provide a complete picture of market value, since this is affected by other factors such as market relations, market actors, liquidity etc. Both conceptions are necessary, and can be regarded as of equal value, neither being superior to the other (Ulbert, 1997).

In the income-based valuation conception we can include the discounted cash flow model and the value added type of procedures.

### 4.1. Discounted cash flow-based model

The basis of the discounted cash flow-based model is the present value rule, i.e. that the value of the asset is equal to the sum of the present value of its expected future cash flows.

From the perspective of the applied entity DCF model used by Copeland et al. (1999), in the case of investment decisions it is based on applied present value and the valuation

procedure described in Modigliani and Miller's (1961) article, since the value of the firm is the present value of the free cash flows created by the firm's current assets and guaranteed to the shareholders. The DCF model approach applies to the whole firm since the firm is in effect a combination of individual projects. Brealey and Myers (1999 II.: 449-450) also formulated in their conclusions that the concept of net present value is valid when applied to the whole firm, given that the shareholders entrust the management of the firm to directors who will maximise its net present value. Here, mention must be made of Modigliani and Miller's (1958), (1961), (1963) conclusion that if we take the future investment of the firm as given, then the value of existing shares will not be influenced by what sources are used to finance the investments, i.e. in a capital market efficiency neither the dividend policy, nor the capital structure has any influence on the shares and thus on the value of the firm.

The discount rate used for the free cash flow discount, and the weighted average cost of capital include all sources of alternative costs, taking into consideration their relative proportions. The weighted average cost of capital is what we use to help us find out the expected future cash flows. An important consideration when determining and applying this is that there should be harmony between the cash flow, the cost of capital, the capital structure and the evaluation. Copeland et al. (1999: 272-307) and Brealey and Myers (1999 I.: 421-451) discuss the WACC determining factors and their pitfalls.

In the framework of the WACC, determining the costs of the equity represents the most difficult task. The solution to this can be provided by using the dividend evaluation model and the CAPM model.

The shareholder value is given by the difference between the corporate value and the debt, where the corporate value is the sum of the total future free cash flows discounted with weighted average cost of capital and the residual value. The free cash flows appear in the period of the maintenance of competitive advantage, and we can consider them free in the sense that they can be divided among the shareholders.

The DCF method models the whole process of value generation, and also takes long term effects into account and discounts genuinely divisible free cash flows, and thus also builds risks into the model and so realises the conception of shareholder value.

Copeland et al. (1999: 61-64) justifiably describe this value, i.e. the discounted cash flows, as the best measure, because to determine this value requires that all value-creating factors be taken into consideration, which requires the leadership of the firm to be fully informed.

Takács (2009) also deals with the DCF model in his article, in which the free cash flow category which features in the Anglo-Saxon model is introduced into a Hungarian accounting environment.

Damodaran (2006: 10) considers the discounted cash flow-based evaluation to be the basis of all evaluation models which are used as the foundation of all other approaches. In order to be able to understand and to use both the relative and the option pricing models, we must begin with the DCF process.

Among the methods of firm valuation, Fernandez (2007) also favours the discounted cash flow valuation, considering it conceptually appropriate.

There are also certain limits in relation to the application of the discounted cash flow-based models. In the case of firms struggling with difficulties, this method cannot be applied, since it is difficult to predict future cash flows for firms with negative results and cash flows; there is also a risk of bankruptcy and so the principle of the continuity of operations can also be damaged.

When considering the weaknesses of the DCF method, Martin (1998) draws attention to the maximisation based exclusively on the absolute measure of cash flows and the false estimation of the size of the residual value. To correct this, the economic profit valuation would be the solution, which is also DCF-based, given that it clearly shows the contribution to the value of the firm in the given period, and eliminates the problem of residual value.

In his article in defence of the family of DCF models, Ulbert (2011) considers the method to be an accepted one despite its critics, and, with some preconditions, believes it appropriate for the evaluation of the SME sector, too. In terms of its practical application, we can say that it is no worse than any other future-oriented procedure.

## 4.2. Value Added Methods

### 4.2.1. Economic Profit Model

Economic profit for firms is the difference between the return and the cost of invested capital in the given period. The advantage of this type of definition is that it is easy to measure and it is linked to the creation of value, since it takes into account the alternative costs of invested capital.

While in the DCF model the value of the equity is equivalent to the business value of the firm, and the value of the debt must be deducted from this, according to the economic profit model, the value of the firm is equivalent to the sum of the invested capital and the present value of the expected results of the firm.

The value added methods consider the profit realised above expected return as the value creator, i.e. the present value of the surplus cash flow of this value must be added to the present value of the capital invested in assets when determining the value of the firm. So it is not the profit, but the profit above expected return which creates value (Copeland et al., 1999).

### 4.2.2. EVA (Economic Value Added) and MVA (Market Value Added)

The theoretical roots of EVA go back to the theses published by Modigliani and Miller (1958), (1961), and were successfully used by Jensen and Meckling (1976) in their principal agent theory and by Jensen (2001) in the enlightened stakeholder theory and the enlightened value maximisation.

According to Ehrbar (2000), one of the reasons for the popularity of the EVA used by Stern Stewart & Co is that the accounting information creates such a rich network of relationships that non-financial managers can also understand them easily.

Stewart (1999) uses the residual income expression for EVA, which means that the costs of the entire capital used by the firm are deducted from the accounting results. The capital costs used by EVA refer equally to the cost of equity and the cost of debt. While a firm cannot produce a return higher than capital costs, it will operate at a loss.

EVA is much more than a performance indicator, being the basis for a comprehensive financial management, decision-making, remuneration and incentive system, which also shows employees how they can create more value for the shareholders, for consumers and for themselves. In this sense, EVA emphasises the priority of the shareholder value, in such a way that the interests of other affected groups are also taken into account (Ehrbar, 2000: 24-25).

The difference between the total market value and the total capital invested in the company gives the market value added.

MVA is the present value of the total by which the expected level of the future return exceeds the capital costs in relation to the investors' expectations, or the extent to which it fails to meet these expectations. MVA is the sum of the current values of expected future EVAs.

MVA is the final measure of value creation, the accumulated total with which the shareholder value increases or decreases. It is also equivalent to estimations of a firm's present value, which are carried out by a capital market, and can be considered the values of a snapshot of a given period. It is precisely for this reason that the change which follows is more important from the perspective of the management's judgement than the absolute value itself.

Its limitations are that it cannot be used as a directional indicator for day-to-day decisions, and only in the case of open companies operating on the stock market can we calculate it; it cannot be determined on the level of firm units or divisions, only on the whole-firm level. EVA, which is closely related to MVA, manages to eliminate these limitations, and can follow these changes, and can be built into the firm's operations at a business unit-level.

Stern Stewart & Co regularly carry out MVA calculations for companies in the USA, and on this basis create a ranking, the Performance 1000, which in addition to MVA includes the firm's EVA and also the data relating to profitability and size (Stewart, 1999: 748-781).

Stern Stewart & Co conduct many empirical tests in relation to EVA and MVA, and consequently are able to explain a half of the changes occurring in EVA and MVA. This can be considered a genuinely successful result, because the share exchange rate is dependent on future expectations and there is no measurement of value which correlates perfectly with market values. Other tests they carry out, which also include an accounting correction adapted to changes, explain 70% of the changes in MVA (Stewart, 1999: 179-222).

Ehrbar (2000) sees another great advantage in the application of EVA, in that during the planning of the investment the division managers can manage capital rationally, and not consider it as an unlimited resource, but as something that is continually built in to the calculation of the return from the project.

In this sense, MVA is nothing more than an estimation of the firm's net present value, which is carried out by the capital market.

When discussing the criticisms of EVA and its possible abuse as an indicator, Damodaran (2006) mentions the following; if the performance of the managers is evaluated on the basis of the economic value added, then there will be a strong temptation to reduce the invested capital, which can lead to higher EVA.

### 4.2.3.  CFROI (Cash Flow Return on Investment)

The CFROI is the company's existing investment in the internal rate of return, which if it exceeds the weighted average cost of capital, i.e. the minimum required return on invested capital, than value creation, otherwise value destruction.

### 5. Relative Valuation

The reality is that most valuations are relative valuations. The method is based on how similar assets are currently priced in the market. There are two components of the relative valuation. The first is that, to value assets on a relative basis, and any resemblance determined to the index, using a multiplier so that those revenues, earnings, book value and sector-specific multiples are converted into numbers. The second is to find similar firms, which is a very difficult to do since no two firms are same size and firms can still differ on risk, growth potential, and cash flows in the same industry as well. Therefore the basic task is to control this difference, when comparing a multiple across several firms, because they are the potential pitfalls of relative valuation (Damodaran, 2006: 609).

### 6. Real Options

Option pricing models can be used effectively in the evaluation of strategies as taking into account the decision alternatives. The option valuation previously applied only in the case of financial options, but has been extended to measure the value of assets that share option characteristics. These options are called real options. The fundamental premise behind the use of option pricing models is that the discounted cash flow models and the relative valuation understate the assets, that show the differences and just comes from the optional component.

The options are the features that the asset derive their from the values of other assets, the cash flows on the assets are contingent on the occurrence of certain events. (Damodaran, 2006: 88)

The real options embedded in the investments and thus the value of the company that owns it too. The kinds of the real options are the option to expand, the option to abandon and the option to delay.

Option pricing models show off option premium in the assessment based on the discounted cash flow and relative valuation models compared.

Damodaran (2006: 1027) highlights three factors, which warns us that it is not always possible to use the option pricing models and what to pay attention when using them.

1. The options are used sparingly.
2. Opportunities are not always options.
3. The options are not counted double in the assessment.


## 7. Conclusion

In the evaluation, the problem is not that there are not enough models to complete the task but on the contrary, the selection of the appropriate model is the first challenge in the work.

The different approaches lead to significantly different values. It may be the case that there are different results of estimates when a company valuation is based on the discounted cash flow model and the relative valuation at the same time.

Professionals involved in the assessment task explained the reason for the differences, and selection the correct model which is the best fit for the job.

Considering the models as described above a best model cannot be identified. This study also concludes that selecting the applicable model depends on the current situation and characteristics of the company or assets.

The DCF models are suitable for various plans, strategies, comparing the projects during the planning process, but to determine the current firm value is not the best method. The method makes it special is that it is excellent for business units separate analyzes, and so with mergers, acquisitions and sales very useful tool in part.

CFROI is the best method when it comes to portfolio decisions.

EVA is the most common methods. The original concept of EVA weakness is the being static, the focusing on profit. However, through the adjusting of the EVA has been eliminated the majority of these shortcomings, therefore being the basis for a comprehensive financial management, decision-making, remuneration and incentive system.

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# BANKRUPTCY AND THE ALTMAN MODELS. CASE OF ALBANIA

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**Abstract:** *This paper examines the univariate models for predicting bankruptcy and the multivariate models of the best known researcher in this field, the Altman models, models that use the multivariate discriminant analysis. This paper is mainly focused on the application of two of the Altman models (the revised model of 1983 and the revised model of 1993) to firms that operate in Albania, to see how its models can predict the future of Albanian firms. To assess the accuracy and the possibility of applying these models in the case of Albania, the study includes 80 firms (large firms) that operate in the service sector. To classify bankrupt and non-bankrupt firms, this study is based on the Albanian legislation on bankruptcy (Law no. 8901), according to which bankruptcy proceedings may be opened in case of a state of insolvency, when the firm is overburdened with debts or when the earnings after tax of the firm is negative for a period of 3 years.*
*According to the Albanian legislation on bankruptcy, 24 (from 80) firms involved in the study result legally bankrupt. The first revised model (The 1983 model) of Altman predicts accurately these firms by 75%. Regarding the non-bankrupt firms (according to Albanian legislation on bankruptcy) inaccuracy in the forecast is even higher than in the case of bankrupt firms. From 56 non-bankrupt firms involved in the study, 23 are classified as insolvent company under the first revised model of Altman, while these firms are not bankrupt.*
*In case of application of the second revised model of Altman (The 1993 model) the results are consistent with the results of the first model in terms of bankrupt firms. Meanwhile, what is striking is the significant reduction in the percentage of Type II error (from 41% to 23%).*

**Keywords:** Altman model; bankrupt firms; non-bankrupt firms; type I error; type II error; Albanian legislation.

**JEL classification:** G33; K22.

## 1. Introduction

Every economic system needs special mechanisms to ensure the best use of the available resources. Bankruptcy is the main instrument for the redistribution of the manufacturing tools from inefficient firms to efficient ones.

*Theoretically, bankruptcy jogs rotten apples from struggling sectors of the economy and allows profitable firms to thrive. However, without an efficient procedure of bankruptcy, financial crises last longer in time and are deeper.*

The bankruptcy process allows the firm to be reorganized, often looking to sell a part of their assets, to make ownership changes, or even a part of the obligations to be forgiven by creditors. However, in other cases, bankruptcy leads to total liquidation, making the company cease to exist.

Given the importance of investigating such a phenomenon, many scholars, starting from the late nineteenth century, have undertaken research to discover more about the causes and factors of bankruptcy. Studies in this field were increased especially after the 60s of XX century. These researches are mainly empirical. Actually, after many years of studies by various authors, there is not a structured theory related to bankruptcy. Certain economic

environments in various countries and particular companies' features operating in various industries have become really difficult to draw a unified theory about the bankruptcy phenomenon. Therefore, the recent studies continue to be empirical.

In terms of our country, studies about the failure of the enterprises have been a few. Mostly, they are focused on the reasons that lead Albanian firms to failure and are mainly made in the context of research projects related to Albanian economic environment. Even by banks, which despite being institutions interested to perform risk analysis, were satisfied with the analysis of the loan (which is a different research field), there haven't been studies done to forecast the failure or bankruptcy. A single study in bankruptcy modeling in our country was made in 2007 by Prof. Assoc. Dr. Rezarta Perri. Part of this study were only state-owned enterprises, due to the perception that the quality of their financial statements is higher than those of private firms.

The remainder of this paper is organized as follows. In Section two is summarized the literature review. In the third section are given some statistics related to the closure of firms in our country (Albania), while the fourth section gives the results of the application of two of the Altman models for a sample of 80 firms operating in the service sector in Albania. Finally, in the fifth section, are given some conclusions on the issue of bankruptcy.


## 2. Literature Review

The first studies in the field of bankruptcy prediction were the univariate models, models with a single variable. These studies were focused on individual financial ratios and compared the values of these ratios for bankrupt and non-bankrupt firms. These studies have played an important role for stakeholders in this field and have served as a basis for further studies, for multivariate models, models that use more than one variable to predict the bankruptcy.

In 1930, the Bureau of Business Research published the results of a study related to the values of financial ratios of bankrupt industrial firms. This study analyzed 24 financial ratios, using data from 29 firms and aimed to determine similar characteristics of bankrupt firms. Results revealed eight financial ratios (Working Capital to Total Assets, Surplus and Reserves to Total Assets, Net Worth to Fixed Assets, Fixed Assets to Total Assets, the Current Ratio, Net Worth to Total Assets, Sales to Total Assets, and Cash to Total Assets), as indicators of "weakening" financial situation of a firm. Based on this study, the best indicator to express the weakness of a firm resulted ratio of working capital to total assets, and subsequently was the current ratio.

FitzPatrick (1932) compared 13 financial ratios for 19 bankrupt firms and 19 non-bankrupt firms. He discovered that in most of the cases, non-bankrupt firms showed favorable ratios compared to the standard level while insolvent firms showed unfavorable ratios. Results showed that two most significant ratios were Net Worth to Debt and Net Profits to Net Worth. Also, according to FitzPatrick should be paid less attention to current ratio and quick ratio of firms with long-term liabilities.

Smith and Winakor (1935) analyzed the financial ratios of 183 firms operating in different industries. From the study, Smith and Winakor concluded that the ratio of Working Capital to Total Assets was a better indicator for predicting financial problems than the ratio of Cash to Total Assets and the Quick Ratio (the Acid Test). Also, they showed that with the approaching of the moment of bankruptcy, firms had a falling ratio of current assets to total assets.

Another study for predicting bankruptcy of firms is the one made by Merwin (1942), which is focused on small producers. According to Merwin, bankrupt firms showed signs of weakness 4 or 5 years before failure. According to the study, three ratios resulted significant in the bankruptcy of a firm: Net Working Capital to Total Assets, the Current Ratio, and Net Worth to Total Debt.

In 1962, Jackendoff compared the financial ratios of firms with profit in their financial statements and firms with loss. He concluded that the Quick Ratio and the Net Working Capital to Total Assets were higher for firms with profits than for firms with losses. Also, profitable firms had a lower ratio of Liabilities to Net Value than firms with losses.

The most important study with a single variable (the univariate model) for predicting the bankruptcy is the study carried out by Beaver in 1966. In this study, the firm is seen as a "reservoir of liquid assets", which is filled by cash inflows and emptied by cash outflows. Insolvency of the firm can be defined as the probability that the reservoir is emptied, a situation in which a firm would not be able to repay the maturing liabilities. The study conducted by Beaver found four situations:

- The bigger the reservoir, the lower is the probability of failure of the firm;
- The larger is the net inflow of liquid assets from the operating activity, the lower is the probability of failure;
- The higher the debt ratio, the higher is the probability of failure;
- The larger is the outflow from the operating activity, the higher is the probability of failure.

Beaver (1966), which is the most knowledgeable researcher of the univariate analysis, estimated the average value of 29 financial ratios from a sample of bankrupt firms for 5 years before their bankruptcy and compared these ratios with the average values from a sample of non-bankrupt firms for the same years of the study. His aim was to identify among them the ratio which best distinguish bankrupt firms from the non-bankrupt ones, as well as to understand how many years before bankruptcy began to notice differences between firms.

From the 29 financial ratios observed by Beaver, he concluded that six ratios with the best discriminatory power were (according to their predictive ability):

- Net income before amortization, depreciation and depletion / total liabilities.
- Net income / total assets
- The total debt / total assets
- Net working capital / total assets
- Short-term Assets / short-term liabilities
- Cash, short-term investments and receivables / Operating expenses without depreciation, depreciation and depletion.

The first study with more than one variable to predict the bankruptcy is the study made by Altman (1968), which used multivariate discriminant analysis. He built a model with five variables to predict the bankruptcy of manufacturing firms, model which was 95% accurate in predicting the bankruptcy of firms a year before. However, the ability of the model to predict the bankruptcy two, three, four and five years before the bankruptcy, was respectively 72%, 48%, 29% and 36%. While, when the model is used to firms that were not included in the initial sample, the model accuracy was 79%.

The multivariate discriminant function of Altman takes the following form:

$$Z = 0.012 * X1 + 0.014 * X2 + 0.033 * X3 + 0.006 * X4 + 0.999 * X5$$

In this equation, five variables represent the following ratios:

- X1 = working capital / total assets
- X2 = retained earnings / total assets
- X3 = earnings before tax and interest / total assets
- X4 = market value of equity / book value of total debt
- X5 = sales / total assets

In 1983, Altman built a revised model "Z-score" for unquoted firms in the financial markets. In this model, on X4 ratio, market value of equity is replaced by the book value of equity. The revised Model "Z-score" had the following form:

$$Z = 0.717 * X1 + 0.847 * X2 + 3.107 * X3 + 0.420 * X4 + 0.998 * X5$$

Once concluded in the above result, Altman found that all firms with Z level higher than 2.90 were non-bankrupt firms, but all firms with a Z level less than 1.23 were bankrupt firms. While, for firms with a Z level between 1.23 and 2.90 was impossible to have accurate results; this area was called the zone of indifference or "gray zone", because it had a high likelihood for possible errors of firm classification.

The accuracy of the first revised model was almost at the same level with the first model built in 1968 (90.9%). According to Altman, firms with Z level greater than 2.90 had 97% chance to continue their activity in a healthy way (Altman, 1993).

To reduce the industry effect, Altman built in 1993 a new model, from which it is removed the assets turnover ratio (X5 - sales / total assets). Four other variables remained the same with those that were included in the first revised model of Altman. The 1993 model has the following form:

$$Z = 6.56 * X1 + 3.26 * X2 + 6.72 * X3 + 1.05 * X4$$

According to this model, firms with a value of less than 1.10 were bankrupt firms and firms with a value greater than 2.60 were non-bankrupt firms.

The accuracy of the model with four variables was at the same level as the first revised model of 1983 (90.9%).


## 3. The Closure of Albanian Firms

In Albania there are no official data about the rate of bankrupt firms. In our country there is not such an information center. Moreover, there isn't any indicator that measures the level of firms closure due to financial difficulties. The only possible statistics available are those collected by INSTAT, which reports the number of active firms and new established firms. Thereby, we are able to calculate the number of closed firms, but we are still not able to obtain information about the reasons of their closure. Noting that a firm could close its activity due to many other reasons (often reasons other than economic difficulties, e.g. fulfillment of the company aim, their partners decision, the fulfillment of the operating period predicted in the statute, the change of their geographical area, their merger or acquisition by another company, etc.), it is admitted that these statistics are not representative of the real rate of bankrupt firms in Albania. However, considering that no other data are available, are chosen the following statistics about the active firms and the rate of new established firms in Albania.

Until 2011, the number of active firms has been increasing, while in 2012 their number decreased, because in this year the number of closed firms was higher than the number of new established firms. The rate of new established firms is different over the years, and is characterized in 2008 by a growth rate of 21 percent.

**Table 1: Number of active, new and closed firms**

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|---|---|
| Active firms | 62162 | 73672 | 80077 | 94533 | 94953 | 103038 | 109039 | 106837 |
| New firms | 10607 | 14568 | 14010 | 19884 | 13081 | 16469 | 12905 | 12828 |
| New firms rate | 17.1% | 19.8% | 17.5% | 21% | 13.8% | 16% | 11.8% | 12% |
| Closed firms | 3354 | 3058 | 7605 | 5428 | 12661 | 8384 | 6904 | 15030 |

**Source: INSTAT**

From 2008, we have a more stable state, where the average rate of new established firms is estimated at 12-16 percent. By the analysis of firms closure phenomenon in years, we found that in 2005-2006 the closure of firms is in its lowest levels during the past eight years, while the highest number of them appeared to be in 2009, which is the year after the financial crisis, that affected almost all countries, and in 2012, the year when the real GDP growth decreased to + 1.6%.

Referring to the above data (Table 1), it is found a high rate of firms closure in Albania during the years 2009-2012. Although the high percentage, we cannot speculate and conclude that the reason of all these closures has been their bankruptcy. As stated above, the reasons of their closure might have been other than financial difficulties. However, there are not a few reasons for failure in view of the tough Albanian economic environment and probably a large number of these closed firms could have been closed due to economic difficulties.

## 4. The Application of Altman's Models to Albanian Firms

The sample to be studied in this paper consists of 80 firms (large businesses) that operate in the service sector. Because of the fact that our country doesn't have a financial market, and therefore it is difficult to have information about the market value of the company's equity, in this section we will evaluate the accuracy of the bankruptcy prediction for two revised models of Altman (the 1983 model and the 1993 model), using the data from the financial statements of 80 Albanian firms.

To distinguish bankrupt firms from non-bankrupt firms, this study is based on the Albanian legislation on bankruptcy (Law no. 8901), according to which the causes of opening the bankruptcy proceedings are as follows:

- The state of insolvency. The debtor is considered insolvent if it is unable to pay liabilities on the maturity date.
- Overburdened with debts. The debtor is overburdened with debts when it is verified that its assets are lower than the liabilities that company has to third parties, and assessing that the debtor has no longer the possibility to continue the activity.
- In the case of legal entities, bankruptcy proceedings may initiate with the request of tax authorities, when the firm results with losses for a period of 3 years continually.

What is worth mentioning is that the total percentage of correct predictions given by a statistically predictive model is not a valid criterion of model accuracy. Evaluation of a classification model is not complete if there are not taken into account the costs and benefits of accurate estimates versus incorrect ones. There are two types of errors of "classification":

1. Type I Error refers to misclassification of a non-bankrupt firm when in fact the firm bankrupts.
2. Type II Error refers to misclassification of a firm as a bankrupt one when the firm does not actually bankrupt.

### Table 2: Type I and Type II Error

| The model forecast | The actual outcome | |
|---|---|---|
| | Bankruptcy | Non-bankruptcy |
| Bankruptcy | Accurate estimate | Type II Error |
| Non-bankruptcy | Type I Error | Accurate estimate |

**Source: Literature Review**

The both types of errors have different costs. Type I error cost is many times higher than the Type II error cost. This is because, in the first case the creditor can lose up to 100 percent of his investment in the company. While in the second case, the cost is limited up to the amount of the difference between the rate of return that investors would earn if they had invested in the company with the current return ratio they get from alternative investments.

Let's have a look to the percentages of the Type I and Type II error when we apply the two revised models of Altman in firms that operate in the service sector in Albania.

### 4.1. The first revised model of Altman (1983)
In the following table (Table 3) are shown the results of the application of the first revised model of Altman.

**Table 3: Results of the first revised model of Altman for 80 Albanian firms**

| The model forecast | Actual outcome | |
|---|---|---|
| | Bankrupt firm (24) | Non-bankrupt firm (56) |
| Bankrupt firm | 18 | 23 (41%) |
| Non-bankrupt firm | 6 (25%) | 33 |

**Source: Financial statements of firms. Data processing by author.**

According to the Albanian legislation on bankruptcy, 24 (from 80) firms result legally bankrupt. The first revised model of Altman predicts accurately these firms by 75%, which means 18 of these firms will go bankrupt within one year of application of this model. While the other 6 firms involved in the study sample, the Altman model predicts that they will continue their activities in the following year, while these firms are legally bankrupt. Regarding non-bankrupt firms (according to the Albanian legislation on bankruptcy) inaccuracy in the forecast is even higher than in the case of bankrupt firms. From 56 non-bankrupt firms included in the study, 23 are classified as insolvent firms under the first revised model of Altman, while these firms are not bankrupt.

As mentioned above, the Type I errors have higher cost than Type II errors for shareholders of the firm. Although the percentage of Type I error is lower than the percentage of Type II error, we can say that the percentage of Type I error is relatively in high levels (25%) compared with the results provided by Altman. Due to the large uncertainty in predicting the future of the firm, we can say that the first revised model of Altman cannot be used for Albanian firms.

### 4.2. The second revised model of Altman (1993)
In the following table (Table 4) are shown the results of the application of the second revised model of Altman.

**Table 4: Results of the second revised model of Altman for 80 Albanian firms**

| The model forecast | Actual outcome | |
|---|---|---|
| | Bankrupt firm (24) | Non-bankrupt firm (56) |
| Bankrupt firm | 18 | 13 (23%) |
| Non-bankrupt firm | 6 (25%) | 43 |

**Source: Financial statements of firms. Data processing by author.**

In the Table 4 we see that the results of the second revised model of Altman are the same with the results of the first revised model in terms of bankrupt firms. Even in this model, the percentage of Type I error is 25%. Meanwhile, what is striking is the significant reduction in the percentage of Type II error. Under the second revised model of Altman, 43 non-bankrupt firms according to Albanian legislation are accurately predicted by the model, while 13 firms (23%) were assessed as bankrupt firms.

### 5. In conclusion
The first studies in the field of bankruptcy prediction were studies that used one variable for prediction (the univariate studies). These studies focus on individual financial ratios and compare the values of ratios of bankrupt firms with non-bankrupt firms. Limitation of

these models is that they measure the impact of each ratio, not taking into account the impact of other ratios and assuming that their impact is zero. Although these models have shortcomings, their importance was great for the time in which they were used and served as a basis for further studies, for multivariate studies.

The effort, which has left more traces and had more influence in subsequent studies, was the effort of the American professor, E. Altman. Precisely in this paper is given a description of three models developed by him for predicting the bankruptcy. This paper is mainly focused on the application of two of the Altman models (The 1983 model and the 1993 model) to firms that operate in Albania, to see how his models can predict the future of the Albanian firms. The first model is not used in this paper, because in our country does not exist an organized financial market, and therefore, we have no data on market value of equity of firms included in the study.

According to the Albanian legislation on bankruptcy, 24 firms included in this study (from 80) are legally bankrupt. The first revised model of Altman (1983) predicts accurately these firms by 75%. Regarding non-bankrupt firms (according to Albanian legislation on bankruptcy) inaccuracy in the forecast is even higher than in the case of bankrupt firms. From 56 non-bankrupt firms involved in this study, 23 are classified as insolvent firms under the first revised model of Altman, while these firms are not bankrupt.

In case of application of the second revised model of Altman (1993), the results are consistent with the results of the first model in terms of bankrupt firms. Even in this model, the percentage of Type I error is 25%. Meanwhile, what is striking is the significant reduction in the percentage of Type II error (from 41% to 23%).

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# LITERATURE REVIEW ON CORPORATE GOVERNANCE - FIRM PERFORMANCE RELATIONSHIP

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**Abstract:** *In the matter of corporate governance reforms, an important aspect is whether the implementation of corporate governance principles and codes has a positive impact on firm performance. The literature testing the relationship between different corporate governance mechanisms and firm performance is extensive. Over time, a lot of corporate governances mechanisms were studied in relation to firm performance and the most used are: CEO duality, board size, proportion of non- executive directors, board committees, ownership structure and concentration, managers' compensation and incentives schemes. With time, different authors began to use more comprehensive measures for corporate governance rather than a single variable or a single governance mechanism, the so called corporate governance indexes. Regarding performance there are three main approaches to firm performance in social science research: research based on market prices, accounting ratios and total factor profitability.The most used performance measures are: Tobin's Q, return on equity, return on asset and economic value added. In our paper, we present the studies undertaken since the 1990's regarding the relationship between different mechanisms of corporate governance and firm performance and between corporate governance index and performance for both developed and developing countries around the world. Regarding the working tools used in this theoretical research we can mention the longitudinal method, by presenting the evolution in time of empirical studies on the research topic and the comparative method used in presenting the resulys of different studies mentioned in our paper. The results of the studies are inconclusive, some studies founded a strog positive relation, others founded a negative correlation between corporate governance and firm performance, while a third category of studies didn't found any relationship at all. We used participative observation method by issuing conclusions on the potential causes of the inconclusive results on the existence and nature of the relationship between corporate governance and firm performance.*

**Keywords:** corporate governance, firm performance, corporate governance index.

**JEL classification:** G30

## 1. Introduction

Corporate governance knows many definitions. Some authors define it as a mix of different mechanisms that direct and control the company (Kim et al. (2005); Hassan (2008)). There are two major sides of corporate governance (CG): conformance and performance. The first one consist of monitoring, supervising and being accountable to different stakeholders (Hassan and Halbouni, 2013:120), while performance measures the contributions of managers (those who govern the company) in obtaining performance.

In the matter of corporate governance reforms, an important aspect is whether the implementation of corporate governance principles and codes has a positive impact on firm

performance. In recent years, the aspect of causality determination has become increasingly important in the research regarding corporate governance.

After studying the literature on this regard we found that many empirical studies use a single governance variable or mechanism in investigating the relationship between firm value or performance (Yermack (1996); Bhagat and Black (2002)). But due to the fact that corporate governance is a complex phenomenon other authors (Gompers et al. (2003); Core *et al.* (2006); Brown and Caylor (2006)) consider that is should be measured using a corporate governance index (CGI - a multidimensional variable). In our opinion, in order to surprise all the aspects of corporate governance mechanism in studying its link to firm performance (firm value) it is appropriate to use an index to measure all dimensions related to corporate governance.

One of the widespread beliefs regarding corporate governance is that good corporate governance leads to increasing performance. But there are studies that suggest no correlation between a mechanism or an index of corporate covernance and firm performance. Although in the '90 the American model of corporate governance was the most successful and appreciated in the matter of creating value, the financial scandals from 2001 a decrease of the public and investors in corporate governance systems. The results of this decrease were new corporate governance requirements and also investors approached it more seriously.

Regarding performance there are three main approaches to firm performance in social science research: research based on market prices, accounting ratios and total factor profitability (Bocean and Barbu, 2007). One of the most used ratio in the research regarding corporate governance is Tobin's Q, while among the accounting ratios, the most common ones return on equity (ROE), return on asset (ROA) and economic value added (EVA) can be used to assess the total profitability of a company.

The information from our research is structured as follows: in section 2 we will present the studies regarding the relationship between different elements that describe CG and firm performance and in section 3 we state our conclusions.


## 2. Empirical Studies on Corporate Governance – Firm Performance Relationship

### 2.1. Studies regarding different corporate governance mechanisms and firm performance relationship

The literature testing the relationship between different corporate governance mechanisms and firm performance is extensive. Studies use different variables to assess corporate governance such as: CEO duality, board size, proportion of non- executive directors, board committees, ownership structure and concentration, managers' compensation and incentives schemes and others. In this part of our paper, we will present only some of the empirical studies.

The first corporate governance mechanism that we will consider is the board committees. If Main and Johnson (1993) found that the presence of remuneration committee is associated with higher levels of executive pay that determines a profitability decrease (negative correlation) for US companies, Klein (1998) found that remuneration committee has a positive link with performance (measured by ROA, productivity and market returns) for the US economy. Weir and Laing (2000) obtained the same results using ROA as a measure of performance. For the audit committee the results are also mixed: if Laing and Weir (1999) establish a positive correlation between firm performance and audit committee using ROA, in 2002 Weir et al. (2002) concluded that the existence of audit committee doesn't influence the firm performance (Tobin's Q). The research period  for the first study is from 1992 till 1995, while for the second  is 1994-1996. The studies were done for the UK companies.

Black and Kim (2012), using Tobin's Q as a measure of performance found that audit committee is positively correlated with firm performance (Tobin's Q) in large Korean companies, while in the smaller firms they didn't found any correlation. This result wasn't confirmed for Nigerian firms, in Kajola (2008) study. The author used ROE and profit margin as measures for performance and 7 years as study period (2000-2006), and the result suggested no impact of the audit committee on firm performance.

Other variable characterizing corporate governance used in such studies is size board. Board size differs from one country to another according to Corporate Governance Codes. Kajola (2008) found a positive significant correlation between board size and firm performance (measured by ROA). In 2009, the same positive correlation was found between large firm boards and firm performance measured by Tobin's Q and ROA by Jackling and Johl (2009). These results were partial sustained by the research of Adams and Mehran (2012). They used a sample of 35 listed banks on the US capital market for a period from 1986 till 1999 and concluded that board size has a positive impact on firm performance measured by Tobin's Q, but no correlation with ROA.

Empirical studies that found negative correlation between board size and firm performance are both for developed economies (Cheng, 2008; Guest, 2009) and developing economies (Guo and Kga, 2012; Ujunwa, 2012), using as performance measures ROA, ROE, Tobin's Q and share returns.

Regarding the representation of non-executive directors on the board, the evidence from the empirical studies conducted is mixed, although it is expected to have a positive influence on firm performance. There as studies that found a positive correlation between the proportion of non-executive directors and firm performance (Weir et al., 2002; Gupta and Fields, 2009), while there are authors that found a negative correlation (Bozec, 2005; Guest, 2009) and others that didn't found a link between the two (Klein, 1998; Laing and Weir, 1999; Kajola, 2008). The measures of performance used in these studies were Tobin's Q, ROA, ROE, market returns and market value.

The structure of board determines board independence. A reasonable proportion between inside and outside managers gives the independence of the board that assures the protection of stakeholders' interests. Authors like Bhagat and Black (2002), Adams and Mehran (1995) and John and Senbet (1998) offer empirical confirmation that supports the hypothesis that the right mix of internal and external managers can enhance performance. Another board characteristic that was studied in relation to firm performance is board meetings. Empirical studies support the idea that firm with good attendance at board meetings perform better than firms with low attendance (Ntim and Oser, 2011), while Johl (2006) in his study on the FTSE 100 companies found a negative correlation between the two elements.

Another issue approached in the literature on this theme is the one regarding managerial ownership and firm performance. While there are some studies that suggest no correlation between the two (Cho, 1998; Brick et al., 2005), there are studies that support the idea of a positive link (Kaserer and Moldenhauer, 2005; Welch, 2003). One of the first studies regarding this correlation was made by Morck, Shleifer and Vishny (1988). According to their results, managers having stake between 0 and 5% take decisions that are in the interest of both while an ownership stake between 5% and 25% influences the managerial decisions.

Voluntarily disclosure can be considered as one of corporate governance mechanism that enhances performance (Zaman et al., 2014). Transparency and disclosure of information are considered to be an essential element of corporate governance. When talking about disclosure there are different aspects such as board and management structure disclosure, ownership structure disclosure and financial transparency and information disclosure. Regarding the last one different author suggest the idea that disclosure through annual reports leads to high profitability (Henry, 2008; Iatridis, 2008). Toksal (2004) found that

corporate governance reporting reduces the cost of capital, while Habib (2008) doesn't find any correlation between economic profit and corporate disclosure.

As we can see, the results are mixed for all the individual mechanisms of corporate governance taken into account. These inconclusive results are due to different used methodologies, different time frames, different samples and different economies, and legislative framework.

The results of the studies support the fact that not all the elements of corporate governance have a positive impact on firm performance, so the integration of all corporate governance mechanism into an index seems to be more effective in having a correlation with firm performance.

## 2.2. Studies Regarding Corporate Governance Index and Firm Performance Relationship

With time, different authors began to use more comprehensive measures for corporate governance rather than a single governance mechanism. Studies mentioned before showed that not all elements of corporate governance, in isolation, have effectiveness in aspects regarding performance and agency issues. In what follows we will present some of the corporate governance indexes that were proposed by different authors in order to measure the quality of corporate governance system within the companies that applied them.

One of the first authors that examined the relationship between corporate governance and performance using multidimensional variable was Labelle (2002). The author used in his research the ratings from a statement of corporate governance practice (SCGP) developed by the Canadian Institute of Chartered Accountants (CICA) regarding disclosure quality of corporate governance, while performance was measured by ROE. The period of the study was 1996-1997. The results suggested no significant relationship between firm performance and disclosure quality of corporate governance.

The first authors to build a complex index regarding all corporate governance aspects are Gompers et al. (2003). Their index, G-index, is composed of 24 distinct Corporate Governance variables grouped in 5 categories. Their study regarding a 10 years period (1990-1999) found a strong correlation between G-index and the following financial indicators: stock performances, Tobin's Q, net profit margin and sales growth. In 2008 Bhagat and Bolton (2008) using G-index confirmed the results obtained by Gompers et al. (2003).

One of the first European studies regarding the relationship corporate governance-firm performance was conducted in Germany by Drobetz et al. (2004). The authors used a Corporate Governance Rating (CGR) (multidimensional answers to a questionnaire based on the Germany Corporate Governance Code (voluntarily adopted by the companies). The measures of performance used were Tobin's Q and market to book value, while CGR was structured into the following categories: shareholder rights, transparency, corporate governance commitment, management supervisory, board matters and auditing ant the period used in their study was 1998-2002. Their findings showed that there is a positive correlation between corporate governance and firm performance (better-operating performance, higher market valuation). In 2008 Bassen et al. (2008) found that between firm performance, measured by Tobin's Q, and compliance with Germany Corporate Governance Code is a negative correlation, for a period of one year and using publicly available date.

Bauer and Günster (2004) used in their analysis Deminor Corporate Governance Ratings (DCGR), an index formed by 300 criteria grouped into 4 categories: rights and duties of shareholders; range of takeover defenses; disclosure of corporate governance and board structure and functioning". The results of their study conducted for 2000-2001 showed an insignificant negative relation between firm performance (net profit margin, ROE) and corporate governance standards.

Beiner et al. (2005) using a CGI based on a set of 7 equations (6 with a corporate governance mechanism as a dependant variable, 1 with Tobin's Q as a dependant variable) found positive correlation between CG and Tobin's Q. Klein et al. (2005) uses the corporate governance score from ROB, testing its link to firm value and the results show that not all corporate governance dimensions are correlated with firm value (board composition and independence). The same ROB score is used by Gupta et al. (2009) and the results are the same: no significant correlation between firm value and performance and corporate governance index.

In 2006 Brown and Caylor designed the Gov-Score index that included variables grouped into 8 categories as follows: audit, board of directors, charter/bylaws, director education, executive and director compensation, ownership, progressive practices and state of incorporation. Their results showed a positive correlation between the Gov-Score index and firm value measured through Tobin's Q. The period of the study was only one year (2002). Zheka (2006) found that, for a transitional economy (Ukraine in this case), corporate governance predicts firm performance. The author developed an index, Ukraine Corporate Governance Index (UCGI) with four dimensions: board independence, chairman independence, shareholders rights and information disclosure (transparency).

Cheung et al. (2007) developed a Corporate Governance Index (CGI) based on publicly available information to appreciate corporate governance and found correlation between CGI and market to book value (firm value). The starting point for the test was the OECD 2004 revised corporate governance principles. Larcker et al. (2007) found a positive correlation between the CGI used and financial performance measured by sales growth, net profit margin and ROA, for a period of two years (2002-2003). Arcot and Bruno (2007) conducted a study based on a comply or explain index to test the influences of corporate governance and firm performance, in an environment with flexible regulatory, for the period from 1999 till 2004. Their findings suggested that compliance with a Code of Corporate Governance is not necessary correlated with an increase in firm performance.

Toudas and Karathanassis (2007) developed a governance index based on a questionnaire to test the effects of compliance with corporate governance on firm performance for a period of two years (2004-2005). The results suggested that good corporate governance (measured through shareholders rights) is correlated to firm performance (measured by Tobin's Q).

Padgett and Shabbir (2008) developed a non-compliance index for UK in order to test the link between companies' performance (measured by ROA, ROE, tota shareholder return (TSR) and Tobin's Q) and compliance with the UK code of corporate governance. Their results evidenced a reversed correlation between the non-compliance index and TSR. Garay and Gonzalez (2008) developed an index with the following dimensions: board composition and performance, transparency, ethics and conflict of interest and shareholders right, while the performance measures used were price to book value and Tobin's Q.

Bebchuk et al. (2009) developed an *Entrenchment index* (E-index) with 6 variables of the 24 used by G-Index, correlated with firm value for a period from 1990 until 2003. The results evidenced that the decrease of governance performance (an increase in the index value) is correlated with negative extra-returns.

Ntim (2009) developed the South African Corporate Governance Index (SACGI) with eleven dimension of corporate governance in order to asset the impact of South African Code on firm performance (measure by Tobin's Q and ROA) from 2002 to 2006. His results suggest a positive link between SACGI and firm performance.

Bozec et al. (2010) examined the governance index-performance relationship using the governance index developed by Global and Mail Report on Business and Tobin's Q, for a period of five years (2001-2005). Their findings suggested no relationship between the CGI and firm performance (Tobin's Q).

Price et al. (2011) developed a governance index with three dimensions: audit committee, board composition, and transparency, based on the compliance with the code of best practiced from Mexico and they found no correlation between firm performance and their CGI. Ammann et al.(2011) realized a cross-national study (22 countries) regarding corporate governance-performance link, using GMI corporate governance ratings and Tobin's Q and the results suggested a positive link between the two concepts. Cremers and Ferrell (2014) found a negative correlation between G - index and firm valuation for a large period (1978-2006).

After analyzing the result of the mentioned studies we found that there are mixed results: some of the studies show positive and significant correlation between CGI and firm performance/value, while others show the lack of such a correlation. This mixed results can be due to the way the indices used were developed (the construction of index are based on subjective judgments on the base of the expertise of the authors and the literature review), the period of time use in the studies, the lack of a code of best practices (many of the studies use periods from the '90).

## 3. Conclusion

The literature on corporate governance and firm performance relationship is extensive and got much attention. It can be characterized as being unable to reach a consensus regarding the nature of the relationship between the two concepts. Although the empirical evidence is inconclusive, the practical importance of governance in relation to performance is globally acknowledged, especially in aligning the interests of managers and shareholders.

The inconclusive results of the empirical studies on this theme can be due to several factors. First, we can mention the choice of the variables used to measure both corporate governance and firm performance. While some studies use market-based performance measures like Tobin's Q, others use accounting-based performance measures (ROA, ROE, EVA). For measuring corporate governance in some studies is used only one mechanism of corporate governance, while others use an index that captures the influence of several corporate governance mechanisms. Second, we consider that institutional differences among countries lead to different results of the empirical studies mentioned. The studies are conducted in both developed and developing economies, so this raises a question: Does corporate governance principles for developed countries are suitable for developing economies?

Although the results of the research regarding corporate governance – firm performance relationship are mixed, we consider that good corporate governance is an essential factor in achieving sustainable economic development due to the increase in the access to outside capital. Objectives like capital market development, decrease in transaction costs and cost of capital and also a reduction of financial crises vulnerability can be achieved by implementing corporate governance mechanisms.

## 4. Acknowledgements

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# THE INFORMATION CONFIDENTIALITY AND CYBER SECURITY IN MEDICAL INSTITUTIONS

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**Abstract:** *The information confidentiality and cyber security risk affects the right to confidentiality and privacy of the patient, as regulated in Romania by the Law 46/2002. The manifestation of the cyber security risk event affects the reputation of the healthcare institution and is becoming more and more complex and often due to the: development of network technology, the medical equipment connected to wifi and the electronic databases. The databases containing medical records were implemented due to automation. Thus, transforming data into medical knowledge contribute to a better understanding of the disease. Due to these factors, the measures taken by the hospital management for this type of risk are adapted to the cyber changes. The hospital objectives aim: the implementation of a robust information system, the early threats identifications and the incident reporting. Neglecting this type of risk can generate financial loss, inability to continue providing health care services for a certain period of time, providing an erroneous diagnosis, medical equipment errors etc. Thus, in a digital age the appropriate risk management for the information security and cyber risk represent a necessity. The main concern of hospitals worldwide is to align with international requirements and obtain credentials in terms of data security from the International Organisation for Standardization, which regulates the management of this type of risk. Romania is at the beginning in terms of concerns regarding the management, avoidance and mitigation of information security, the health system being most highly exposed to its manifestation. The present paper examines the concerns of the health system to the confidentiality of information and cyber security risk and its management arrangements. Thus, a set of key risk indicators is implemented and monitored for 2011-2013, using a user interface, a Dashboard, which acts as an early warning system of the manifestation of the risk event in a hospital from western Romania.*

**Keywords:** information security-cyber security-hospital-Dashboard-ISO.
**JEL classification:** I10, M10

## 1. Introduction

Confidentiality of information concerning the patient was a principle respected by physicians from ancient times, as it is stipulated even in the Hippocratic Oath. Respecting the personal aspects of patient's life and ensuring the security of personal information allows the strengthening of physician-patient relation. Due to the development of information technology, the patient related data are recorded in digital databases that are vulnerable to cyber attacks and information leakage generated by an unprotected information system.

Threats related to this type of risk are becoming increasingly powerful, companies and institutions around the world taking action to avoid and mitigate it. The US government has had great concern for this type of risk, the National Institute for Standards and Technology developed a reference framework for this in 2014. The framework has not yet become binding, but companies are encouraged to voluntarily implement it (Callahan, 2014).

Managing this type of risk can be achieved through: training staff to not provide confidential information without the written consent of the patient, or information and documents belonging to the hospital; regular training for staff; restricting access to people in hospital; encrypting private data regarding personal character, the patient's condition, the medical assistance, the outcome of examinations, diagnosis, treatment and prognosis; releasing the information to the authorized bodies on request and signature; careful recruitment of personnel dealing with the personal information management and cyber security; acquisition of performance software; hiring highly qualified IT-ists; periodic updating of data; periodic checks; rapid communication of errors made through a Dashboard (Bradea, Delcea, Scarlat and Boloș, 2014).

## 2. Approaches for confidentiality information and cyber security risk management in Romania

Cyberspace provides opportunities to develop a knowledge-based information society, but also risks related to its operation. Due to numerous cyber attacks on institutions all over the globe, risk managers need to be aware of information confidentiality and cyber security risk (Bradea, 2014). Thus, there have been implemented national cyber security strategy in Estonia, USA, UK, Germany and France. Romania is trying to line up with the regulations imposed by ISO: ISO 27001 - "Information technology-Security Techniques-Information Security Management Systems", ISO 27002 – „Information technology-Security techniques -Code of practice for information security controls", and in the healthcare domain  ISO 27799 – „Health informatics-Information security management in health using ISO/IEC 27002". Also Romania must comply with European directives relating to these issues: 95/46/EC, 2002/58/EC.

Nationally the protection of personal data and their circulation are reglemented by the following laws: 46/2003, 682/2001, 102/2005. Thus, Romania has initiated actions in accord with those of NATO and EU, creating the Romania cyber security strategy and action plan for the implementation of national cyber security. This strategy aimed to: strengthen cooperation between bodies responsible for this area, develop a regulatory framework and a culture of risk management.

**Figure 1:** Characteristics of a robust information system
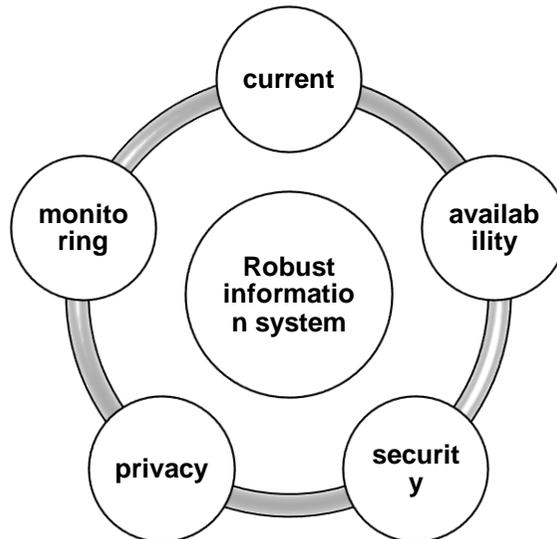
The main goal is to create a robust information system that face threats like: cyber attacks, unauthorized access to the system, cyber espionage, blackmail, financial loss, or terrorist activities. The National cyber security system (SNSC) observes the Digital Agenda, which is a Europe 2020 pilot initiative. It has recently been implemented The Romanian Computer Security Incident Response Team (Cert-ro), subordinated to the Ministry for Information Society, Ministry of Internal Affairs, Ministry of Defence and other national institutions. It represents the centre for cyber security incident response; ensures public policies to prevent cyber risk and analyzes the procedural and technical malfunctions in the cyber infrastructure.

But even if at the state level there are concerns related to the management of this risk by facilitating the transition to the information society and strengthening the cyber infrastructure, the healthcare system is particularly exposed to this risk.

Loss of patients personal data is more difficult to detect than in the financial cyber attacks. Exposure to this risk increased this year with the introduction of health cards. Even if they streamline access to patient history, a neglect of security of data stored on these cards can be extremely dangerous. It was observed that in the heathcare system, most cases of data leaks are caused by hospital employees. Vulnerabilities arising from the lack of an integrated security and lack of culture in this area (Delcea, Bradea, Paun, Friptu, 2015).

## 3. Case Study: Creating an early warning system framework for information security risk in a Romanian hospital

In this section we analyze a set of key indicators for the information confidentiality and cyber security risk, for a Clinical Emergency Hospital situated in western Romania, for a period between 2011 and 2013. Studies on these issues in Romanian literature are scarce, mainly due to lack of data, the hospital managers being reluctant to provide data for research in this area. It can be observed that this type of risk is analyzed using three aspects or variables: system control, system vulnerability and system security.

Most indicators are binary variables that records be 0 (NO) either 1 (YES). The red boxes reflect a high degree of risk, yellow boxes indicate a deterioration in the value of the indicator and the green boxes illustrate values located in the accepted range.

For the information confidentiality and cyber security risk, it is important to consider issues relating to: the security of personal data, data on the patient's condition, the outcome of examinations, diagnosis, treatment and prognosis, the migration to cloud, restricting access to the database, network failure management, careful recruitment of staff dealing with the management of personal information and cyber security, software purchasing performing periodic updating and control of data.

**Table 1:** Key risk indicators for confidentiality information and cyber security risk

| | Variables | Key Risk Indicators | KRI value | | |
|---|---|---|---|---|---|
| | | | 2011 | 2012 | 2013 |
| **Confidentiality information and cyber security risk** | System Control | Data update rate | 3 times /year | 4 times /year | 4 times /year |
| | | (The number of controls per year/Number of controls planned) * 100 | 75% | 75% | 100% |
| | System vulnerability | Insurance policies for this type of risk | No | No | No |
| | | The number of cyber attacks per year | NO DATA | NO DATA | NO DATA |
| | | The implementation of a management plan | YES | YES | YES |
| | System security | Unique identification of users | YES | YES | YES |
| | | Automatic users logout password for all equipments | YES | YES | YES |

| | | The ability to remotely wipe data | NO | NO | YES |
|---|---|---|---|---|---|
| | | Implementation of attacks detection | NO | NO | NO |

Source: Own indicators

Medical equipment (such as lasers, glucose monitoring devices, infusion monitoring devices etc.) connected to wifi require permanent monitoring and security because once attacked can provide constant access to data in interacting systems, but can also damage the health of the patient (can even generate death).

**Figure 2:** Data update rate and system control evolution
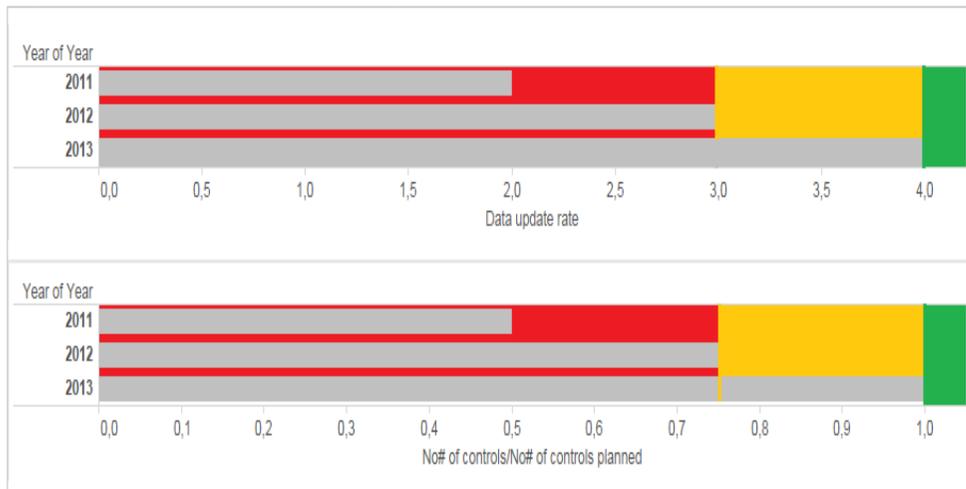


Source: Own calculations

Depending on the values established as acceptable for each KRI, are set thresholds that alert the risk manager if there are recorded exceeding. As with traffic lights, exceeding the threshold is indicated by the yellow traffic light. When the risk is situated in the green or yellow area, risk management should take measures to prevent the risk. If the situation is extremely unfavourable and the indicator value is in the red zone, the hospital losses and measures must be taken to mitigate it (Bradea, Delcea, Păun, 2014).

In the figure 2 is presented the evolution of the data update rate and system control. It can be observed that the desired data update rate is four times/year, situation met in 2013. In 2011 the hospital was exposed to the information security risk, being made only two year update data. Regarding the system control, the value of the KRI that reflects the number of controls per year divided to the number of controls planned, also in 2011 the value was in the red zone, and after the taken measures by risk management its value gradually improved until 2013.

## 3. Conclusions

An ineffective information confidentiality and cyber security risk management in a hospital determine: leakage of sensitive information, medical work breaks due to malfunctions of computer networks, loss of trust and reputation and complaints. These can

cause: errors in diagnosis, medical errors and financial losses, all with disastrous consequences for the healthcare institution.

The analysed hospital is exposed to the information security risk, because many issues that concern this risk management of this type of risk were not implemented. It requires awareness of the negative effects of the manifestation of this risk and an organizational culture that supports continuous improvement in the information system.

## 4. Acknowledgements

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# CONTEMPORARY IMPLICATIONS OF MORAL HAZARD AND ADVERSE SELECTION FOR INSURANCE FIRMS

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**Abstract:** *The present paper approaches the effects of moral hazard and adverse selection for insurance firms in a context where insurances are the foundation of modern life. In this respect, the paper analyses defining elements regarding the contemporary risk, assesses moral hazard, morale hazard, anti-selection and adverse selection on insurance market, and identifies main contemporary implications of moral hazards and adverse selection for insurance policies. The main objective is reached by using inductive and deductive techniques. The main conclusions of these paper refer to the most important solutions for moral hazard and adverse selection.*

**Keywords:** risk, moral hazard, insurance, adverse selection, franchise, bonus- malus.

**JEL classification:** G22.

## 1. Introduction
The insurance industry provides coverage for risks economic, climatic, technological, political and demographic, allowing people to conduct their daily lives and businesses to operate, innovate and grow. The word risk is often used in connection with insurance, finance and banking. Insurance risk is a specific element being subject to any insurance contract. There are many situations in which the insured may influence the likelihood of risks exacerbating environmental objective risk taken into account in determining the scale of insurance premiums, a situation arises the notion of moral hazard. Moral hazard arises because the insured assumes full responsibility for his actions and consequences and therefore tends to behave less cautious than usual, leaving the insurer to assume responsibilities for the consequences of his actions. A standard problem of applied contracts theory is to empirically distinguish between adverse selection and moral hazard. The present paper approaches risks imminence in the contemporaneity by referring to moral hazard and adverse selection. In this respect, the paper comprises sections related to the main topic such as: an brief analysis regarding the concept of 'risk', a short description of the current economic and financial context in contrast to the main risks of insurance market, an approach of moral hazard and morale hazard, anti-selection and adverse selection respectively the main measures to reduce moral hazard and avoid adverse selection. Our main conclusions refer to an informational deficiency which amplifies the effects of the contemporary risks that are dynamic and complex, affected by moral hazard and anti-selection. All the economic and financial mutations are placed in a political and social context more difficult than in the years before the international.

## 2. Defining elements regarding the contemporary risk
The concept of *risk* as it is known currently is a reflection of a continuing research made in the insurance market area. The contemporary understanding refers to a loss which may occur in certain assessable circumstances. Its etymological roots are in the thirteenth century, but the current form used in the international financial markets is used since 1741. In the last decades the concept of risk has been developed to the current understanding

without direct connections with similar meanings given by words such as danger or luck. Its development was supported with proper mathematical instruments which associate risks with probability analyses for those circumstances which may lead to significant disequilibria.

Defining the "risk" which may look simple in a linguistic perspectives is not a simple task because there are multiple views regarding its meaning. However, there are some common elements such as the exposure to dangers with implications which differ depending on circumstances. A risk is triggered by both known and unpredictable determinants through specific transmission channels. Their nature may be mechanical, chemical or biological. Specifically, these determinants are in fact fires, meteorological events such as tornadoes, unexpected medical problems or criminal acts. The negative effects of risk manifestation are amplified by hazard.

Nowadays, insurance companies use complex methods in order to assess risks if they have an irregular frequency. In this case, assessing risk is more complicated due to economic, financial and social mutations. Their dynamics cannot be assessed through probabilities and establishing a premium is difficult because the references are missing. The risk is too large and it cannot be assessed such as in the case of static risks which have a certain frequency that make them assessable through mathematical techniques. In this respect, insurance firms may associate a manifestation probability for static risks. Therefore, in the case of dynamic risks, insurance firms must establish a higher value for their premium rates because the probability cannot be assessed and the risk is much higher than in the case of static risks.

The international financial crisis and the current conflicts developed in the Eastern Europe emphasises general risks which are impersonal from the perspective of their causes and effects. In this respect, unemployment, armed conflicts, inflation, earthquakes and floods are important events that are primordial in the strategy adopted by the contemporary insurance firms. These phenomena influence the main economic, social, financial and political characterises inside a country. In addition, there are determined certain evolutions of particular risks generated by the actions taken by individuals (Vaughan, 2014). Some specific events have gained an international importance because most of them are assessed in a larger macroeconomic and financial context.

Nowadays, insurance firms aim to obtain a higher profitability rate than in the previous financial year. In this respect, they don't insure speculative risks such as gambling. Their strategy involves just those activities which imply losses. Therefore, insured risks may be personal, related to property issues, liability risks or resulted from the violation of certain contractual agreements.

During contemporaneity, insurance firms, must manage frauds caused by persons who amplify risk intentionally in the context of informational asymmetry. In addition, insurance firms and supervisors of insurance market don't have the necessary instruments to realise a complete assessment of risks. Given this informational asymmetry, insurance firms refuse to insure certain risks or they prefer applying higher premiums to cover their potential losses.

## 3. Moral hazard, morale hazard, anti-selection and adverse selection in insurance market

Hazard is a central concept in the contemporary insurance because it illustrates the circumstances which determine risk manifestation. Therefore, a hazard is assessed by insurance firms by considering their typology. In the case of physic hazards, insurance firms establish their premiums by including the assessment made by professionals of the entire physical characteristics. In this respect, a premium is determined by their localisation and the occupancy rate of the building. These technical details are important because physical hazards influence risks manifestation. Nowadays, insurance firms focus on those cases of moral hazards in order to identify if individuals amplify a loss in order to collect the

money accordingly to the contractual clauses. In this respect, assessing moral hazard is a necessary component subscribed to the general strategy of the insurance firm in order to avoid frauds (Saunders and Cornett, 2007).

Insurance market confronts many risks and challenges. A special case which implies profound negative implications for insurance firms is that situation when an individual doesn't manifest attention or he doesn't take all the necessary measures to avoid risk manifestation. This situation describes the concept of morale hazard and it derives from the behavioural patterns of individuals who are insured and became careless because they know that a certain amount of money is assured in any circumstances.

Information deficiencies affect the insurance process and create manifestation conditions for anti-selection and adverse selection. In the first case, anti-selection is a risk assumed by the insurance company in the context of reduced capacity or due to the impossibility to observe all the characteristics of the good insured or the health state of an individual. In these circumstances, the individual insured may hide certain deficiencies in order to obtain money from the insurance firm. Given these circumstances, adverse selection refers to that probability for the insurance company to sign contract with individuals who hide deficiencies of their goods or health status.

## 4. Main contemporary implications of moral hazard and adverse selection for insurance policies

One of the most important challenges of the modern insurance firm is to manage moral risk. In these circumstances, insurance firms must find an equilibrium point between risks insured and total value of premiums. In addition, it must include in their calculation the possibility for an individual to be careless which amplifies the risk. Their implication is limited to those cases where the potential loss is quantifiable.

In the case of adverse selection, implications may be significant due to the fact that insurance firms cannot have complete information such as in the case of health status. Given these special circumstances, contemporary insurance companies confront with significant difficulties when they establish proper premiums for those individuals who intend insuring a complex risk which have unquantifiable effects. In addition, such risk implies higher premiums which are considered unacceptable by clients because they cannot support them financially. For the insurance firm, the financial effort is higher because a part of their resources are allocated to identify and analyse those cases where moral hazard may occur.

## 5. Finding proper solutions for moral hazard and adverse selection

The main solutions proposed in the current paper refer mainly to a responsibility transfer from the insurance firm to individuals. In this respect, a franchise system may represent the most proper solution which may be used by the insurance firm in order to establish a percent or a fix sum paid by insured when the risk occurs. In addition, the experience of the insurance firm and of its collaborators is essential in order to identify those cases when moral hazard has a frequency higher than the sector average.

An alternative solution to a franchised system consists in applying limitations by using contractual clauses which would limit the amount of money given to those insured individuals when risks occur.

Applying the aforementioned measures is more efficient if comprehensive analyses are made before signing a contract in order to assess market flexibility. In this respect, actuarial calculations are useful instruments to create adequate insurance products in order to stimulate the market such as co-insurance or the deductions applied to premiums calculations for those individuals who have a positive history (the "bonus-malus" system). In addition, such analyses made on the historical evolution, but also on the current state of an individual would support a clear delimitation between diferent risk categories and helps placing the insured individuals in diferent risk classes ("underwriting").

Nowadays, the measures adopted by the participants involved within insurance market manage to segregate risks and create premises for a better offer of insurance products to be adapted for the characteristics and the needs of each individual.

## 6. Conclusions

The current economic and financial framework has underlined the capacity of the contemporary insurance firms to manage difficult cases such as moral hazard and adverse selection. In this respect, experience of these firms and complexity of assessment method related to risks are essential.

The underwriting represents a primordial solution because it derives from mathematical calculations. In this manner, an adequate support is given to the insurance firms who don't know the exact state of an individual. Therefore, a smoker has a mortality rate higher than average and he must pay a supplementary amount for the premium than a non-smoker.

For insurance firms, is important to have a sufficient portfolio for each insurance category in order to ensure an informational framework sufficient to elaborate statistical analyses. Premium rate must be calculated in order to have a margin which would ensure a reserve for those periods when costs of damage are much higher than usually.

## 7. Acknowledgements

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*SUB-SECTION: BANKING*

# BANK RATING. A COMPARATIVE ANALYSIS

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**Abstract.** *Banks in Romania offers its customers a wide range of products but which involves both risk taking. Therefore researchers seek to build rating models to help managers of banks to risk of non-recovery of loans and interest. In the following we highlight rating Raiffeisen Bank, BCR-ERSTE Bank and Transilvania Bank, based on the models CAAMPL and Stickney making a comparative analysis of the two rating models.*

## 1. Literature review

In the literature there are many research on banking rating.

Thus, some authors explore the traditional and prevalent approach to credit risk assessment – the rating system. They first describe the rating systems of the two main credit rating agencies, Standard & Poor's and Moody's. Then they show how an internal rating system in a bank can be organized in order to rate creditors systematically. Also suggest adopting a two-tier rating system. First, an obligor rating that can be easily mapped to a default probability bucket. Second, a facility rating that determines the loss parameters in case of default, such as (i) "loss given default" (LGD), which depends on the seniority of the facility and the quality of the gurantees, and (ii) "usage given default" (UGD) for loan commitments, which depends on the nature of the commitment and the rating history of the borrower.

A credit rating is an evaluation of the credit worthiness of a debtor, especially a business (company) or a government, but not individual consumers. The evaluation is made by a credit rating agency of the debtor's ability to pay back the debt and the likelihood of default. Evaluations of individuals' credit worthiness are known as credit reporting and done by credit bureaus, or consumer credit reporting agencies, which issue credit scores.

Credit ratings are determined by credit ratings agencies. The credit rating represents the credit rating agency's evaluation of qualitative and quantitative information for a company or government; including non-public information obtained by the credit rating agencies' analysts.

The credit rating is used by individuals and entities that purchase the bonds issued by companies and governments to determine the likelihood that the government will pay its bond obligations.

A poor credit rating indicates a credit rating agency's opinion that the company or government has a high risk of defaulting, based on the agency's analysis of the entity's history and analysis of long term economic prospects.

Bank internal ratings of corporate clients are intended to quantify the expected likelihood of future borrower defaults. The authors develops a comprehensive framework for evaluating

the quality of standard rating systems. They suggest a number of principles that ought to be met by "good rating practice". These "generally accepted rating principles" are potentially relevant for the improvement of existing rating systems. They are also relevant for the development of certification standards for internal rating systems, as currently discussed in a consultative paper issued by the Bank for International Settlements in Basle, entitled "A new capital adequacy framework". They would very much appreciate any comments by readers that help to develop these rating standards further.

One of the primary responsibilities of banking regulatory agencies is to minimize the financial loss to the bank to Bank Insurance Fund that results from the failure of insured depository institutions. To discharge this responsibility, bank regulators evaluate the financial performance and condition of depository institutions and initiate prompt corrective actions when they find signs of distress. In evaluation, regulators use a combination of on-site examinations and off-site monitoring systems. In 1993, the Federal Reserve instituted the Financial Institutions Monitoring System ("FIMS," also known as "SEER," or System for Estimating Examination Ratings), which is significantly more accurate that previous off-site systems in identifying financially trouble banking institutions. This article gives the background of FIMS, describes the new system, and explained how it improves on previous systems.(Cole, Gunther, Cornyn, 1995 )

## 2. Method and results

In the following we present the change in the rating of the three banks under study that Raiffeisen Bank, BCR-Erste Bank and Transilvania Bank using the CAMEL and Stickney.

## A. CAAMPL Model for Raiffeisen Bank

Analysis of the overall risk based on CAAMPL rating system require consideration in the calculation of indicators such as those of capital adequacy, quality of ownership, asset quality, management, profitability and degree of liquidity of the bank.

Totaling CAAMPL model with the six elements captured by it, and weighting based on the ratings for each element followed by type of indicator, we will show how risk category falls the work done by this bank. We consider qualitative indicators and quality management of the bank shareholders. The other four indicators, capital adequacy, asset quality and profitability liquidity are quantitative indicators. Thus we give a share of 30% and 70% qualitative indicators of quantity. Regarding aggregation quantitative rating I thought it captured the four elements are of equal importance in analyzing the bank's activity, so give equal weight to each of 25%.

Summarizing, we used the following equation to obtain quantitative rating:

Rating (quantitative) = 25%*Rating (C) + 25%*Rating (A) + 25%*Rating (P) +   25%*Rating (L)

For composite rating:

Composite Rating = 30% * Rating (qualitative) + 70% * Rating (quantitative)

**Table 1**: Raifeissen Bank CAAMPL Rating

| Year | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|------|------|------|------|------|------|------|------|------|------|------|
| Quality Rating | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Quantity Rating | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 |
| CAAMPL Raiffeisen Rating | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |

Source: Own calculus

Raiffeisen Bank falls throughout the period under review a rating class 2, which captures the basic structure banks healthy, difficult issues can be resolved with a well developed management. With regard to market fluctuations posed that does not change in a significant way its banking problems surveillance is not an issue of concern.

## B. Stickney Model for Raiffeisen Bank

It captures an entity's financial risks and default risk of bankruptcy credit scoring method. In what follows we present the results of Raiffeisen bank in the same time period 2004-2013. This model supposes four stages namely calculation of indicators surprised by this, corrected these indicators by coefficients, obtaining partial products and the last step is to calculate the probability of bankruptcy and class rating falling respective bank. Thus, for each indicator followed obtained is corrected coefficient of each so the score they take into account in calculating the final rating is correct. We notice that Raiffeisen Bank recorded a total score between the minimum and maximum of about -7 around -3.

With the following relationship-specific coefficients and gain exposure indicator bank.

$$Y = 0.23883 - R1* 0.108 - R2*1.583 - R3*10.78 + R4*3.074 + R5* 0.4860 - R6* 4.35 + R7* 0.11$$

**Table 2**: Raifeissen Bank Stickney Rating

| Score Y | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|---|---|---|---|
| | -5.5269 | -3.4281 | -5.6341 | -6.1971 | -6.2763 | -5.9500 | -6.9944 | -7.3480 | -5.8785 | -6.4081 |
| $(1+e^y)$ | 1.0040 | 1.0324 | 1.0036 | 1.0020 | 1.0019 | 1.0026 | 1.0009 | 1.0006 | 1.0028 | 1.0016 |
| Probability of bankruptcy $=1/(1+e^y)$ | 0.9960 | 0.9686 | 0.9964 | 0.9980 | 0.9981 | 0.9974 | 0.9991 | 0.9994 | 0.9972 | 0.9984 |
| Raiffeisen Rating | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |

Source: Own Calculus

As we can see in the above table the whole time intervelul 2004-2013 analyzed the risk 869eve lis 4, default probability ranging between 0.9686 minimum recorded in 2006 and 0.9991 in 2010. The maximum equivalent term debt rating Ba1Ba2 long from Moody's and BB + / BB / BB- from Standard & Poor's, with satisfactory capacity to make payments vulnerable to difficulties that may arise in the long term and with a low probability of bankruptcy.

## C. CAAMPL Model for BCR – ERSTE Bank

Next we will focus on the overall risk analysis based on CAMEL rating system BCR-Erste Bank.

CAMEL model with total scores of the six elements captured by it, and weighting based on the ratings for each element followed by type of indicator, we will show how risk category falls the work done by this bank. We consider qualitative indicators and quality management of the bank shareholders. Regarding aggregation quantitative rating I thought it captured the four elements are of equal importance in analyzing the bank's activity, ogive equal weight to each of 25%. The other four indicators, capital adequacy, asset quality and profitability liquidity are quantitative indicators. Thus we give a 20% share of the qualitative and the quantitative 80%.

Summarizing, we used the following equation to obtain quantitative rating:

Rating (quantitative) = 25%*Rating (C) +25%*Rating (A) +25%*Rating (P) +25%*Rating (L)

Composite rating = 20% * Rating(qualitative ) + 80% * Rating(quantitative)

**Table 3**: BCR-ERSTE CAAMPL Rating

| Year | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|---|---|---|---|
| Quality Rating | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Quantity Rating | 3 | 1 | 3 | 5 | 3 | 3 | 3 | 3 | 3 | 3 |
| BCR-ERSTE Rating | 2 | 1 | 2 | 3 | 2 | 2 | 2 | 2 | 3 | 2 |

Source: Own calculus

BCR fits only one rating class in 2005, is awarded 3 rating in 2007 and 2012, obtaining a rating other two analyzed years, which suggests healthy basic structure, difficult issues can be resolved with a good management tuned as we see it was the situation in 2012 when the bank failed because of management applied to register a rating of 2 in the following year.

### D. Stickney Model for BCR-ERSTE Bank

It captures an entity's financial risks and default risk of bankruptcy credit scoring method. In what follows we present the results of BCR bank in the same time period 2004-2013. This model supposes four stages namely calculation of indicators surprised by these indicators, obtaining partial products and the last step is to calculate the probability of bankruptcy and class rating falling respective bank.

Each indicator in the model is adjusted by the coefficient associated with it so that the score you consider is correct. Using the following formula and specific coefficients of each indicator we obtain the total exposure of the bank. As can be seen in the following table throughout the period considered there is an oscillation between 2004-2013 rating 1 and 4 for the bank. The probability of bankruptcy oscillating between 0 minimum recorded three time periods analyzed 2004,.2005, 2013 and the maximum 0.95286 respectively in 2006. The lowest rating to the bank obtained in 2006, 2007 and 2010, and 2008 and 2011 - They categorized rating 3.

**Table 4**: BCE-ERSTE Stickney Rating

| Year | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|---|---|---|---|
| $Y= 0.23883 – R1* 0.108 – R2*1.583-R3*10.78 + R4*3.074 + R5* 0.4860 – R6* 4.35 + R7* 0.11$ | | | | | | | | | | |
| Score Y | 23.3830 | 30.8609 | -3.8806 | -4752.1820 | -0.3002 | 2.6354 | -1.2270 | 0.8473 | 5.1730 | 69.6216 |
| Probability of bankruptcy $= 1/ (1+e^y)$ | 0 | 0 | 0.95286 | 1 | 0.55788 | 0.11489 | 0.72123 | 0.34154 | 0.01785 | 0 |
| BCR-ERSTE Rating | 1 | 1 | 4 | 4 | 3 | 1 | 4 | 3 | 1 | 1 |

Source: Own calculus

### E. CAAMPL Methodl for Transilvania Bank

In the following we present the the CAAMPL model that uses indicators of capital adequacy, asset ownership, management, profitability and liquidity.

Table 5: Transilvania Bank CAAMPL Rating

| Year | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|---|---|---|---|

| Quality Rating | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
|---|---|---|---|---|---|---|---|---|---|---|
| Quantity Rating | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| TOTAL Transilvania Composite Rating | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |

Source: Own calculus

We observe that for all years the rating is very good at 2 level.

### F. Stickney Method for Transilvania Bank

**Table 6**: Transilvania Bank Stickney Rating

| Year | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Y= 0.23883 − R1* 0.108 − R2*1.583-R3*10.78 + R4*3.074 + R5* 0.4860 − R6* 4.35 + R7* 0.11** | | | | | | | | | | |
| SCORE Y | 0,5410 | -0,7239 | -0,0693 | -0,1097 | 4,5984 | 7,2025 | 5,4844 | 6,0733 | 7,8304 | 11,1746 |
| Probability of bankruptcy = $1/(1+e^y)$ | 0,39672 | 0,63664 | 0,51341 | 0,52123 | 0,02758 | 0,00376 | 0,01408 | 0,00897 | 0,00231 | 0,00017 |
| Transilvania Rating | 1 | 1 | 4 | 4 | 3 | 1 | 4 | 3 | 1 | 1 |

Source: Own calculus

As seen from the above table the whole period of analysis is an oscillation between 1 and 4 for rating this bank. The probability of bankruptcy oscillating between 0 minimum recorded six time periods analyzed 2008-2013 and the maximum in 2005.

### 3. Conclusions
●The three banks analyzed in the present project is an important part of the bank's market share in Romania, which is clear from the indicators presented in the research.
●Amid the financial and economic crisis occurred worldwide banking activity was hampered, requiring measures of austerity, banking law amendment to survival and overcoming the disadvantages produced by this global phenomenon.
●In the present study it was intended to analyze each of them in order to outline the relevant financial performance and risk indicators which are subject mainly to credit risk, which is the largest bank level. By its very specific Bank lending activity is exposed on the repayment of loans to customers, as a result, there are additional expenses that produce bad loans to recover amounts awarded will ultimately execution debtor in final form after exhausting all ways recovery amicably.
●In fact, to avoid what is worst for both the bank and the client, that enforcement should be use extreme caution regarding lending.Bank as an institution must have a good hold management to manage unpredictable court cases to hold and take appropriate action in time to address them.
●You must know how to properly manage their assets and liabilities in its possession, always calculate indicators to identify early and give as much as possible avoid potential failures. Consequently, over time have developed a number of methods for preventing a bank failure which would lead to a number of problems in the banking chain contamination, a bank failure is fatal to the entire banking system, due to the multiple connections interchange at local, national and international more.

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# MODERN OPTIONS FOR THE FINANCING OF THE REAL ESTATE INVESTMENTS

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**Abstract:** *The investments represent one of the most important elements in the national economy development strategies, as well as in all the business fields and branches. The notion of investment is extremely complex, perceived with different meanings and significates. In a general, wider meaning the investments represent a capital placement which is made with the purpose of obtaining profit bearing incomes in the future. In a narrower meaning, investments mean the totality of expenses made for obtaining capital assets which are future potential factors in the formation of incomes. Investments represent the most important factor in the development strategies of the national economy as well as in all the business fields and branches. The investment strategy represents an important element in the management of the investments and a component of the general strategy of the entity. The use of investment strategies in the management activity implies the application of scientific techniques and methods. The great number of studies carried out shows that there were no certain answers formed, very often the option for a form of financing or the other is influenced only by the "level of accessibility" of the resources available on the financial market and the financing policy of many companies is guided rather by the constraints of the financial market than a coherent company strategy In order to ensure a constant economic growth it is necessary to prepare investment projects. In practice the predominant one is the investment activity based on real investments performed for the modernising of assets, in order to ensure their physical and moral wear and tear. The analysis of real estate investments can be made using a various range of indicators, from the traditional ones to those based on the updated cash flow, using traditional analysis techniques or complex techniques used by specialists with training in the analysis of real estate investment. The accountancy of real estate investments is made with the respect of the provisions of IAS 40. The present paper makes a brief overview of the most frequently used financing options of the real estate investments. In order to exemplify the importance the real estate investments must benefit of, we offered financing solutions for them. Real estate investments help the fulfilment of the main management objectives: the continuation of activity and performance of entity.*

**Keywords:** real estate investments, mortgage loan, real estate leasing.

**JEL classification:** G 10
**REL classification:** 8 D, 11 D.

## 1. Introduction
At the beginning the investors do not really have to own an amount of money to cover entirely the investment expenses. An investment can be financed in various proportions, from several sources.
Nowadays, the most frequently used financing options of the real estate options are the following:
- mortgage loans;
- development of a real estate project financed through a bank;
- real estate leasing;
- non refundable financing for investment projects;

- other financing methods.

One of the recently introduced terms in OMFP 1802/2014 is the concept of "real estate investments".

According to OMFP 1802/2014, a "real estate investment" (a plot of land or a building, or a part of a building, or both) owned (by the owner or a tennant by a financial leasing contract) more likely to obtain income from rent or to increase capital value, or both, instead of:

1. Being used in the production or supply of goods or services or for administrative purposes;
2. To be sold in the ordinary course of the business.

A real estate property used by its owner is a real estate property (owned by the owner or a tennant by a financial leasing contract)  for use in the production or supply of goods or services or for administrative purposes.

It is important to be mentioned that, to establish if a real estate property can be a real estate investment proffesional judgement is needed.

Specialized literature shows the fact that the interaction between the investment decision and the financing decision was researched by several authors (Ross, Westerfield, Jaffe, 1999; Myers, 1974; Dean, 1951; Brigham, Gapenski, Erhardt, 1999; Solomon, 1955; Grinblatt, Titman, 1998; Benninga, Sarig, 1998; Myers, 1977; Boyle, Guthrie, 2003, etc.). Their approaches are grouped in static and dynamic patterns and both decisions – the investment one and the financing one are endogenous and depend on elements such as: the state of capital markets, features of the investment opportunities for the company and available internal sources.

## 2. Mortgage loan for real estate investments

The mortgage loan is the type of loan granted exclusively by licensed institutions, with the respect of the legal regulations in force in that country, for the purchase or construction of buildings. Therefore, in countries such as the USA, Germany, Great Britain ecc, the mortgage banks are those institutions that grant long term loans for real estate investments and the loans granted are guaranteed with mortgage on the buildings (Căpraru and Onofrei, 2013: 47).

Mortgage banks obtain financial resources through specific value titles, namely mortgage bonds that are sold on the secondary market of the mortgage financing, being forbidden to attract deposits, obtaining incomes from commissions and from the interests perceived for credits.  But in countries such as France, Spain etc. the mortgage banks are not the only institutions that issue mortgage bonds, they can be released also by trade banks (Căpraru and  Onofrei, 2013:  47)

In Romania, Law n.  32/2006 regulates the mortgage loan for real estate investment (Official Journal n.  264 from March 23rd 2006)

Therefore this law regulates the juridical regime of the loan credit for real estate investments. According to this law (Law n.  32/2006, Art.  2, paragraph c), the mortgage credit for real estate investments is the credit granted with the total fulfilment of the following conditions:

1) is granted with the purpose of contracting real estate investments with living destination or a different destination than the living one or in the purpose of reimbursing a mortgage loan for real estate investments contracted previously;

2) the granting of the credit is guaranteed at least with the mortgage on the real estate that makes the object of the real estate investment for whose financing the loan is granted, respectively with the mortgage on the building object of the real estate investment for whose financing such a mortgage loan for real estate investments was granted whose reimbursement will be financed this way.

On the basis of the same law (Law n. 32/2006, Art. 2, paragraph d), e) and g) the following notions are defined as well:

- real estate – the construction and/or the land on which a construction is or will be placed, that makes the object of real estate investment;
- licensed institutions – universal banks and mortgage loan banks, the National Housing Agency, the mortgage credit companies and any other entity adjusted through special laws to grant mortgage loans for real estate investments;
- real estate investments – investments having as object the acquiring of the ownership right on a building through legal documents with onerous title, real estate settlement, improvement, rehabilitation, consolidation or extension of it but without limiting to it.

For each issue of mortgage loans, the issuer must keep an internal evidence registry to reflect the structure and the dynamics of the credit portfolio and the public offer of bonds issue is made according to the phases of each public offer of transferable securities, implying a licensed intermediary to carry out financial investment services. The mortgage bank or another financial institution has the obligation to appoint an authorized agent with the following attributions (law n. 32/2006):

✓ to verify the correct keeping of the internal evidence registry by the issuer;
✓ to register in the archive the securities on the portfolio as well as any further modifications related to them;
✓ to represent the holders of mortgage bonds.

The structure of the mortgage credits used as guarantee for the issue of mortgage bonds is subject to the fulfilment of conditions, such as (Căpraru and Onofrei, 2013: 48):

- each mortgage loan from the portfolio must have been granted according to the legal norms on that date;
- the levelling of the portfolio in order to include a single type of mortgage credits from the point of view of the real estate investment;
- weighted average of the deadlines of the mortgage loans from the portfolio allotted to their issue be higher than the due date of the real estate that will be issued based on them;
- the updated value of the receivables affected to the guarantee of a mortgage bond issue to be at least equal to the updated value of the payment obligations of the issuer in respect to the holders of mortgage bonds from the emission guaranteed with that portfolio;
- the total value of the mortgage credits guaranteed with mortgages on the lands without construction and those guaranteed with mortgages on the real estate in construction not to exceed a total percentage from the value of the portfolio;
- the fulfilment of the general eligibility criteria foreseen by the law and the performance characteristics announced in the issue prospect.

The real estate market knows two main types of mortgage loans (Căpraru and Onofrei, 2013:65, 70-71):

- fixed interest mortgage loans which are those credits whose interest rate does not vary along the reimbursement period, remaining fixed. Therefore, the loan instalments are also fixed and the debtor will know a priori how much will they have to pay to the bank during the reimbursement period;
- the mortgage loans with variable interest is characterised by the fact that the interest rate can vary along the reimbursement period. It can rise or drop according to the pre-established reference index (EURIBOR, LIBOR, ROBOR). Variable interest real estate loans have a disadvantage for the client through the fact that a likely increase of the index level might lead to an increase of the credit rate level. The higher and the longer the growth is, the more drops the probability of it paying the loan instalments. Also, for the bank, the variability of the interest rate is favourable, the loan instalment being adjusted to

the market interest, but to the extent to which the client will be able to keep up with the payment of the credits monthly instalments, otherwise the credit can become non profitable. For this reason the bank will make a stress test for each client and by corroborating its results with the degree of indebtness and refunding capacity, the client will turn out eligible or not.

## 3.      The development of a real estate project financed by a bank
In the opinion of the authors Căpraru and Onofrei (2013: 72), in the context of development of a bank-financed project  that contributes to the insurance of the success of obtaining such financing, the following general principles are to be taken into consideration:

- incorporation of a new company with the purpose of independent development of the project;
- attraction of investors that sustain partially the project and that participate at the incorporation of the new project company;
- guarantee of the project financing with the assets of the new-formed project and not with the assets of another business;
- considering as a primary reimbursement source of financing the cash flow generated by the financed project, instead other sources obtained from other older businesses undertaken.

Usually, in the context of the development of a project proposed for financing (such as, for example in a shopping centre), the newly-incorporated project company though the participation of already selected investors that will contribute partially to the financing of the project has to establish first collaboration relationship with a series of partners involved in the project, before proposing the project to the bank for financing (Căpraru and Onofrei M, 2013: 73). They would be: a general contractor for constructions, a work supervisor that will represent their interests in the relationship with the general manager and that will monitor the costs and the quality of works, an insurer (insurance company) in order to insure the project in case of events that might disturb the work development.  In case of development of residential areas, the bank can participate through financing offers for the clients of the future project, offering them real estate loans.

Basically, the banks will consider as selection criteria of the projects the following aspects (Căpraru and Onofrei, 2013:  73):

- viability of the project;
- the financial power and the experience of the investors partners of the project company;
- quality of project management;
- business plan quality;
- financing plan and project budget;
- venue and accessibility of the project;
- quality and experience of the general constructor;
- quality of the potential clients if there are pre-contract conditions;

Through the financing plan, the weight of participation of the investors will be established as well as the bank's financial contribution and through the project's estimated budget  the cost elements of the land, the construction, the project and marketing costs, the costs with the legal assistance and consultancy, interest costs, etc will be taken into consideration.

## 4.      Real estate leasing
The leasing is a medium and long term financing technique that allows a company the exploitation of an asset (usually an intangible asset) without being forced to turn to bank loans for the purchase or to other forms of loans or to own capitals.

The final institutions specialised in such leasing operations, as owner of the asset (owner) will transfer the use right on the asset to a user (tenant) based on a firm request,

concluding an agreement (contract) between the two parties and in exchange of a series of payments, called royalties or rentals.  The royalty can include, according to the case, the following elements (Dragotă et al: 186):

• asset write-off;
• remuneration of the invested capital (based on commission);
• risk premium due to the fact that the bank institution (lessor) support the entire financing;
• administrative expenses.

Of course, the choice of this financing variant will be realised only in the conditions in which the costs involved are lower than in the situation of financing the investment by turning to bank credit.  It is well-known that the leasing has been in use since ancient times, at the beginning for the financing of lands and buildings and later it became a financing tool for the purchase of other types of assets.

Practically, a wide variety of leasing contracts are known, however, the majority of specialists believes that at operational level, the following main categories can be found:

• operational leasing;
• financial leasing;
• leasing through indebtness;
• leaseback associated with a sale.

Further on we intend to stop and develop the financing tool found in case of a real estate investment, specially for extensive projects.  Thus, according to the authors Căpraru and Onofrei (2013; 74) is the most used form of the real estate leasing type is the sale-leaseback type. In such situation the owner of a real estate will sell it to an investor, concluding with them a  long term leasing contract for the same estate as well.  If the leasing contract implies that at the end of the leasing period the owner can purchase the real  estate than the leasing is the **sale-leaseback-buyback** type (Căpraru and Onofrei, 2013: 74).

As presented previously, the lease-back transaction consists in the sale of an asset and the immediate take-over as rental. It is obvious that through this operation, the real situation of the company does not change, continuing to use the asset.  The lease-back operation allows the observation at results, in the year of the sale of an added value that, in reality, will be neutralized by the future rentals.  Moreover, by placing the leasing contract in the category of operational leasing, we avoid the acknowledgement of a debt and, consequently, the increase of the indebtness rate.  These transactions can appear when the owner-seller has cash flow or financing problems or because they can obtain a series of fiscal advantages after such a transaction.

In such a context it is important to take into consideration the fact that two distinct economic transactions take place.  To be mentioned that there is no physical transfer of the asset.  First there is a sale of the asset and then a leasing agreement for the same asset, agreement in which the initial seller becomes lesser and the buyer becomes lessee.

A sale and leaseback transaction is usually structured so as the sale price of the asset is higher or equal to the current market value. The result of such a high sale price is a periodical lease payment higher on the duration of the leasing period. The transaction is often attractive because of the fiscal advantages induced and because it offers financing to the lessee (Bogdan, 2009: 195).

The seller–lessee benefits of the high sale price because they obtain a higher income from the sale, as well as the deducibility of the leasing payments that are usually higher than the depreciation previously taken into consideration. The buyer-lesser benefits both from the payment of high rents as well as of a wider base for depreciation.

The context pertaining to this financial system is suggested by the following principle scheme:
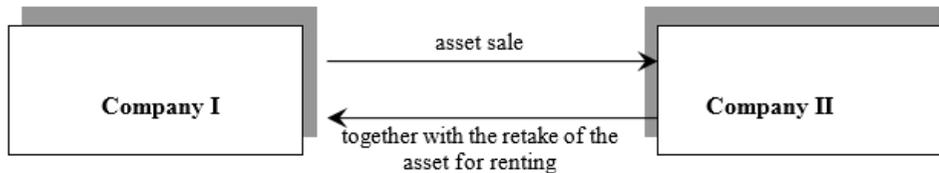
**Figure 1.** Sale of a good and its retake in renting
*Source: Bogdan Victoria, International normalising and accounting harmonization – class material, 2009, pp 194*

Real estate leasing has a series of **advantages**, such as (Căpraru and Onofrei, 2013: 74-75) :

- the lesser, who is at first owner, obtains cash after the sale of the estate in which they will continue the activity, cash they can count on for other purposes such as equipments, retechnologization, ecc.
- leasing instalments are entirely deducible, being operation expenses, unlike the variant through bank loan, where only the interest and the write-off quota are deducible;
- if the building is already written-off, its sale followed by a leasing contract is beneficial from the perspective of taxation, both for the user and for the landlord who will be able to write-off the building, enjoying the deductions of the write-off instalments. If the building is partially written-off, the sale made at the market's price, higher than its accounting value can bring a higher write-off rate therefore, bigger advantages of the investor from the fiscal point of view who can establish in these conditions a leasing instalment more convenient for the lessee;
- the leasing does not affect the lessee's level of endowment, as they can turn to loans for other investments;
- through the sale of the estate, the value of the user will drop leading to the increase of profitability of the assets in the financial reports, in the context in which profits remain the same;
- at the end the seller-lessee can  opt for the purchase of the building or not, at a price established in the moment of contracting. This option is valid if the construction is new in the moment of concluding the leasing agreement;
- if the tenant needs the building for a shorter period of time, the leasing is the best alternative, because the purchase would involve extra transaction costs;
- for the investor, this way of financing is convenient because it will have a safe user, for a longer period of time, at a pre-established rent (leasing rate);
- the investor can manage the risk of the investment according to the quality of the user, establishing a higher or lower rate, proportional with the risk.

*The main disadvantage of the real estate leasing* is the fact that in case of conclusion of the leasing contract, the seller-user cannot benefit of the appreciation of the estate's market value.

## 5.  Non refundable financing for investment projects

One of the recent external financing options at the disposition of the companies is the one that refers to accessing European funds for the financing of the real estate investments. European funds, according to OUG n. 63/1999 regarding the management of the reimbursement funds allotted to Romania by the European Community, as well as the co-financing funds pertaining to them are defined as the financial contribution of the European Union, represented by amounts that are transferred to the Romanian Government by the Committee of the European Union, as non refundable financial assistance. Structural funds

are post-adhesion funds financed by the budget of the European Union having as a purpose the support of the member states in fields of interest such as: education, research, agriculture, development of SMEs, etc. (CECCAR, 2011: 54).

In order to pay the European funds for the financing of the investment the beneficiaries of the program must know the type of the European funds for the proper implementation of the projects. Therefore, the main financing lines that can be accessed in Romania for the financing of the real estate investments are POR and POSCCE.

Investments in the real estate field that are susceptible of benefiting of financing from European funds mainly aim at the regeneration of disadvantages areas, the investments in the SME real estate infrastructure and the various investments materialized in: buildings or building group rehabilitation, modernising, restoring, ecc.

The opportunities considered by the European funds for the financing of the investments in the real estate field refer to (http://www.structuralconsult.ro/accesare-fonduri-europene.php/05.08.2014):

- ✓ rehabilitation of the disadvantaged urban areas, including the building of motorways, pavements, buildings construction, construction of infrastructure for houses and services;
- ✓ investments in the social infrastructure, for example: centres for the protection of the children, facilities and sports and entertainment centres;
- ✓ European funds allow the achievement of integrated projects with the purpose of complex rehabilitation of the disadvantaged urban area, the use of project and objective combination, including complementary projects such as the solving of the ecological obligations older and for the reduction of the energetic consumption, etc.

The opportunities considered by the European funds for the financing of the investments in the real estate infrastructure of the SMEs refer mainly to the development of the infrastructure and the administration services within the business development area, for example: modernization, restoring of buildings.

*Usually the steps that must be followed by the solicitors of accessing of non refundable European funds for the financing of the real estate investments are:*

- • *assessment of the legal situations of the land or the construction that the building will be placed on or the investment made of:*
- • *the contracting of both a consultant and an experienced engineer in the accessing and implementation of European funds projects in order to define the investment structure from the financial and technical point of view;*
- • *the so-called implementation of the investment from the writing of the financing documentation from the technical and financial point of view until its finalization.*

## 6. Conclusions

Considering the information presented in this paper, we can conclude the following:

- - The investment decision is influenced significantly by the financing decision;
- - The development of a long term company will imply turning to financial resources;
- - The central objective of a company is the one of obtaining maximum performance for the invested capitals;
- - On the moment of choosing a financing structure, the managers must calculate a series of factors;
- - We recommend that, in an investment activity, the entities start by mobilising their own sources (self-financing) and then turn to external resources;
- - in our opinion, the management of Romanian companies is not interested in obtaining investments in intangible assets because the capital market investors do not consider the performance of the companies from this perspective;

In our opinion, the elements that will be considered when the financing decision of an investment project is taken are:

- the duration of financing the investment project;
- financing source;
- reimbursement means;
- financing form;
- financing risk;
- financing cost;
- various facilities granted to financing.

The determination of the value / cost of real estate investment will be achieved by taking into account the following aspects:

- the replacement cost, represented by the duplication value of the existing investment at the moment of analysis, from which we deduct the depreciation of the real estate investment and adding the value of the land of the construction;
- the market value, namely the price paid for other investors for similar real estate;
- the value given by the incomes obtained after the exploitation of the real estate investment.

   In the financial practice, there are numerous cases of investment projects that, although are characterized by relatively long recovery terms, generate update value clearly superior to other projects with a more reduced recovery term, thus contributing to the maximization of the company value.

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# BANKING UNION – ROMANIAN PERSPECTIVE

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**Abstract**: The financial crisis showed that banks were not able to face the loss, because there is no framework for a resolution, so that it intervened with money from taxpayers. So, it has been highlighted the need to update the regulations applicable to the banking sector. Creating a single supervisory mechanism in the fall of 2014 was a time reference point to achieve a banking union in Europe. Banking Union is one of the four foundations for a genuine Economic and Monetary Union. The paper's purpose is to analyze the Banking Union structure, based on three pillars: (i) The Single Supervisory Mechanism - the transfer of the main responsibility regarding banking supervision from national to European level, (ii) The Single Resolution Mechanism - introduction of common provisions to ensure legal support required to manage bank failures problem, (iii) The Deposit Guarantee Schemes - harmonization of deposit guarantee rules. These measures were adopted at European Union level to ensure the stability of the European banking system and to prevent future crises. Because countries that are not part of the euro area are not required to join the Banking Union, the dilemma of these countries lies in the decision to join the Banking Union quickly or to wait. It is the case of Romania, also, so, this paper analyze the opportunity of Romania's accession to the Banking Union before adopting the euro. There are analyzed the advantages and disadvantages of Romania's participation in the Banking Union, showing that, in the context of single currency introduction, Romania's participation is required. So far, there are reduced debates regarding the need, advantages and disadvantages of Romania's participation in the European Banking Union, the top representatives of the National Bank of Romania being among the few who expressed their views in public and published papers on the subject.

## 1.Introduction
As the financial crisis evolved and turned into the Eurozone debt crisis in 2010-2011, in the case of countries with a single currency, some measures had to be taken, in particular to break the vicious circle between banks and national finances (See Figure 1). Therefore, in June 2012, Heads of State and Government agreed to create a banking union, completing the economic and monetary union. This will unify the EU banking rules, mandatory measure for banks in the euro area and optional for any non-euro Member States (http://europa.eu/rapid/press-release_MEMO-14-294_en.htm).

**Figure 1:** The vicious circle between banks and national finances
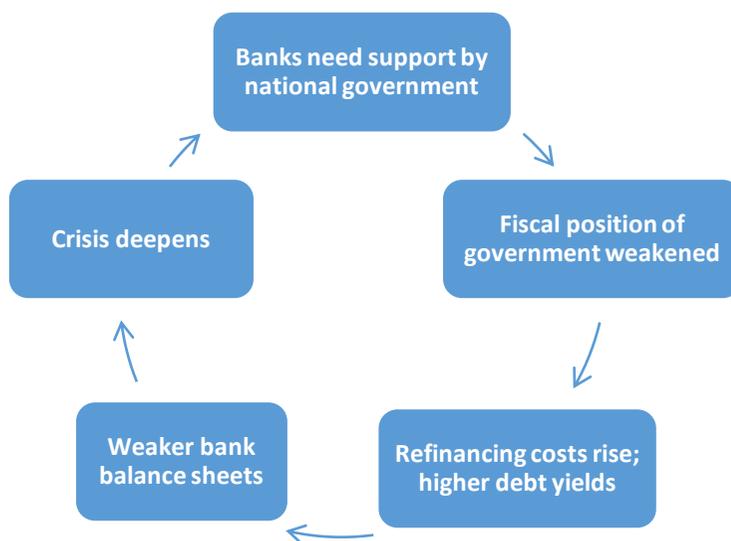


Source: http://europa.eu/rapid/press-release_MEMO-14-294_en.htm

The banking union will help to break the link between banks and sovereigns:
- Banks will be stronger and more immune to shocks: Common supervision will ensure effective enforcement of stronger prudential requirements for banks, requiring them to keep sufficient capital reserves and liquidity. This will make EU banks more solid, strengthen their capacity to adequately manage risks linked to their activities and absorb losses they may incur.
- Failing banks will be resolved without taxpayers money, limiting negative effects on governments' fiscal positions: bank resolution will be financed by banks' shareholders and creditors and by a resolution fund financed by industry. Banks should not be bailed out and government fiscal position will not be weakened further.
- Banks will no longer be "European in life but national in death" as they will be supervised by a truly European mechanism and any failure will also be managed by a truly European mechanism. (http://europa.eu/rapid/press-release_MEMO-14-294_en.htm)

The necessity of the Banking Union is based on the following arguments:
- Stopping the current trends of fragmentation of financial markets in the European Union, which is incompatible with the existence of an Economic and Monetary Union;
- Prevention of bankrupcy, strengthening financial stability and restoring market confidence in the euro;
- Unique surveillance is a prerequisite for applying the direct capitalization of euro area banks by the European Stability Mechanism;
- Breaking the vicious circle of distressed banks and debt of the states (Georgescu, 2014);
- Breaking the link between banks and governments, so that to be eliminated the need for support of the financial institutions, to the detriment of the public interest. European Central Bank supervises banks in the Eurozone and banks from the EU countries, who wish to be included in the bank project (Dăianu, 2014).

## 2. Pillars of the Banking Union

The three pillars of the Banking Union are:

- The Single Supervisory Mechanism (SSM) – The transfer of the main responsibility regarding banking supervision from national to European level;
- The Single Resolution Mechanism (SRM) - Introduction of common provisions to ensure legal support required to manage bank failures problem;
- The Deposit Guarantee Schemes (DGS) - Harmonization of deposit guarantee rules.

These pillars must be implemented simultaneously to establish banking union.

## 2.1. The Single Supervisory Mechanism (SSM)

The unique supervision will be realized by the European Central Bank, which will have the role to monitor the situation of euro area banks and of the banking union acceding countries, and the risks they assume and to intervene when problems arise.

European Central Bank will directly supervise only 'significant' banks, the rest remaining the attribute of the national authorities. In the euro area, there are approximately 130 'significant' banking groups, which are separated from the rest of the banks, according to their size, their importance to the national economy or to the EU and the importance of cross-border activities.

The European Central Bank (ECB) will supervise direct the following, also:

- banks that have applied for or have received public financial assistance;
- banks less significant, when it is necessary to ensure consistent application of high standards of supervision;
- three of the largest banks from each participating member state (Georgescu, 2014). The ECB will directly supervise about 85% of banking assets of the Eurozone. However, the activity will be governed by a single monitoring manual and all data of supervisory will be sent to the ECB. The European Central Bank will be able to directly supervise any bank or group of banks that represents a potential source of systemic risk.

Prudential supervision by SSM is systematically presented in Table 1.

The regulation regarding the Single Supervisory Mechanism came into force in November 2013, and the ECB has provided 12 months for its operationalization. In April 2014 the ECB published the Framework Regulation which establishes SSM conduct business. ECB has already assumed full supervisory duties from November 4, 2014 (Isărescu, 2014).

Potential conflict of interest generated by the dual role of the European Central Bank, as monetary authority and supervision, was settled by:

- Implementing a decision flow that completely separates the two activities by establishing the Supervisory Board;
- Building institutional capacity of ECB for supervision activity – ensure the specialized staffing;

The Single Supervisory Mechanism aims to restore the medium and long term confidence of investors and depositors in the European banking system, because non-performing assets will no longer be hidden in other jurisdictions, and by identifying and monitoring exposures and international financial linkages, it should be reduced systemic risk (Cărămidariu, 2015).

**Table 1**: Prudential supervisory by SSM

| National authorities | European Central Bank |
|---|---|
| ➢ Consumer protection;<br>➢ Combating Money Laundering;<br>➢ Supervision of entities belonging to credit institutions headquartered outside the EU. | ➢ Authorization of credit institutions;<br>➢ Ensuring compliance of the banks' capital adequacy and liquidity requirements;<br>➢ Consolidated supervision of financial conglomerates;<br>➢ The ECB and the national banking supervisory authorities will act as a system. |

Source: Isărescu, 2014

## 2.2. The Single Resolution Mechanism (SRM)

The second pillar of Banking Union establish a European authority of resolution, which will decide whether a bank with problems should be saved or should enter into bankruptcy.

During the recent financial crisis, a number of European banks had to be supported by public funds (bail-out). Use of public funds for this purpose, although it was considered necessary, is not sustainable in the future. (Georgescu, 2014).

The transnational consequences of a banking crisis justify building a resolution mechanism at European level.

Its objective is impartial and effective management of banking crises so as to minimize negative impacts on the economy and call for public funds.

The principles governing SRM are:

- A functioning market economy requires exit from the market in case of failure;
- Resolution cost to be support first by shareholders and creditors. "Resolution" involves restructuring a bank / financial institution by a resolution authority, using specific tools.
- The involvement of public funds should be only one last resort and accompanied by measures to ensure medium-term fiscal neutrality;
- Avoiding a potential conflict between the goals of structure decision by administration of this mechanism by a single authority resolution different from the ECB, but with a similar broader institutional and geographical coverage (Ferran and Babis, 2013); SRM will include all banks from the euro area and the Member States participating. It involves the distribution of responsibilities between the Single Board Resolution and the National Authorities Resolution.

Single Board resolution is directly responsible for the cross-border banks and for the 'significant' banks. National Authorities Resolution is responsible for all other banks and for decisions of resolution for them, on condition of non-involvement in solving their fund resources.

The Single Fund Resolution will be financed by contributions from the banking sector and will replace the national resolution funds of the states that are participating in Union Banking.

Implementing the Single Resolution Mechanism will be done in two stages:

- ➢ January 1, 2015: partial entry into force, that will come into effect the provisions of the resolution planning preparation, collection of information and cooperation with national authorities;
- ➢ January 1, 2016: Full entry into force of the unique mechanism of resolution, that

the entry into force of the provisions relating to the planning resolution, early intervention, actions and resolution tools, including bail-in, on condition entering into force of the Intergovernmental Agreement on the Single Fund Resolution. (http://www.europarl.europa.eu/news/ro/newsroom/content/20140410STO43248/html /Uniunea-bancar%C4%83-pe-scurt-ghid-despre-noile-reguli-UE).

## 2.3. The Deposit Guarantee Schemes (DGS)

This mechanism has the following objectives:
- EU harmonization of categories and level of guaranteed deposits;
- Reduction of payout;
- Harmonization of information provided to depositors;
- Establish monitoring requirements of deposit guarantee schemes.

Completing the Banking Union with a single deposit guarantee scheme seems difficult to achieve. There is a major controversy between the member states on the need and on design it. Obvious, asymmetry between North and South in terms of its financing costs raises difficulties to policy issues.

Larosière report does not support the idea of mutualisation the resource of the deposit guarantee schemes in the Member States, considering that the harmonization the sets of related rules should be sufficient (High Level Group on Financial Supervision in the EU, Report February 25, 2009 - De Larosière Report).

The compromise that was reached at the European level provides for the harmonization of national guarantee schemes.

Steps in this direction have already been implemented:
- Coverage of national deposit guarantee schemes - harmonized level of 100 000 EUR / depositor / credit institution;
- Simplifying procedures for reimbursement of covered deposits: reduce payment periods and improved financing arrangements.

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- Simplifying procedures for reimbursement of covered deposits: reduce payment periods and improved financing arrangements.

European directive adopted by the European Parliament in April 2014 imposed ex ante funding of all national guarantee schemes in the EU (Sibeltein, 2007). The main advantages of harmonization of deposit guarantee schemes are:
- Ensuring the equal treatment of depositors in all EMU countries complementarity with single supervisory mechanism;
- Increasing confidence in the banking system; A larger volume of resources is likely to grow considerably the resistance of the system on shock.
- Limiting moral hazard and disposal of potent pro-cyclical effects; Contributions banking institutions are set according to their size and the risks involved (Ilie Mihai, 2003).

## 3. Romania and Banking Union

Countries that are not part of the euro area are not required to join the Banking Union. In this context, the dilemma of these countries lies in the decision to join the Banking Union quickly or to wait.

So far, there are reduced debates regarding the need, advantages and disadvantages of Romania's participation in the European Banking Union, the top representatives of the National Bank of Romania being among the few who expressed their views in public and published papers on the subject.

The Commission proposal did not provide the voting rights for the non-euro area countries, generating skepticism for countries like Poland or Sweden. Summit requires that all participating states in single supervisory system to have the right for vote in a new decision making body of the ECB - Supervisory Board, but not in the Governing Council, which retains the veto decisions of the Supervisory Board. (http://europa.eu/rapid/press-release_MEMO-12-656_en.htm).

To alleviate the concern of countries like Britain and others countries outside the euro area related to the fact that the Banking Union divide EU in decision makers and passive viewers, it has been modified the voting procedure. This requires a dual majority, both in the group of countries inside and outside the euro area. Although the new proposal to structure single supervisory mechanism reduces the danger of Europe in the 'two-speed', only apparently solve the initial dilemma of countries from the CEE region: of losing the powers of supervision of the banks in countries that foot the bill in case of bankruptcy.

An argument in favor of joining a non-euro countries in the EU Banking refers to this massive capital Eurozone national banking structure. In Romania, euro area banks hold over 70 percent of net assets and the capital of the Romanian banking system. In this context, it is necessary and carrying out cross-border regulation and supervision. Given the massive presence of foreign capital in the domestic banking system, the contagion effect is major. Participation in Banking Union reduce costs of contagion, providing greater capacity reaction most appropriate mechanisms and greater resources.

As mentioned, the banking system in Romania is dominated by subsidiaries of multinational banks of the euro area. These subsidiaries are systemically important for the host country (Romania), but not for the mother country (Austria, France, Italy). Over 70% of the Romanian banking sector was held by foreign banks, similar to other countries in the region, while only about 15% of banking assets in Western European countries were owned by foreign banks.

The sphere of political economy is an argument in favor of a rapid accession to the Banking Union. Insider participation to the construction of a mechanism offers the advantage of having a say on the adoption of decisions. At the same time, offers the advantage of direct access to first-hand knowledge, thus avoiding holding partial or distorted information, provided by parent banks in line with interests in the financial group.

From the political point of view, who do not participate to the negotiating table, will not be able in the future to claim the new decision-making structures, and therefore will not have a voice in terms of future priorities for action. A Banking Union membership will strengthen the position of Romania in such negotiations.

Entry into Banking Union provides an incentive for deleveraging and removing the foreign banks. For Romania, the Banking Union membership is a natural choice.

Banking Union membership is closely related to the adoption of the euro. From a financial stability perspective, it is essential that Romania to participate in the single supervisory mechanism as a first step towards a long-term political project, the Banking Union.

Changeovers mobilize the membership of the Bank automatically. So the question of membership in the Banking Union designation is just one moment. Becoming a member of the Bank will be at the changeover time or as soon as possible?

Romania has already expressed support for the formation of the Bank. In December 2012, the Romanian Government adopted a memorandum containing a number of elements of Romania's position regarding the proposals to strengthen economic and monetary union. The document says that Romania supports efforts aimed at strengthening of the EU and creating a genuine banking, fiscal and economic union. Romania supports the process of strengthening governance of the euro area, but considers that this process should not be detrimental to the states outside the euro area and lead to fragmentation of the Union.

Government action was prefaced by statements of the governor BNR, who in September 2012 said: "The Union Banking is an inevitable process, and Romania will have to enroll in it ... this is the orientation of the central bank, noting that this depends not only on the

central bank, but also by the Government to Parliament." (http://www.bnro.ro/Interven%C8%9Bie-la-Conferin%C8%9Ba-'Uniunea-Bancara-Europeana-%C8%99i-Noul-Model-Bancar'-organizata-de-Grupul-de-Presa-Bursa-10813.aspx)

For Romania, Banking Union membership is expected to have the following effects:

- Enhance financial stability;
- Increased confidence in the national banking system;
- Supporting a sustainable increase in lending and economic activity barriers of entry.

Domestic banking system through a disciplined process of recalibration of their activities in accordance with the new European vision on establishing a healthy financial intermediation:

- Issuance of bad loans sheet;
- Redirecting funding sources to domestic saving;
- Strengthening credit fundamentals recovery assumptions and healthy destination, to sustainable economic development.

The disadvantage is a contribution to a fund of assistance in case of banking crisis, especially if applying a subscription key that disregards the degree of financial intermediation (Isărescu, 2013).

Restricting the perimeter of the Banking Union at the euro-zone countries has the risk of underestimating the importance of financial connections in the EU banking sector.

For the banks outside the euro area, there is a risk that a uniform approach to be a wrong solution. For example, foreign currency loans are a major source of vulnerability for Romanian banks, which is why the central bank continuously monitors and limits foreign currency loans of banks in Romania. On the other hand, increased dependence on short-term interbank loans in combination with exposure to so-called "toxic assets" have caused problems in the euro area banks during the financial crisis of 2007-2008. From the perspective of financial stability, addressing such risks require different instruments.

Romania's accession to the Banking Union is a landmark in the course of the single currency. It is desired the reinforcing of financial stability, including reducing the risk of regional contagion and removing an incentive of disintermediation from banks with foreign capital. Banking Union facilitates recovery of lending on a path consistent with sustainable development-economic activity in accordance with the economic resources released by structural reforms. This will enhance real convergence, which will lead to sustainable performance criteria for joining the euro area.

## 4. Conclusions

The international financial crisis has reminded us that the European project is incomplete. Strengthening the institutional and economic reform of the EU are conditions for longevity of the Union.

EU return path of smart, sustainable and inclusive growth, generating jobs and enhanced competitiveness is supported by a thorough reform of the European financial system regulation and supervision, in line with the international agenda in the field. Exuberance or excessive conservatism cannot be found in the new European outlook on financial intermediation. Counteract regional contagion risk requires further integration of European banking.

Banking Union is one of the fundamental pillars of the new economic governance framework at EU level. Romania's accession to the Banking Union before adopting the euro is an option. From a financial stability perspective, it is essential that Romania to participate in the single supervisory mechanism as a first step towards the Banking Union.

Romania's participation in the European Banking Union can strengthen the financial stability, can strengthen confidence in the banking sector and can contribute to sustainable

growth in lending and in economic activity in general.

Romania's participation in Banking Union requires a close cooperation between ECB and the National Bank of Romania, as well as a flexible approach, with local features.

## 5. Acknowledgement

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***http://europa.eu/rapid/press-release_MEMO-14-294_en.htm

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# THE NEW ARCHITECTURE OF ECONOMIC GOVERNANCE IN THE EUROPEAN UNION

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**Abstract:** The economic crisis that began in 2007-2008 has highlighted the need for a stronger economic coordination at EU level, to ensure financial stability. The new architecture of economic governance in the European Union is based on Fiscal Pact, on Macroeconomic Imbalances Identification Mechanism, on European Stability Mechanism and on Banking Union. Since the banking system is the most significant component of the financial system, we will give more importance to the analysis of Banking Union, which is based on three pillars: The Single Supervisory Mechanism, The Single Resolution Mechanism and The Deposit Guarantee Schemes.

**Keywords:** Fiscal Pact, Macroeconomic Imbalances Identification Mechanism, European Stability Mechanism, Banking Union, European Union.

**JEL Codes:** O23, P43, L51.

## 1.Introduction

To restore confidence and to ensure stability in the euro area is necessary to strengthen the institutional framework of Economic and Monetary Union. At European Union level, the new architecture of economic governance is based on Fiscal Pact, on Macroeconomic Imbalances Identification Mechanism, on Banking Union and on European Stability Mechanism.

These mechanisms focus on the following aspects (see figure 1):
- Fiscal Pact: budget deficit, structural deficit, public debt;
- Macroeconomic Imbalances Identification Mechanism : 11 risk indicators;
- European stability mechanism: directly banks recapitalization, financing public debt;
- Baking Union: the Single Supervisory Mechanism, Deposit Guarantee Schemes, the Single Resolution Mechanism.

**Figure 1:** The new architecture of economic governance in the European Union
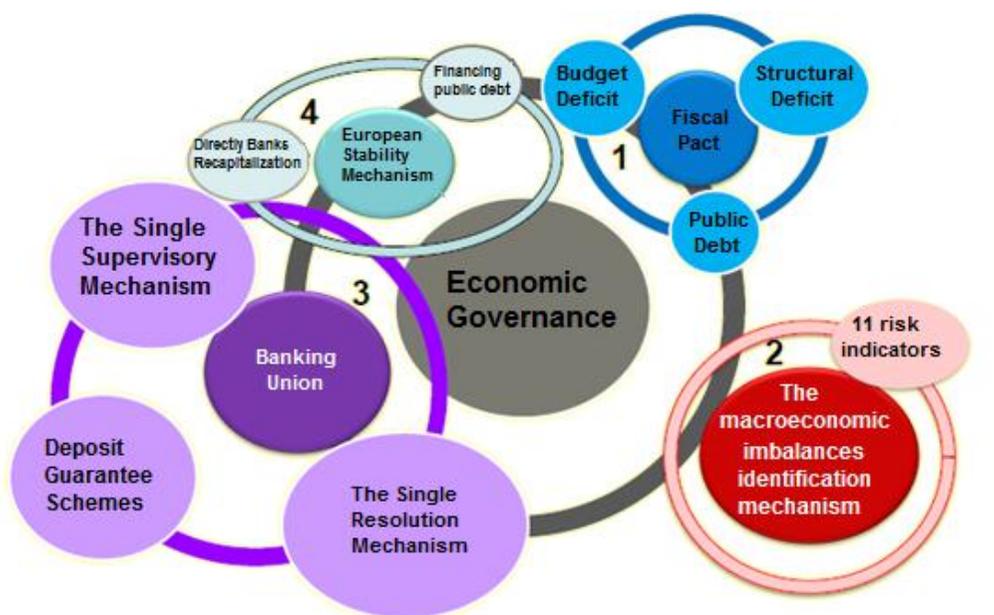


Source: Georgescu, 2014

## 2. Fiscal Pact

Fiscal Pact objective is to strengthen fiscal discipline within the euro area through the "budget balance rule" and an automatic correction mechanism. Fiscal Pact was signed on March 2, 2012 for 25 EU countries, except the Czech Republic and the UK.

According to Fiscal Pact, countries that joined it must have a balanced or a surplus national budget or must have a speed of adjustment of the structural deficit > 0.5% of GDP / year by MTO; MTO is the medium-term objective for the budgetary position and differs for each EU Member State. In the case of Romania, the structural deficit must be 1% of GDP.

In addition, the deficit should be in line with the minimum long-term sustainability of the country, established by the Stability and Growth Pact. Temporary deviation from the 'golden rule' of budget balance is only allowed in exceptional economic circumstances, for example in the case of economic decline. If public debt exceeds the 60% of GDP, the deficit limit may be set at 1% of GDP.

If a member state deviates from the golden rule of budget balance will trigger an automatic correction mechanism. It will have to correct deviations in a clearly defined time period. On the other hand, automatic correction mechanism will have to respect the prerogatives of national parliaments. In case of deviations from the programe assumed, deviations considered significant by the European Council, it can make recommendations and substantial monetary sanctions.

## 3. The macroeconomic imbalances identification mechanism

To detect macroeconomic imbalances, there are built scoreboards and are used 11 indicators with specified limits. Deviations from limits are determined automatically applying corrective side; These signals are combined with a detailed analysis of the economy, including through technical evaluation missions. Economic plans for medium-term stability or convergence are approved in advance by the European Council (Georgescu, 2014).

The European Council may issue recommendations or warnings to imbalances identified; their failure and lack of a national plan of correction attract penalties (Georgescu, 2014).

## 4. Banking Union

Banking Union aims to build an integrated financial framework to safeguard financial stability and minimize the costs of bank failures. The necessity of the Banking Union is based on the following arguments:

- Stopping the current trends of fragmentation of financial markets in the European Union, which is incompatible with the existence of an Economic and Monetary Union;
- Breaking the vicious circle of distressed banks and debt of the states;
- Prevention of bankrun, strengthening financial stability and restoring market confidence in the euro;
- Unique surveillance is a prerequisite for applying the direct capitalization of euro area banks by the European Stability Mechanism

The three pillars of the Union Bank are:

- The Single Supervisory Mechanism (SSM) – The transfer of the main responsibility regarding banking supervision from national to European level;
- The Single Resolution Mechanism (SRM) - Introduction of common provisions to ensure legal support required to manage bank failures problem;
- The Deposit Guarantee Schemes (DGS) - Harmonization of deposit guarantee rules (Georgescu, 2014).

### 4.1. The Single Supervisory Mechanism (SSM)

European Central Bank will directly supervise only 'significant' banks, the rest remaining the attribute of the national authorities. In the euro area, there are approximately 130 'significant' banking groups, which are separated from the rest of the banks according to their size, their importance to the national economy or the EU and the importance of cross-border activities.

The European Central Bank will supervise direct the following, also:

- banks that have applied for or have received public financial assistance directly from the EFSF or from ESM;
- banks less significant, when it is necessary to ensure consistent application of high standards of supervision;
- three of the largest banks from each participating member state (Georgescu, 2014).

The ECB will directly supervise about 85% of banking assets in the eurozone.

However, the activity will be governed by a single monitoring manual and all data of supervisory will be sent to the ECB. The European Central Bank will be able to directly supervise any bank or group of banks that represent a potential source of systemic risk.

The regulation regarding the Single Supervisory Mechanism came into force in November 2013, and the ECB has provided 12 months for its operationalization. In April 2014 the ECB published the Framework Regulation which establishes SSM conduct business. ECB will assume full supervisory duties from November 4, 2014 (Isarescu, 2014).

Potential conflict of interest generated by assuming a dual role by the European Central Bank's role as monetary authority and supervision, was settled by:

- Implementing a decision flow that completely separates the two activities by establishing the Supervisory Board;
- Building institutional capacity of ECB for supervision activity – ensure the specialized staffing;

### 4.2. The Single Resolution Mechanism (SRM)

During the recent financial crisis, a number of European banks had to be supported by public funds (bail-out). Use of public funds for this purpose, although it was considered necessary, is not sustainable in the future. (Georgescu, 2014).

The transnational consequences of a banking crisis justify building a resolution mechanism at european level.

Its objective is impartial and effective management of banking crises so as to minimize negative impacts on the economy and call for public funds.

The principles governing SRM are:

- A functioning market economy requires exit from the market in case of failure;
- Resolution cost to be support first by shareholders and creditors. "Resolution" involves restructuring a bank / financial institution by a resolution authority, using specific tools.
- The involvement of public funds should be only one last resort and accompanied by measures to ensure medium-term fiscal neutrality;
- Avoiding a potential conflict between the goals of structure decision by administration of of this mechanism by a single authority resolution different from the ECB, but with a similar broader institutional and geographical coverage (Ferran and Babis, 2013);

SRM will include all banks in the euro area and the Member States participating. It involves the distribution of responsibilities between the Single Board Resolution and the National Authorities Resolution.

Single Board resolution is directly responsible for cross-border banks and banks 'significant'. National Authorities Resolution are responsible for all other banks and for decisions of resolution for them, on condition of non-involvement in solving their fund resources.

Implementing the Single Resolution Mechanism will be done in two stages:

- January 1, 2015: partial entry into force, that will come into effect the provisions of the resolution planning preparation, collection of information and cooperation with national authorities;
- January 1, 2016: Full entry into force of the unique mechanism of resolution, that the entry into force of the provisions relating to the planning resolution, early intervention, actions and resolution tools, including bail-in, on condition entering into force of the Intergovernmental Agreement on the Single Fund resolution (http://www.europarl.europa.eu/news/ro/newsroom/content/20140410STO43248/html/Uniunea-bancar%C4%83-pe-scurt-ghid-despre-noile-reguli-UE).

### 4.3. The Deposit Guarantee Schemes (DGS)

This mechanism has the following objectives:

- EU harmonization of categories and level of guaranteed deposits;
- Reduction of payout;
- Harmonization of information provided to depositors;
- Establish monitoring requirements of deposit guarantee schemes.

Completing the Union Bank with a single deposit guarantee scheme seems difficult to achieve. There is major controversy between the member states on the need and on design it.

Obvious asymmetry between North and South in terms of its financing costs raises difficult policy issues.

Larosière report does not support the idea of mutualisation of resource of the deposit guarantee schemes in the Member States, considering that the harmonization the sets of related rules should be sufficient (High Level Group on Financial Supervision in the EU, Report February 25, 2009 - De Larosière Report).

The compromise that was reached at the European level provides for the harmonization of national guarantee schemes.

Steps in this direction have already been implemented:
- Coverage of national deposit guarantee schemes - harmonized level of 100 000 EUR / depositor / credit institution;
- Simplifying procedures for reimbursement of covered deposits: reduce payment periods and improved financing arrangements.

European directive adopted by the European Parliament in April 2014 imposed ex ante funding of all national guarantee schemes in the EU (Sibeltein, 2007).

Advantages of harmonization of deposit guarantee schemes:
- Ensuring the equal treatment of depositors in all EMU countries complementarity with single supervisory mechanism;
- Increasing confidence in the banking system; A larger volume of resources is likely to grow considerably the resistance of the system on shock.
- Limiting moral hazard and disposal of potent pro-cyclical effects; Contributions banking institutions are set according to their size and the risks involved (Ilie Mihai, 2003).

## 5. European Stability Mechanism

European Stability Mechanism is a permanent crisis resolution tool for eurozone countries. It can issue bonds to finance loans and other financial assistance to euro area Member States to strengthen the banking sector.

It was inaugurated in October 2012, and the shareholders are the member states of the euro area (Georgescu, 2014).

The main responsabilities of the European Stability Mechanism are:
- Guarantor of financial assistance;
- Establishing the terms and conditions of financial assistance;
- Lending capacity of the ESM;
- Creation of additional tools (Agnes, 2011).

At the release of this mechanism were available 500 billion euro to lend. Spain and Cyprus have received financial assistance programs, so now the remaining lending capacity is of about 450 billion euro.

## 6. Conclusions

The international financial crisis highlighted that the European project is incomplete, and further strengthen the institutional framework of EU economic governance reform efforts represents essential steps for achieving sustainable fundamental objectives of the European Union.

The EU wants to achieve a sustainable economic growth, generating employment. This must be supported by a deep reform of the european financial system regulation and supervision.

The new european conception doesn't includes anymore exuberance or excessive conservatism on financial intermediation. Countering the regional contagion risk requires further integration of European banking. Union Banking is one of the fundamental pillars of the new economic governance framework at EU level.

## 7. Acknowledgement

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# INTERNAL AND EXTERNAL DETERMINANTS OF COMMERCIAL BANKS PROFITABILITY: EMPIRICAL EVIDENCE FROM BULGARIA AND ROMANIA

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**Abstract:** *Our study focuses on commercial banks which are operating in Bulgaria and Romania, two countries whose banking sectors have registered major structural changes in the transition to a market economy and which are showing some similarities.*
*Similar to other EU countries, the financial system from Bulgaria and Romania is dominated by the banking sector, which holds the largest share of total assets. Thus, we can say that health, strength and performance of the banking sector are of major importance for the sustainable economic development of states, but also for efficient transmission of monetary policy decisions on the real economy.*
*The paper aims to identify the key factors that affect bank profitability and to evaluate empirically their contribution to a sample of 29 commercial banks in Bulgaria and Romania, for the period 2003-2012.*
*Our research is based on data from the Bureau Van Dijk database, the World Bank and the European Central Bank and uses panel data estimation techniques. The dependent variable used in our study is the bank profitability, which is measured by two representative indicators the Return on Average Assets (ROAA) and Return on Average Equity (ROAE). Regarding the independent variables, our analysis includes capital adequacy, the loan loss reserve rate, cost to income ratio, the ratio of liquid assets to total assets, the interest expenses to deposits ratio, the non-interest income over total gross revenues, bank size, the GDP per capita growth, inflation rate, domestic bank credit to private sector and banking industry concentration.*
*The results of our empirical study shows that among the variables considered, the loan loss reserve rate, the ratio of cost to income, GDP per capita growth and domestic bank credit to the private sector, have a significant impact on bank profitability, results in line with our expectations, but also with the results of other empirical studies.*

**Keywords:** Profitability; Determinants; Commercial banks; Panel data

**JEL classification:** G21; C33; P52

## 1. Introduction

During the pre-crisis years, the banking sector in Bulgaria and Romania, similar to other states in the Central and Eastern Europe, has known an extremely rapid growth, as a consequence of the liberalization of the internal financial markets and of the opening of the capital accounts which attracted important capital flows and the significant increase of the number of foreign banks. In this context, the competition on the national banking markets has been intensified and has been registered a very rapid financial development.

One of the most significant features of the banking sector in the two countries over the aforementioned period is the extremely accelerated dynamics of the bank loans granted to the economy, which determined the growth of bank profitability, of the credit risk, but also the accumulation of certain major macroeconomic disequilibria.

In the context of the current global crisis, amid the bank loans contraction, the reduction of the interest margin as a consequence of the increase of the financing costs, of the significant deterioration of the quality of the bank loan portfolio and the important increase

of the provisions, the banking sector in the analyzed countries has registered an important profitability decrease.

Our research aims to identify empirically and to analyze the most important internal and external factors which affect the profitability of the commercial banks operating in Bulgaria and Romania, over a period of 10 years (2003-2012).

In order to achieve our goal, the paper is structured as follows: section 2 is dedicated to the specialty literature review, focusing on the studies investigating the European countries; section 3 describes the data, the selected variables and the methodology used in the assessment; section 4 reflects the main results of the empirical analysis while section 5 contains the concluding remarks.

## 2. Literature review

Bank profitability is one of the representative indicators used for the assessment of the banking sector health and soundness and is the main concern of the researchers and of the decision-makers, which are trying to identify and analyze the key factors influencing it.

The review of the specialty literature focused on the European countries, reflects the existence of an important number of studies which are investigating the determinants of the profitability of banks operating in the economic environment in different European countries, such as Molyneux and Thorton (1992), Mendes and Abreu (2003), Staikouras and Wood (2004), Athanasoglou et al. (2006), Iannotta et al. (2007), Pasiouras and Kosmidou (2007), Staikouras, Mamatzakis and Koutsomanoli-Filippaki (2007), Claeys and Vander Vennet (2008), Košak and Čok (2008), Havrylchyk and Jurzyk (2011), Rumler and Waschiczek (2012), Trujillo-Ponce (2013), Dumičić and Ridzak (2013), Gunter et al. (2013).

Athanasoglou et al. (2006) analyze the determinants of the profitability of certain banks in countries in South Eastern Europe over the period 1998-2002. The results of the study reflect mainly that the concentration is positively correlated with bank profitability, while the analyzed macroeconomic factors have a mixed impact.

Iannotta et al. (2007) investigate how the ownership structure can affect the profitability, the cost efficiency and risk in the banking sector in 15 European countries. The results of the empirical study highlight that the private banks are more profitable than the mutual and public sector banks. On the other hand, the banks in the public sector register loans having a weaker quality and a higher insolvency risk, while the mutual banks have a better quality of the assets.

Pasiouras and Kosmidou (2007) investigate the main determinants of the profitability of the commercial domestic and foreign banks in 15 countries of the EU. The authors find that, in the case of domestic banks, the most important factor affecting the profitability is the ratio of equity to assets. Comparatively, in the case of foreign owned banks, the most important determinant of the profitability is the cost to income ratio.

The empirical study carried out by Košak and Čok (2008) evaluates the relationship between bank ownership and bank profitability in six South-Eastern European countries over the period 1995-2004. The authors find that there are no significant differences between the profitability of the domestic and foreign owned banks**.**

Dumičić and Ridzak (2013) investigate the main net interest margin determinants of banks operating in 11 countries in Central and Eastern Europe over the period 1999-2010. The results of the study show that the net interest margins from the banking sectors considered in the sample have decreased over the pre-crisis years, mainly as a consequence of the significant capital entries and of the stable macroeconomic environment. Comparatively, over the crisis years, the net interest margins were significantly influenced by government debt increase, macroeconomic risks increase, credit demand decrease, higher capitalization and the significant increase of the non-performing loans.

## 3. Data, the variables and methodology

Our research focuses on a sample of 14 commercial banks operating in Bulgaria and 15 commercial banks operating in Romania, the analyzed period being of 10 years (2003-2012), therefore we have a total number of 290 observations.

Our sample includes only the commercial banks for which the entire range of data was available for the analyzed period. The data regarding the internal determinants were obtained from the Bureau Van Dijk database and the annual reports of the banks from our sample, and the data regarding the external determinants were supplied by the World Bank (Global Financial Development Database) and by the European Central Bank (Statistical Data Warehouse).

The dependent variable used in our study is the bank profitability, measured by means of two representative indicators, respectively the Return on Average Assets (ROAA) and the Return on Average Equity (ROAE).

The analyzed independent variables are represented by the factors which can affect the bank profitability. According to the aforementioned empirical studies, profitability determinants are divided into two main groups, namely the *internal and the external determinants*. The determinants from the first group are specific to any bank and, therefore, they are the direct result of the managerial decisions (for instance, capital adequacy, asset quality, operational efficiency, liquidity and the bank size). The second group of determinants is connected to the banking sector and to the macroeconomic, institutional and legal environment in which the banks operate. The external determinants currently analyzed in the empirical studies are represented by the concentration of the banking market, the ownership status, GDP growth, the inflation rate and the interest rates.

In our research, we use 11 variables which could affect the banking profitability, respectively the capital adequacy (*EA*), the loan loss reserve rate (*LLR*), the cost to income ratio (*CIR*), the ratio of liquid assets to total assets (*LIQA*), the interest expenses to deposits ratio (*FC*), the non-interest income over total gross revenues (*NIIR*), bank size (*LNTA*), the GDP per capita growth (*GDP*), the inflation rate (*INF*), the domestic bank credit to private sector (*DCPSB*) and banking industry concentration (*CR*). These variables were selected taking into account the criteria of representativeness and availability of data for all the banks from the sample.

According to the results of the previous empirical studies and in accordance with the economic theory, the capital adequacy (expressed through the ratio of total equity to total asset) has a mixed impact on bank profitability. A higher equity-to-asset ratio has a positive impact on profitability because the bank's financing costs are reduced. On the other hand, according to the conventional risk-return hypothesis, a lower equity-to-asset ratio leads to a higher expected return. The variable loan loss reserve rate (LLR) is used as proxy of credit risk and it is expected to have a negative impact on bank profitability, because the significant deterioration of loans quality, especially in the context of the crisis, reduces the profitability.

As for the cost to income ratio, it is expected to have a negative impact on bank profitability.

As regards the liquidity, we expect to notice a negative relationship with the profitability, in accordance with the empirical studies stating that liquid assets generate lower return.

The interest expenses to deposits ratio variable highlights the capacity of a bank to attract deposits at a low cost. Therefore, a low level of this indicator has a positive effect on bank profitability.

Regarding the income diversification of a bank, we have to highlight that within the conditions of the diversification of the activities of a bank, can be registered a growth of the non-interest income in total gross revenues. As a consequence, this variable is expected to positively affect the bank profitability.

Bank size is measured in our research through the natural logarithm of the accounting value of the total assets of bank. According to the empirical studies, a large size can

generate economies of scale and therefore increase the profitability. On the other hand, a large dimension can have a negative effect on profitability, because of the agency costs and of the bureaucracy.

For the economic activity, we use as proxy variable, the GDP per capita growth. An increase of the level of this indicator can lead to an increase in the demand of bank products and services, with a positive impact on profitability. In accordance with the empirical studies, this variable is expected to have a positive impact on bank profitability.

Another variable taken into account is the inflation rate whose effects on bank profitability depend on the extent to which the inflation is anticipated or unanticipated. According to the previous empirical studies, if the inflation is anticipated, the banks increase the interest rates and therefore bank profitability can increase. If the inflation is not anticipated, an increase of the banking costs may appear, determining a decrease in profitability.

Domestic bank credit to private sector measures the importance of bank financing in the economy. A high level of this indicator can lead to an increase of the credit risk, having a negative impact on bank profitability. On the other hand, within the conditions in which bank loans are granted for viable projects, can be registered an increase of profitability (Mirzaei et al., 2013).

Banking industry concentration is expressed in our research through the weight of the assets of the five largest banks in the total assets of the commercial banks. According to the empirical studies, the relationship between this variable and bank profitability is not clear.

In order to assess the determinants of bank profitability, our study is based on the following model:

$$Dv_t = c + \sum_{i=1}^{N} \alpha_i \, BSV_{it} + \sum_{j=1}^{M} \beta_j MV_{jt} + d + \mu_i$$

where:

$Dvt$ – Dependent variable, represented by banking profitability; BSV – Bank specific variables; MV – Macroeconomic variables; IS - Industry-specific variables;

i, j, k – counters by categories in independent variables; t – Time period (2003-2012); N, M – numbers of independent variables; α, β – Coefficients (estimated parameters); c-constant; ui – Idiosyncratic errors.

## 4. Empirical Results and Discussions

The descriptive statistics of the variables included in our study is presented in table 1. We can see averages, standard deviations, the minimal and maximal values of dependant and independent variables.

**Table 1:** Descriptive statistics of the variables used in our analysis

| Variables | Obs. | Mean | Std. dev. | Min | Max |
|-----------|------|------|-----------|------|------|
| ROAA | 290 | 1.07 | 1.57 | -10.94 | 4.405 |
| ROAE | 290 | 8.85 | 20.51 | -256.54 | 43.60 |
| EA | 290 | 12.19 | 7.23 | 4.22 | 68.93 |
| LLR | 290 | 4.72 | 4.89 | 0.16 | 34.99 |
| CIR | 290 | 65.26 | 21.32 | 14.35 | 157.48 |
| LIQA | 290 | 29.78 | 17.71 | 1.92 | 109.32 |
| FC | 290 | 5.38 | 5.01 | 0.82 | 40.00 |
| NIIR | 290 | 33.07 | 13.78 | -4.00 | 70.81 |
| LNTA | 290 | 8.12 | 1.42 | 4.28 | 11.25 |
| GDP | 290 | 4.37 | 4.51 | -6.02 | 9.75 |
| INF | 290 | 6.55 | 3.45 | 2.16 | 15.27 |

| DCPSB | 290 | 43.43 | 19.66 | 13.74 | 75.39 |
|-------|-----|-------|-------|-------|-------|
| CR | 290 | 54.82 | 2.97 | 50.34 | 60.10 |
| dummy | 290 | 0.517 | 0.501 | 0 | 1 |

Source: authors' calculations

The correlation matrix between independent variables can be seen from figure 1. The coefficients are low which suggests no multicollinearity problems.

*Panel Data Multiple Linear Regression Model Results*
In panel data models, panel id variable is Bank, and time variable is Year. The results of fixed effects (within) regression, naive and robust (coefficient test in table), and random effects (default standard errors and robust – in table robust is shown at coefficient test) are shown in table 2.
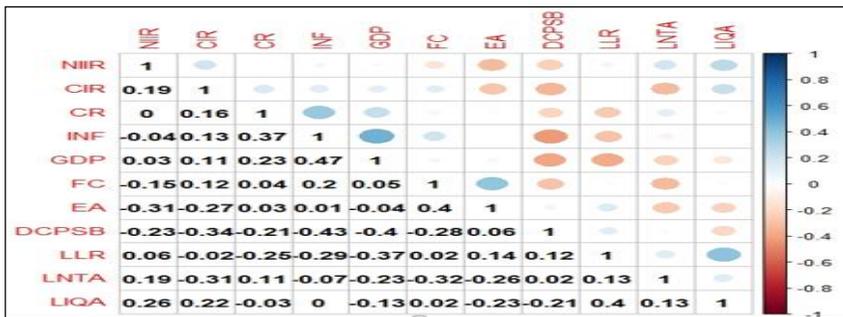


**Figure 1: Correlation matrix**
Source: authors' calculations

Our empirical results highlight the key factors affecting the profitability of the commercial banks in Bulgaria and Romania. Therefore, the loan loss reserves rate has a major impact on the profitability. The coefficients are statistically significant and reflect a negative relationship, in accordance with our expectations and consistent with the results of certain empirical studies (Košak and Čok, 2008; Dumičić and Ridzak, 2013; Trujillo-Ponce, 2013; Ayaydin and Karaaslan, 2014; Dietrich and Wanzenried, 2014). According to our estimates, the increase of the loan loss reserves rate by 1% would determine the reduction of the Return on Average Assets by 0.109% (fixed effects model) and by 0.114% (random effects model). As for the Return on Average Equity (ROAE), the decrease is by 1.659% (fixed effects model) and by -2.029% (random effects model). These results can be explained by the fact that within the current global crisis, the banks from the two countries have registered an important (even alarming) increase of the nonperforming loans, which has determined the creation of reserves in order to cover the losses from loans, with a negative impact on bank profitability, mainly in Romania. On the other hand, as a consequence of the significant reduction of the supply and demand for loans, loan loss reserve rate has known an important increase, mainly in the Romanian banking sector, which restricted significantly bank lending.

For the entire sample, the coefficients of the ratio of cost to income (CIR) are negative and indicate a major impact on profitability (ROAA), in line with our expectations, but also consistent with the results obtained by Pasiouras and Kosmidou (2007), Košak and Čok (2008), Trujillo-Ponce (2013), Dietrich and Wanzenried (2014). Our estimates show that a 1% increase in the ratio of cost to income would lead to the reduction of the Return on Average Assets by 0.039% (fixed effects model) and by 0.040% (random effects model). We notice, mainly in the case of the Romanian banks, a significantly higher level of the

cost to income ratio, in the context of the crisis, as a consequence of the rapid growth of the provisions expenses and the diminution of bank operational income.

Another main determinant identified by our empirical analysis is GDP per capita growth. The coefficient is positive and it has an important statistical significance, in line with our expectations and consistent with the results obtained by Mendes and Abreu (2003), Athanasoglou et al. (2006), Košak and Čok (2008), Rumler and Waschiczek (2012), Trujillo-Ponce (2013), Dietrich and Wanzenried (2014). Our results can be explained through the fact that an increase in the level of the indicator improves the solvability of the borrowers and increases the demand of bank products and services, with a positive impact on bank profitability.

The profitability of the banks included in our study has also been influenced by the domestic bank credit to private sector. The coefficients of the variable are statistically significant and negative, in line with our expectations and consistent with the results of Ayaydin and Karaaslan (2014). These effects can be explained through the fact that in the years before the crisis Romania and Bulgaria have recorded a significant and rapid (even unsustainable) increase of bank loan ratio and, implicitly, an important growth of the credit risk, with a negative impact upon bank profitability.

Based on dummy variable, Bulgaria performed better, since the dummy has a negative sign.

**Table 2:** Empirical results

| | Dependent variable | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ROAA fix | | | ROAA random | | | ROAE fix | | | ROAE random | | |
| | BG | RO | both | BG | RO | both | BG | RO | both | BG | RO | both |
| EA | 0.020 (0.022) | 0.088 (0.069) | 0.033 (0.043) | 0.019 (0.013) | 0.101 (0.075) | 0.027 (0.032) | -0.328 (0.225) | 1.502 (1.020) | 0.482 (0.664) | -0.377* (0.195) | 1.662 (1.09) | 0.247 (0.544) |
| LLR | -0.180*** (0.047) | -0.100*** (0.033) | -0.109*** (0.024) | -0.134*** (0.043) | -0.115*** (0.029) | -0.114*** (0.021) | -1.446*** (0.385) | -1.881*** (0.700) | -1.659*** (0.568) | -1.160*** (0.325) | -2.532** (0.80) | -2.029*** (0.798) |
| CIR | -0.033*** (0.010) | -0.045*** (0.014) | -0.039** (0.011) | -0.033*** (0.007) | -0.046*** (0.014) | -0.040*** (0.011) | -0.366*** (0.116) | -0.207 (0.260) | -0.193 (0.192) | -0.358*** (0.096) | -0.258 (0.20) | 0.247 (0.544) |
| LIQA | -0.004 (0.010) | -0.001 (0.010) | 0.0004 (0.007) | -0.003 (0.008) | 0.004 (0.009) | 0.003 (0.005) | -0.069 (0.086) | 0.114 (0.163) | 0.013 (0.096) | -0.032 (0.068) | 0.196 (0.15) | 0.081 (0.101) |
| FC | 0.033** (0.013) | -0.078 (0.128) | 0.015 (0.030) | 0.032*** (0.010) | -0.089 (0.107) | 0.006 (0.032) | -0.046 (0.162) | -0.113 (0.996) | 0.180 (0.214) | -0.072 (0.092) | -0.384 (0.107) | -0.061 (0.198) |
| NIIR | 0.003 (0.005) | -0.017 (0.027) | -0.011 (0.017) | 0.002 (0.004) | -0.007 (0.017) | -0.001 (0.012) | -0.016 (0.092) | -0.438 (0.553) | -0.310 (0.377) | -0.024 (0.092) | -0.112 (0.017) | -0.091 (0.222) |
| LNTA | 0.047 (0.376) | 0.026 (0.377) | 0.001 (0.310) | 0.175 (0.141) | 0.095 (0.254) | 0.143 (0.161) | -0.644 (3.964) | 10.674 (7.859) | 6.185 (5.282) | -0.229 (1.754) | 5.839 (0.254) | 4.259 (3.437) |

| GDP | INF | DCPSB | CR | dummy | C |
|---|---|---|---|---|---|
| 0.040 (0.029) | 0.017 (0.038) | -0.017 (0.013) | 0.011 (0.043) | | |
| 0.063* (0.034) | -0.022 (0.087) | -0.008 (0.030) | 0.057 (0.071) | | |
| 0.075*** (0.020) | -0.036 (0.036) | -0.016 (0.013) | 0.032 (0.023) | | 0.015 (0.026) |
| 0.034 (0.032) | 0.030 (0.039) | -0.027*** (0.004) | 0.037 (0.036) | | 0.014 (0.071) |
| 0.063* (0.033) | -0.027 (0.091) | -0.017 (0.035) | 0.042 (0.089) | -0.009** (0.005) | 0.017 (0.023) |
| 0.066*** (0.013) | -0.020 (0.028) | -0.023*** (0.006) | 0.042* (0.023) | | |
| 0.246 (0.244) | 0.422 (0.281) | -0.166 (0.142) | 0.105 (0.376) | | |
| 1.020** (0.404) | -1.135 (1.063) | -0.726 (0.459) | -0.464 (0.584) | | |
| 0.848*** (0.338) | -0.359 (0.540) | -0.323 (0.199) | 0.253 (0.260) | | 0.411 (0.305) |
| 0.187 (0.256) | 0.504* (0.293) | -0.211*** (0.075) | 0.264 (0.294) | | 0.152 (0.071) |
| 0.812** (0.033) | -1.318 (1.04) | -0.481 (0.035) | -0.486 (0.089) | | |
| 0.701*** (0.208) | -0.261 (0.394) | -0.235** (0.100) | 0.209 (0.206) | -0.133* (0.076) | 0.004 (0.331) |

Note: $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$

Source: authors' calculations using Stata

*The results of the statistical tests*

The results that we have obtained are consistent, being confirmed by the statistical test outcome. The variance inflation factor (vif) results suggest that coefficients indicate no problem. The results are presented in table 3.

**Table 3:** Variance Inflation Factor

| EA | LLR | CIR | LIQA | FC | NIIR |
|---|---|---|---|---|---|
| 1.789901 | 1.709169 | 2.051965 | 1.517445 | 1.606327 | 1.271805 |
| LNTA | GDP | INF | DCPSB | CR | dummy |
| 3.374271 | 1.839707 | 1.682070 | 3.814506 | 1.548857 | 6.327617 |

Source: authors' calculations

The poolability test results shows that we should accept the presence of individual effects (both ROAA and ROAE), so panel data estimation is better than pooled OLS model. Hausman Test suggests what model is more appropriate, but we choose to estimate both models (fixed and random), based on Baltagi's suggestion to also use the information criteria in order to choose between FE and RE models (Baltagi, 2008). The Breusch-Pagan BP test confirms the presence of heteroskedasticity. For all tests the results are presented in table 4.

**Table 4: The results of the statistical tests**

| Test | | p value results | |
|---|---|---|---|
| | | ROAA | ROAE |
| F test for individual effects | BG | p-value = 1.734e-05 | p-value = 0.002135 |
| | RO | p-value = 0.074 | p-value = 0.074 |
| | Overal | p-value = 0.0004947 | p-value = 0.0006601 |

| Lagrange Multiplier Test - (Breusch-Pagan) | BG | p-value = 0.002135 | p-value = 4.669e-05 |
|---|---|---|---|
| | RO | p-value < 2.2e-16 | p-value < 2.2e-16 |
| | Overal | p-value = 0.003967 | p-value = 0.02779 |
| Hausman Test | BG | p-value = 0.0127 | p-value = 0.844 |
| | RO | p-value = 0.241 | p-value = 0.241 |
| | Overal | p-value = 0.6221 | p-value = 0.006294 |

Source: authors' calculations

## 5. Conclusion

Our study aimed to identify and analyze the main factors which affect the profitability of the commercial banks operating in Bulgaria and Romania.

Our research shows that bank profitability is influenced both by internal factors (bank-specific) and by external factors. Therefore, among the internal factors included in our analysis, our empirical results highlight that the profitability of the analyzed banks has been significantly affected by the loan loss reserves rate and by the ratio of cost to income. As regards the external factors, our study finds out that GDP per capita growth and the domestic bank credit to private sector had a significant impact on the profitability of the analyzed banks.

The identification of the factors affecting bank profitability has a significant importance (Chmielewski and Krześniak, 2004) because bank profits constitute one of their capital sources and allow the growth of the capital safety buffer, which can be used for the absorption of the eventual losses which would appear within the conditions of the manifestation of certain unforeseen chokes. Moreover, the profitability level influences banks competitiveness, with a main impact on their credibility.

The monitoring of bank profitability level, of its evolution, but also of the influence factors presents a main interest both for bank managers and for the monetary authorities, for the purpose of identifying measures which can allow the amelioration and the consolidation of banks health, stability and performance.

Taking into consideration the importance of this topic, we consider it appropriate as a future research direction the extension of our analysis through an empirical investigation of the impact of other internal and external factors on the profitability of banks in the 28 member states of the EU.

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# THE GREGARIOUS BEHAVIOR OF INVESTORS FROM BALTIC STOCK MARKETS

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**Abstract:** *The main objective of this research is to investigate market participants' gregarious behaviour in Baltic stock markets, namely Lithuania, Latvia and Estonia during the period January 2003-December 2013. The herding behaviour derives from the investors' irrationality, who trade financial assets based on their positive expectations about prices future growth, generating manias among other market participants, thus ignoring the real return rates and the risk levels of their investments.The investors' irrational behaviour is influenced by actions, feelings and impulses that are intertwined: mimicry, fear, trust, greed, optimism, pessimism, euphoria, panic. These features highlight an erroneous perception of investors in point of unsustained increase in prices, which has been generated by the stock prices deviations from their fundamental value.Under these premises, optimism, overreaction and speculative bubbles are appearing on the market and may constitute triggering factors of a financial crash.The probability of the occurrence of the speculative bubbles and financial crashes is influenced by the continuous entry on the market of new investors and less informed participants, which often act based on impulse, following a benchmark, without considering their own analysis and information that they hold. The existence of a "collective behaviour" of the investors, which is manifested by their tendency to imitate other market participants actions and to "follow the herd", so ignoring their own beliefs, may increase market sensitivity to shocks and the probability of the occurrence of the systemic risk.In order to identify the investors' herding behaviour, I have applied an adjusted CSSD model proposed by (Yao, Ma, Peng He, 2014), which implies the inclusion of two additional variables, the first one, to reduce the effect of multicollinearity and a second one, a lag term of the dependent variable, in order to improve the power of the model. Furthermore, I have constructed portfolios ranked according to daily market capitalization, by using quartile analysis, having as objective the identification of herding behaviour for small, medium and large companies. I have obtained mixed results. In the case of Lithuanian stock market, there is no statistical evidence in favour of herding behaviour of investors. Moreover, in the case of Latvia, the findings indicate a strong presence of herding behaviour in the case of large companies. In the case of Estonia, the empirical results highlighted the existence of herding behaviour for medium companies, which can be explained by the investors' tendency to imitate the strategies of others market participants and to ignore their own beliefs.*

**Keywords:** gregarious behaviour, emerging markets, quartile analysis

**JEL classification:** C1, C5, G1

## 1. Introduction

One of the most debated topic in the financial literature is the efficient market theory, which was developed by (Fama, 1970) and highlights that the price of a financial asset instantly and entirely reflect all the available information from the market and the investors behave rationally. Under these assumptions, the individual and institutional investors will have an equal access to information on the market and will follow passive strategies, because all the actions taken by the market participants in their attempt to "beat the market" would be in vain, as indicated by (Shleifer, 2000). Beginning with the 80's, the

research realised by (Grossman, Stiglitz, 1980), (De Bondt, Thaler, 1985), (Shiller, 2003) put into questions the hypothesis of the efficient market theory, therefore the authors advocate for the predictability of financial markets and the existence of irrational behaviour of investors, which is influenced by their actions and feelings that intersect with each other, such as: imitation, fear, trust, greed, optimism, pessimism, euphoria, panic. Thus, (Grossman, Stiglitz, 1980) pointed out that the assumption according to which the capital markets are in equilibrium and there are no arbitrage opportunities is not supported when the arbitrage is costly and they have proposed a model in which prices reflect information held by informed investors, but only partially, so that the market participants who allocate resources to obtain information, will be rewarded. Furthermore, (De Bondt, Thaler, 1985) have compared portfolios with different composition, on the one hand a portfolio of the companies with the best performance from the market, and on the other hand a portfolio of non-performing companies from the market. The authors have concluded that the financial asset prices react disproportionately, so the financial assets prices are predictable, depending on the evolution from the past. (Shiller, 2003) has examined the studies that refer to the efficient market theory, reviewing its main flaws and has exposed the significance of the behavioural finance concept built on the correlation between the stock markets evolution and human psychology. Moreover, the author pointed out that the financial crashes originate in human groundlessness, which affect the main role that stock markets hold in an economy, namely optimal allocation of resources towards effective business sectors.

Therefore, in response to all weaknesses of the efficient market theory, in the '90s a new concept has its genesis, namely the behavioural finance, as a replication to anomalies that cannot be explained by traditional financial models. (Sornette, Johansen, 1997) have sustained the replacement of the usual interpretation of the efficient market theory, according to which the market participants extract and aware integrate, through their actions, all the available information in prices, with a new interpretation, according to which the market as a whole may exhibit an "emergent behaviour", which is not shared by any of its constituents. The efficient market hypothesis will be recovered, when the investors will be able to extract and interpret this "collective information".

Furthermore, I stop my attention on the concept of herding behaviour, which is situated on the border between finance and psychology. I consider relevant the opinion of (Christie, Huang, 1995), according to which the gregarious behaviour of investors occurs when the individuals ignore their own beliefs and take their investment decisions solely on the basis of collective actions in the market, even when they disagree with market forecasts.

(Olsen, 1996) argues that the probability of herding behaviour manifestation is influenced by the difficulty in forecasting earnings per share. In this context, remains a challenge for researchers to identify an explanatory variable to quantify the investor psychology, as it can provide relevant information in the development of the financial models used to predict the evolution of financial assets prices.

The objective of this paper is to investigate the existence of herding behaviour of investors from the Baltic stock markets. The emerging stock markets are particularly exposed to the presence of herding behaviour, due to the existence of less experienced participants, who often act based on impulse, following the market trend and ignoring their own beliefs. The novelty of this research is that examines the existence of herding behaviour of investors from Baltic stock markets at portfolio level, by taking into account the market capitalization. The paper is structured as follows: Section 2 reviews the literature, Section 3 offers information regarding the data and methodology applied in order to quantify the existence of herding behaviour, Section 4 highlights the empirical results and Section 5, concludes.

## 2. Literature review

Specialized studies realized over time indicate the differences between theoretical models and econometric models used to quantify the herding behaviour of investors. Theoretical frameworks make reference to abstract models in order to identify the features of herding, while the empirical research only verifies the appearance of a "collective behaviour" on the market. In the literature, herding behaviour has become a debated topic for researchers, which try to provide eloquent answers regarding its impact on capital markets evolution.

Regarding the developed stock markets from Asia, (Tan, Chiang, Mason, Nelling, 2008) have investigated the investors' herding behaviour on the Chinese stock markets, both A and B, by using CSAD and CSSD models. Their findings indicate that the herding behaviour occurs on short time intervals. Moreover, there is an asymmetry in herding, it is most probable to occur during bull markets and in conditions of high volumes traded on the market. Another research for Asian stock markets was performed by (Demirer, Kutan, Chen, 2010) for the Taiwanese stock market. Compared with other studies, this research comes to enrich the financial literature by applying the state space model together with CSAD and CSSD and by conducting an analysis at sector level. The results provide evidence of herding behaviour for all sectors of activity.

Moreover, (Chiang, Li, Tan, 2010) have examined the Chinese stock market and as a novelty, the authors have introduced the quantile analysis, which pointed out the existence of herding behaviour, in particular in the case of lower quantiles. Regarding the impact of global financial crisis from 2007-2009, (Teng, Liu, 2014) have investigated the main important Chinese stock markets: Taiwan, Hong Kong, Shangai, Shenzen by using the state space model. The results obtained provide evidence of herding behaviour for each individual market and a contagion phenomenon between these markets, which was realized through investors' gregarious behaviour. Moreover, (Chang, Lin, 2015) have examined the herding behaviour of investors at group level, by taking into consideration fifty stock markets during a period of forty six years and the impact of national culture on herding behaviour.

The results indicate the existence of herding behaviour for eighteen stock markets and the main features that influence the investors' behaviour are: behavioural traps, excessive optimism, high confidence and mood effect.

Moreover, I have reviewed some studies which refer to the developed markets from Europe. (Khan, Hassairi, Viviani, 2011) have studied the investors' herding behaviour by taking into account the stock markets' performance and size from France, Great Britain, Germany and Italy. The results of Salmon and Hwang model (2001, 2004, 2008) provide evidence of herding for the four capital markets which have been analyzed. Moreover, (Mobarek, Mollah, 2013) recourse to a comparative analysis of herding behaviour between Northern European countries and PIIGS countries. Their findings suggest the existence of herding behaviour both for developed and emerging markets.

Regarding the European emerging markets, I mention the research that was realized by (Caporale, Economu, Philippas, 2008) for the Greek stock market. Using the CSAD and CSSD model, the authors have concluded the existence of herding behavior during the crisis from 1999 and subsequently the investors become more rational due to new regulations and the presence of the foreign institutional investors. (Filip, Pochea, Pece, 2014) have analyzed the herding behavior of investors from CEE stock markets by applying the CSAD model. The results highlighted the existence of herding behavior for Romania, Bulgaria, Hungary and Czech Republic, except Poland. Moreover, (Filip, Pochea, 2014) have examined the global financial crisis period and the impact of volatility on herding behavior. The results pointed out an assymmetric effect of volatility on herding behavior, respectively, it is manifested in conditions of low volatility in Bulgaria, Hungary and Poland and in conditions of high volatility in Czech Republic.

## 3. Data and methodology

In order to investigate the existence of herding behaviour for the investors from Baltic stock markets (respectively, Lithuania, Latvia and Estonia), I have used daily returns for the companies listed on these stock markets, corresponding to the period 2003-2013. The analysis was realized at portfolio level based on daily logarithmic returns, calculated by using the following formula:

$$R_{i,t} = \ln\left(\frac{P_{i,t}}{P_{i,t-1}}\right)$$

where, $P_{i,t}$ represents the closing price of the stock $i$ for the day $t$. As proxy variables for market portfolio I have used the market indices (OMXV, RIGSE and TALSE).

The portfolio analysis was performed by using the quantiles: 10, 25, 50, 75, 90. The portfolio composition was determined according to the level of daily market capitalization.

The statistical methodology used to identify the existence of gregarious behaviour is the adjusted CSSD method, which was developed by (Yao, Ma, Peng He, 2014).

The CSSD model was first developed by (Christie, Huang, 1995) as a measure of return dispersions. The cross-sectional standard deviations of returns are determined based on the following equation:

$$CSSD_t = \sqrt{\frac{\sum_{i=1}^{N}(R_{i,t} - R_{m,t})^2}{N-1}}$$

where, $CSSD_t$ constitutes the return dispersion at time $t$, $N$ represents the number of companies from the portfolio, $R_{i,t}$ represents the stock return of company $i$ at time $t$ and $R_{m,t}$ represents the market return at time $t$. The existence of herding behavior can be identified if there is a low value of dispersion around the mean.

The equation of the model is:

$$CSSD_t = \alpha + \gamma_1|R_{m,t}| + \gamma_2(R_{m,t})^2 + \varepsilon_t$$

The variable $R_{m,t}^2$ was introduced in order to capture the nonlinear component, which can be identified mainly during the periods characterized by extreme market conditions. The negative and statistically significant values of $\gamma_2$ coefficient provide evidence of gregarious behavior of investors.

Based on the improvements that were introduced by (Yao, Ma, Peng He, 2014) for the CSSD model, in the current paper, I also have introduced two additional variables, namely: $\overline{R_m}$ - the arithmetic mean of the variable $R_{m,t}$ , which has the purpose to reduce the effect of multicollinearity and a lag term of the dependent variable $CSSD_{t-1}$ which has the objective to increase the power of the model. For the estimation of the model, I have applied the Newey West (1997) methodology.

After the inclusion of the new variables in order to improve the power of the model, the final equation of the model used to quantify the presence of gregarious behaviour is:

$$CSSD_t = \alpha + \gamma_1|R_{m,t}| + \gamma_2(R_{m,t} - \overline{R_m})^2 + \gamma_3 CSSD_{t-1} + \varepsilon_t$$

## 4. Empirical results

In this section, I will estimate the adjusted CSSD model, that was proposed by (Yao, Ma, Peng He, 2014) in order to identify the gregarious behaviour of investors from Baltic stock markets, based on quartile portfolios which were developed from a sample of companies listed on the Baltic stock exchanges, grouped based on the daily market capitalization.

The Table 1 presents the results of the adjusted CSSD model for Lithuanian stock market. According to the results presented in the below table, in the case of Lithuanian stock market, there is no statistical evidence in favour of herding behaviour of investors. None of the $\gamma_2$ coefficients are negatively and statistically significants, highlighting that the market

capitalization does not provides information about the investors' behaviour.

**Table 1:** Estimated results of daily $CSSD_t$ for portfolios constructed based on market capitalization from Lithuania stock market

| Portfolio | $Q_1 = 10\%$ | $Q_2 = 25\%$ | $Q_3 = 50\%$ | $Q_4 = 75\%$ | $Q_5 = 90\%$ |
|---|---|---|---|---|---|
| $\alpha$ | 0.0083*** | 0.0067*** | 0.0103*** | 0.0108*** | 0.0081*** |
| | (3.341) | (3.642) | (6.975) | (10.555) | (16.456) |
| $\gamma_1$ | 0.0909 | 0.0186 | -0.3206 | 0.4595*** | 0.3969*** |
| | (0.2278) | (0.063) | (-1.348) | (3.591) | (7.1751) |
| $\gamma_2$ | 4.5832 | 4.6511 | 9.0831*** | 0.4881 | 1.2989 |
| | (0.8816) | (1.143) | (2.947) | (0.251) | (1.561) |
| $\gamma_3$ | 0.5569*** | 0.5558*** | 0.2260*** | 0.4146*** | 0.4311*** |
| | (18.487) | (20.919) | (6.3406) | (24.066) | (26.259) |
| $Adj. R^2$ | 0.3116 | 0.3103 | 0.0618 | 0.1934 | 0.2906 |

Source: Author calculation; *** statistical significance at the 1% level; ** statistical significance at the 5% level; * statistical significance at the 10% level; () in the brackets are presented the values recorded by $t\ statistic$ .

**Table 2:** Estimated results of daily $CSSD_t$ for portfolios constructed based on market capitalization from Latvia stock market

| Portfolio | $Q_1 = 10\%$ | $Q_2 = 25\%$ | $Q_3 = 50\%$ | $Q_4 = 75\%$ | $Q_5 = 90\%$ |
|---|---|---|---|---|---|
| $\alpha$ | 0.0085*** | 0.0418*** | 0.0118*** | 0.03105*** | 0.01218*** |
| | (5.399) | (9.988) | (5.062) | (18.348) | (17.644) |
| $\gamma_1$ | 0.5050** | 0.3604 | 0.5948** | 0.6605*** | 0.9163*** |
| | (2.532) | (0.710) | (2.1851) | (3.214) | (11.961) |
| $\gamma_2$ | 0.4991 | 3.0206 | -1.8188 | 0.3953 | <span style="color:red">-6.1361***</span> |
| | (0.129) | (0.710) | (-0.365) | (0.098) | <span style="color:red">(-4.092)</span> |
| $\gamma_3$ | 0.2857*** | 0.0453** | 0.1097*** | 0.0484** | 0.2337*** |
| | (14.924) | (2.126) | (4.483) | (2.562) | (13.274) |
| $Adj. R^2$ | 0.0917 | 0.0027 | 0.0189 | 0.0173 | 0.1671 |

Source: Author calculation; *** statistical significance at the 1% level; ** statistical significance at the 5% level; * statistical significance at the 10% level; () in the brackets are presented the values recorded by $t\ statistic$ .

A different output can be observed in the case of Latvia, where the $\gamma_2$ coefficient is negative and statistically significant for the portfolio which is composed by stocks with the highest market capitalization from the market. The results indicate that the occurrence of herding behaviour is frequent among the largest stocks from capital market from Latvia.

**Table 3:** Estimated results of daily $CSSD_t$ for portfolios constructed based on market capitalization from Estonia stock market

| Portfolio | $Q_1 = 10\%$ | $Q_2 = 25\%$ | $Q_3 = 50\%$ | $Q_4 = 75\%$ | $Q_5 = 90\%$ |
|---|---|---|---|---|---|
| $\alpha$ | 0.0108*** | 0.0165*** | 0.0148*** | 0.0109*** | 0.0075*** |
| | (4.232) | (10.336) | (15.545) | (15.838) | (15.135) |
| $\gamma_1$ | 0.5792 | 0.2597 | 0.4961*** | 0.4856*** | 0.42605*** |
| | (0.865) | (1.496) | (5.1319) | (6.2629) | (7.4022) |
| $\gamma_2$ | 2.4419 | 0.6988 | <span style="color:red">-3.0587*</span> | -1.9813 | 0.5585 |
| | (0.081) | (0.226) | <span style="color:red">(-1.752)</span> | (-1.325) | (0.5054) |
| $\gamma_3$ | 0.3126*** | 0.3822*** | 0.3848*** | 0.4205*** | 0.4203*** |
| | (5.311) | (16.081) | (17.802) | (24.853) | (25.441) |
| $Adj. R^2$ | 0.1153 | 0.1554 | 0.1942 | 0.2175 | 0.2643 |

Source: Author calculation; *** statistical significance at the 1% level; ** statistical significance at the 5% level; * statistical significance at the 10% level; () in the brackets are presented the values recorded by $t\ statistic$.

For Estonia, the findings suggest that market participants exhibit a gregarious behaviour for medium quantiles, while there is no evidence of herding in the case of small and large companies. The existence of herding behaviour in the case of medium companies can be explained by the investors' tendency to imitate the strategies of others market participants and to ignore their own beliefs.

## 5. In conclusions

This paper investigated the presence of investors' herding behaviour from Baltic stock markets, during the period January 2003-December 2013, by using an adjusted CSSD model, in order to correct for multicolinearity and to improve the power of the model.

In order to provide a pertinent image of the existence of herding behaviour, I have constructed five portfolios based on the market capitalization, by using quantiles. The empirical results were mixed. In the case of Lithuania, there is no evidence of herding, which may be explained by the existence of an adequate quality of information on the market. Furthermore, in the case of Latvia, the value recorded by $\gamma_2$ coefficient is negative and statistically significant, the high value of the coefficient provides a strong evidence of herding in the case of large companies, suggesting the existence of less experienced investors that will adopt "follower strategies", which assume that small investors will analyze the actions of other market participants and will choose to imitate their trading strategies which they consider more appropriate. In the case of Estonia, the results provide evidence of herding in the case of medium companies, indicating that the less informed investors tend to imitate the collective behaviour from the market, ignoring their own beliefs.

I conclude that in the development of financial models the informed investors should include a variable in order to quantify the market participants' psychology, having as a purpose to provide pertinent information in forecasting the evolution of stock prices, so avoiding the biases that can be introduce by herding behaviour, when realizing the estimations.

## 6. Acknowledgements

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# IDIOSYNCRATIC RISK AND SYSTEMIC RISK IN THE EUROPEAN BANKING SYSTEM

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**Abstract:** *This paper assesses the predictability of Conditional Value at Risk measure in estimating systemic risk and contagion effects. Using the OLS panel estimation technique applied for a sample of European banks we highlight the link between systemic risk and a range of balance sheet indicators over 2008-2011. The empirical results show that future contributions of banks to systemic risk can be reduced by adjusting countercyclical the banks' asset and liability portfolios.*

**Keywords:** idiosyncratic risk, systemic risk, loan to deposits, capitalization

**JEL classification:** G01, G28

## 1. Introduction

One of the main tasks of supervisory authorities is to implement an effective early warning system regarding systemic events that keeps under control the spread of contagion from one bank to another and facilitates the prudential supervision of the banking system. However, this approach must control the individual banks' contribution to systemic risk resulting from a collapse of the entire system.

In terms of banking supervision, the control of banks' idiosyncratic risk is performed according to the Basel Agreement that establishes variation limits of the Value at Risk indicator. Moreover, the capital adequacy ratio is determined based on historical VaR estimations for different elements of the bank's portfolio and depending on a risk margin that captures the sensitiveness of the portfolio to changes in the market environment. Whenever the bank is below the minimum capital adequacy recapitalizations are required. But this way of treating each bank separately and not as a part of a system led to erroneous predictions regarding the real risks and also their magnitude. From this perspective, it is necessary to implement control measures that take into account the degree of interdependence between banks, but also the connections between the banking markets and other financial markets.

Considering this background, the aim of our paper is to demonstrate the predictability offered by the Conditional Value at Risk measure in estimating systemic risk and contagion effects. Using the OLS panel estimation technique applied for 53 European banks we highlight the link between banks' contribution to systemic risk estimated though Conditional Value at Risk and a range of balance sheet indicators over 2008-2011 period. These indicators reflect several characteristics of banks like the degree of indebtness, the degree of liquidity, but also the maturity mismatch between assets and liabilities. The final goal is to propose improvements in the supervisory measures, reflecting possible counter-cyclical adjustment of banks' contribution to systemic risk. More specifically, we demonstrate that the future contribution of banks to systemic risk can be reduced by adjusting countercyclical the banks' asset and liability portfolios.

We are in line with Adrian and Brunnermeier (2010) who proposed a counter-cyclical approach to capital adequacy regulations using the measure "Conditional Value at Risk" (CoVaR). Analyzing during 1986-2000 period a number of 1,269 financial companies listed on the US stock market (commercial banks, brokers and dealers, insurance companies and real estate companies) they found a close link between the present value of systemic risk indicators estimated by the CoVaR measure and the previous value of financial companies analyzed. Among other studies that treat the problem of pro-cyclicality of risk measures and prudential regulations are those of Adrian and Shin (2010) and Gorton and Metrick (2010). Brunnermeier and Pedersen (2009), as well as Brunnermeier and Sannikov (2009), highlight the link between the pro-cyclical behavior of banks during the crisis and the forced selling of asset. Wong (2011) developed buVaR (Bubble Value at Risk), another measure of systemic risk assessment and contagion. It is recommended to be used for the countercyclical regulation of systemic risk, as it takes into account structural breaks generated by speculative bubble in the market.

The paper is organized as follows. Section 2 presents the data. Section 3 describes the methodology used. Section 4 gives the results. Finally, section 5 concludes.

## 2. Data analysis

The contribution of each bank to systemic risk is estimated using the Conditional Value at Risk method. This is determined using the returns of the stock exchange of listed financial institutions and market indices that capture the developments in the interbank markets, capital markets and government loans markets: the interest rate on government bonds issued by Euro area countries with a maturity 10 years (GB10y); the index of the banking sector in Central and Eastern Europe (CECE Banking Index); the representative index of the largest 600 US companies in terms of market capitalization (STOXX 600 Index Americans); the index of 64 Euro area financial companies (EURO STOXX Financials Index); and, the interbank interest rate on unsecured borrowings in the Eurozone with a maturity of three months (3M Euribor).

The indicators that reflect each bank's specific risk profile have been calculated on the basis of quarterly accounts (Table 1). They are extracted from the data provided by Thomson Reuters, and reflect the following financial conditions: the degree of indebtness expressed by the ratio Total assets / Total equity; the degree of mismatch in the maturities of assets and liabilities expressed by the ratio (Short term debt - Cash) / Total Debt; the size of banks represented by total assets; and, the liquidity situation of banks expressed through the ratio Loans / Deposits that reflecting the stability of funding sources and the ability to meet immediate liquidity shocks

### Tabel 1. Description of the variables

| Symbol | Significance | Calculation | Source |
|--------|-------------|-------------|--------|
| LVG | Total assets/ Total equity | log (Total assets/ Total equity | Thomson Reuters |
| nmAL | (Short term debt - Cash) / Total Debt | log (((Short term debt - Cash) / Total Debt) | Thomson Reuters |
| TA | Total assets | log (Total assets) | Thomson Reuters |
| LTD | Loans / Deposits | log (Loans / Deposits) | Thomson Reuters |

*Source: authors'calculation*

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### 3.Methodology

Through a panel analysis applied on 53 European banks we want to highlight the link between banks' contribution to systemic risk and a number of variables that capture the liquidity positions of banks, the degree of mismatch in the maturities of assets and liabilities, size and indebtedness, over the 2008-2011 period. We use as dependent variable systemic risk contribution of each bank (estimated by CoVaR indicator), and the explanatory variables will be represented by indebtedness (LVG), the degree of mismatch in the maturities of assets and liabilities (nmAL),t he size of financial institutions (TA) and the ratio between loans and deposits (LTD). For balance sheet items we use quarterly data. To capture the risk generated by the transnational banks analyzed data were extracted from the consolidated balance sheet.

Data on the variables correspond to the time period Q1 2008 - Q3 2011. This was chosen in accordance with the recommendations of the Basel Committee on systemic risk estimation. A recent period capture the latest changes that took place in the banking system (mergers and acquisitions, sale of business lines, reshaping certain lending activities and derivative trading) and the most recent events in the financial markets which took a new turn in the mid-2008.

In order to estimate the relationship of dependency between systemic risk and the set of specific banking variables we use the following relationship:

$$CoVaR_{it} = \alpha_0 + \alpha_1 LVG_{it} + \alpha_2 nmAL_{it} + \alpha_3 TA_{it} + \alpha_4 LTD_{it} + \theta_t + \varepsilon_{it} \qquad (3.1.)$$

where CoVaRit is the bank's i contribution to systemic risk in time t is, LVGit is bank i's indebtedness at time t, nmALit capture the liquidity position of the bank i at time t, TAit captures the bank's i size at time t and LTDit is the loans to deposits ratio for bank i at time t. θt capture fixed effects with common influence on the banks analyzed while εit is the estimated error.

### 4. Empirical results

The empirical results show that the indicators calculated present a significant influence on banks' contribution to systemic risk in all five periods analyzed (Table 2). Improving the liquidity ratio (LTD), the leverage (LVG), but also increasing the maturity matching of assets and liabilities (nmAL) will reduce banks' contribution to systemic risk. These indicators are negative and significantly correlated with systemic risk.

To reduce the risk of contagion is necessary to reduce the indebtness grade expressed by the total assets / capital (that can be achieved by increasing the share of equity in total assets). For example, reducing this ratio by one percentage point in the current quarter to a certain bank will generate a reduction in the respective bank's contribution to the overall system loss of 0.58 percentage points next quarter, 0.60 percentage points over two quarters, 0.64 percentage points over three quarters, and, respectively 0.73 percentage points within one year. If we take as an example Deutsche Bank (the largest bank in terms of total balance sheet assets), its contribution to the entire European risk system at 30.09.2011 consists in a loss of 1623.57 billion EUR in market value of assets of the entire sample analyzed. In this case, a reduction of indebtedness by 1% in Q3 2011 will reduce the possible loss of market value of assets with 941 billion EUR in Q4 2011.

Improving the liquidity situation (the equivalent of reducing the loans to deposits ratio) also

contribute significantly to reducing systemic risk. It was also confirmed in the models proposed in this research that the banks "too big to fail" contribute to increasing systemic risk. The associated coefficients of variable reflecting the size of banks are significantly correlated with the contribution to systemic risk. The balance sheet value of the assets will be greater and the risk of collapse of the system will increase more. The regression coefficients associated with balance sheet indicators maintain their sign in all five models analyzed, but their magnitude differs.

**Table 2. The influence of balance sheet indicators on the contribution to systemic risk**

| Variables | Baseline specification | Model (1) | Model (2) | Model (3) | Model (4) |
|---|---|---|---|---|---|
| $C$ | 0,0470*** | 0,0450*** | 0,0463*** | 0,0455*** | 0,0521*** |
|  | (0,0099) | (0,0097) | (0,0099) | (0,0110) | (0,0077) |
| $LVG$ | -0,0059*** | -0,0058*** | -0,0060*** | -0,0064*** | -0,0073*** |
|  | (0,0013) | (0,0015) | (0,0017) | (0,0018) | (0,0018) |
| $nmAL$ | -0,0019** | -0,0015* | -0,0015** | -0,0009 | -0,0009 |
|  | (0,0008) | (0,0008) | (0,0007) | (0,0007) | (0,0007) |
| $TA$ | -0,0080*** | -0,0079*** | -0,0081*** | -0,0082*** | -0,0090*** |
|  | (0,0010) | (0,0010) | (0,0011) | (0,0011) | (0,0009) |
| $LTD$ | -0,0027*** | -0,0032*** | -0,0028*** | -0,0024*** | -0,0018** |
|  | (0,0008) | (0,0007) | (0,0008) | (0,0008) | (0,0008) |
| Nr. obs. | 636 | 636 | 636 | 636 | 583 |
| $R^2$ | 0,2777 | 0,2624 | 0,2635 | 0,2571 | 0,3063 |
| Adj.$R^2$ | 0,2573 | 0,2419 | 0,2430 | 0,2359 | 0,2862 |

*Note:* Unbalanced panel with fixed effects; (0) is the current value of explanatory variables, (1) the amount delayed by a quarter, (2) the amount delayed by two quarters, (3) the amount delayed by three quarters and (4) the amount delayed by four quarters; *** significant at 1%; ** significant at 5%; * significant at 10%;

*Source*: authors' calculation

In order to analyze if systemic risk vary according to the risk profile of banks' we let the contribution to systemic risk varying with the level of capital adequacy. The results are presented in Table 3.

**Table 3. The influence of balance sheet indicators on the contribution to systemic risk- depending on the level of capital adequacy**

| Variables | Baseline specification | Model (1) | Model (2) | Model (3) | Model (4) |
|---|---|---|---|---|---|
| $c\ (CT_{1R})$ | 0,0427*** | 0,0410*** | 0,0417*** | 0,0401*** | 0,0461*** |
|  | (0,0092) | (0,0091) | (0,0092) | (0,0103) | (0,0068) |
| $LVG$ | -0,0052*** | -0,0048*** | -0,0052*** | -0,0058*** | -0,0069*** |
|  | (0,0013) | (0,0014) | (0,0016) | (0,0017) | (0,0017) |

| | | | | | |
|---|---|---|---|---|---|
| *nmAL* | -0,0015** | -0,0010 | -0,0010 | -0,0002 | -0,0002 |
| | (0,0007) | (0,0007) | (0,0006) | (0,0007) | (0,0006) |
| *TA* | -0,0070*** | -0,0069*** | -0,0070*** | -0,0072*** | -0,0080*** |
| | (0,0010) | (0,0010) | (0,0011) | (0,0011) | (0,0008) |
| *LTD* | -0,0050*** | -0,0055*** | -0,0049*** | -0,0045*** | -0,0039*** |
| | (0,0008) | (0,0007) | (0,0008) | (0,0009) | (0,0008) |
| $CT_{2R}$ | 0,0277*** | 0,0283*** | 0,0285*** | 0,0297*** | 0,0300*** |
| | (0,0024) | (0,0024) | (0,0024) | (0,0026) | (0,0022) |
| $CT_{3R}$ | 0,0143*** | 0,0143*** | 0,0143*** | 0,0144*** | 0,0143*** |
| | (0,0010) | (0,0011) | (0,0010) | (0,0011) | (0,0009) |
| $CT_{4R}$ | -0,0142*** | -0,0144*** | -0,0142*** | -0,0143*** | -0,0136*** |
| | (0,0018) | (0,0017) | (0,0017) | (0,0017) | (0,0015) |
| Nr. obs. | 636 | 636 | 636 | 636 | 583 |
| $R^2$ | 0,3653 | 0,3548 | 0,3544 | 0,3489 | 0,4008 |
| Adj.$R^2$ | 0,3435 | 0,3332 | 0,3327 | 0,3266 | 0,3796 |

*Note:* Unbalanced panel with fixed effects; (0) is the current value of explanatory variables, (1) the amount delayed by a quarter, (2) the amount delayed by two quarters, (3) the amount delayed by three quarters and (4) the amount delayed by four quarters; *** significant at 1%; ** significant at 5%; * significant at 10%;

*Source*: authors' calculation

The first Model (Model 1) comprises banks that failed to meet the criteria recommended by the Basel Committee, namely Tier 1 capital adequacy ratio of minimum 5%. The second model (Model 2) comprises banks that meet the minimum requirement but presents a low level of core capital adequacy (between 5% and 6%) and may face solvency problems. Most banks are found in the third model (Model 3), with a tier 1 capital adequacy ratio between 6% and 10%, while the most capitalized banks are included in the forth group (Model 4), with a Tier 1 capital adequacy ratio of above 10%.

For each of the four groups of banks we use dummy variables, the first group (with the lowest rate of capital adequacy) acting as a benchmark. Thus, the coefficients associated with other dummy variables represent the difference from the first group. The liquidity ratio (LTD), leverage (LVG), the degree of mismatch in the maturities of assets and liabilities (nmAL) and the size of banks expressed in total balance sheet assets remain significant in explaining the evolution of systemic risk. The sign of the coefficients associated with these variables are kept and the values obtained are quite close to those of the previous model.

**Table 4. The influence of balance sheet indicators related to banking systems from countries with downgraded ratings on contribution to systemic risk**

| Variabile | Specificatia de baza | Model (1) | Model (2) | Model (3) | Model (4) |
|---|---|---|---|---|---|
| *c* | 0,0055 | 0,0003 | 0,0018 | 0,0009 | 0,0108 |
| | (0,0155) | (0,0150) | (0,0153) | (0,0162) | (0,0111) |
| *LVG* | -0,0068*** | -0,0071*** | -0,0073*** | -0,0075*** | -0,0084*** |

|  |  |  |  |  |  |
|---|---|---|---|---|---|
|  | (0,0016) | (0,0018) | (0,0019) | (0,0020) | (0,0021) |
| *nmAL* | -0,0016 | -0,0021* | -0,0017* | -0,0017* | -0,0015 |
|  | (0,0011) | (0,0011) | (0,0010) | (0,0010) | (0,0009) |
| *TA* | -0,0062*** | -0,0060*** | -0,0061*** | -0,0061*** | -0,0070*** |
|  | (0,0011) | (0,0011) | (0,0012) | (0,0013) | (0,0009) |
| *LTD* | -0,0128*** | -0,0140*** | -0,0131*** | -0,0132*** | -0,0120*** |
|  | (0,0020) | (0,0018) | (0,0020) | (0,0019) | (0,0016) |
| *Grece* | 0,0254*** | 0,0267*** | 0,0263*** | 0,0261*** | 0,0241*** |
|  | (0,0039) | (0,0038) | (0,0039) | (0,0038) | (0,0031) |
| *Ireland* | 0,0312*** | 0,0317*** | 0,0312*** | 0,0317*** | 0,0320*** |
|  | (0,0027) | (0,0025) | (0,0024) | (0,0026) | (0,0023) |
| *Italy* | 0,0054*** | 0,0058*** | 0,0058*** | 0,0059*** | 0,0062*** |
|  | (0,0012) | (0,0013) | (0,0013) | (0,0014) | (0,0015) |
| *Portugal* | 0,0141*** | 0,0142*** | 0,0132*** | 0,0130*** | 0,0117*** |
|  | (0,0025) | (0,0024) | (0,0027) | (0,0027) | (0,0023) |
| *Spain* | -0,0095*** | -0,0091*** | -0,0095*** | -0,0102*** | -0,0110*** |
|  | (0,0018) | (0,0016) | (0,0016) | (0,0019) | (0,0018) |
| Nr. obs. | 636 | 636 | 636 | 636 | 583 |
| $R^2$ | 0,4198 | 0,4132 | 0,4119 | 0,4086 | 0,4599 |
| Adj.$R^2$ | 0,3976 | 0,3913 | 0,3899 | 0,3860 | 0,4385 |

*Note:* Unbalanced panel with fixed effects; (0) is the current value of explanatory variables, (1) the amount delayed by a quarter, (2) the amount delayed by two quarters, (3) the amount delayed by three quarters and (4) the amount delayed by four quarters; *** significant at 1%; ** significant at 5%; * significant at 10%;

*Source*: authors' calculation

Basel Supervisory Committee leaves to national or regional supervisory authorities to impose capital adequacy requirements more stringent or more relaxed. We consider that supervisory regulations of the banking system should make a difference for banking systems in distressed areas. The requirements for these should be more restrictive, in line with the magnitude of the negative externalities that can spread to the entire system.

Thus, we estimate a fixed effects panel regression model on banks in countries that have experienced a downgrade of the rating. The goal is to quantify the influence of balance sheet indicators on the contribution to systemic risk in countries with financial problems: Spain, Greece, Ireland, Italy and Portugal. It notes the significance of coefficients associated with each country, for all five regression models (Table 4). Except the degree of mismatch in the maturities of assets and liabilities, all other balance sheet indicators significantly influence the banks' contribution to systemic risk with a 99% probability of confidence. Also, the sign of the coefficients associated with the balance sheet indicators do not change, and the values obtained are quite close to those of previous models.

To reduce the risk of contribution to the whole banking system in countries with financial difficulties, we recommend designing prudential regulations aimed to improve the leverage, the liquidity situation, and, to reduce the balance sheet assets by controlling the risky assets.

## 5. Conclusions

Future contribution of banks to systemic risk can be reduced by more counter-cyclical adjustment of the assets and liabilities portfolio reflecting the degree of solvency, liquidity and debt. In this regard, we have proposed several models of banking supervision by placing limits on the variation of the Conditional Value at Risk indicator. These prudential regulations should be implemented differently depending on the level of capitalization and depending on the rating of country of origin.

Also if we look at contagion through the impact of a collapse of the whole system has and considering each bank individually, the analysis becomes useful to banks. If banks can predict the future collapse of the whole system they can adjust the balance sheet items in time to prevent future losses. In addition, the analysis serves to determine the risk of collapse of banks with which they have connections on the interbank market and on the market for payments systems and financial instruments. Finally, the estimates can be used to determine the contagion from parent banks to subsidiaries and vice versa, in order to take necessary measures to lessen the dependence between them.

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*SUB-SECTION: ACCOUNTING*

# THE CHOSEN EXCHANGE RATE AS THE POSSIBILITY OF REDUCING THE RISKS OF CURRENCY EXCHANGE TRANSACTIONS

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**Abstract:** The profitability of the operation of an enterprise is influenced by several factors. Beside the evolution of market supply and demand the hectic changes in exchange rates have an increasingly important role too. Since the start of the economic crisis in the autumn of 2008, changes in the exchange rate have been more and more emphasized. The article deals with methods for decreasing exchange risks of foreign currency transactions, without the need of completeness. In international trade due to the growth of the number of currency loans the significance of managing financial risks coming from the changes in exchange rates has increased. One of the most obvious tools is properly selected currency.

Exchange gain or loss coming from the changes in the exchanges rate may be caused by the change between the completion and the financial completion and in case of the conversion of these items as well as may appear in year end evaluation.

When translating the foreign exchange items of the enterprise, the following opportunities may arise on the bases of the Act C of 2000 on Accounting: "60. § (4) *The HUF value of foreign currency holdings, whether on hand or on account, and receivables, financial investments, securities denominated in foreign currencies (jointly referred to as "assets denominated in foreign currencies"), and liabilities shall be determined - as defined under Subsections (1)-(2) - by the average of the buying and selling rate of a credit institution of the undertaking's choice, or by the official foreign exchange rate published by the National Bank of Hungary."*

"60.§ (6) *When determining the HUF value of assets and liabilities denominated in foreign currencies, instead of the average of the buying and selling rate of foreign exchange, all assets and liabilities denominated in foreign currencies may be uniformly valuated at buying and at selling rates, provided the difference resulting from the use of a valuation method other than the one described under Subsection (4) is illustrated in the notes on the accounts, if the difference resulting from the valuation method described under Subsection (4) carries a substantial impact in the assets and liabilities, or on the profit and loss figure, because of which the true and fair view requirement would not be satisfied if valuated according to Subsection (4)."*

If the revenues and the expenses of an enterprise occur mainly in currency, it is worth finding a solution for avoiding the exchange risks. Exchange risk management has both internal and external techniques as well.

**Internal methods** of risk management use tools which constitute the part of the financial management of the entity, and do not require establishing any special contractual relationship with a third party. Such tools are for example:

- **Delaying payments**: this time the early completion or delaying the deadline happens by which the opportunities of under or overvaluation may be utilized.
- **Internal compensation** or offsetting: the enterprise group nets the debts in its certain interest and accounts only the remaining net debt.

- **Cash-flow harmonization**, the enterprise harmonizes its revenues in foreign currency to the expenses in foreign currency on the basis of the amounts and timing, thus the contribution of certain currencies happens in the same currency.
- The next possible technique for exchange risk management is **changing the price**. In this case the change in the exchange rate is calculated in advance and built in the increasing selling price.
- It is possible for an enterprise to decrease the exchange risk by giving an **account in a foreign currency** after its products or service (BUCKLEY-ADRIAN, 1998).

These opportunities may partly be solutions for risk management for a company. However, they may be used only in a limited way, and do not serve an all-rounded solution for certain cases.

The external techniques utilize contractual solutions to avoid potential exchange losses. The most often used risk management techniques in the domestic companies are **futures, options, swap, hedge** and **arbitrage** transactions.

### Survey on Foreign Exchange Risk

The Deloitte made a survey relating to foreign exchange risks, by which the unrealized exchange loss resulted the most common negative effects evolved due to the exchange risk. In the given year end evaluation significant losses were generated in companies in the earnings if the enterprise used foreign currency credit, has suppliers of foreign currency, maybe contracted futures transactions, as exchange risk appears in these transactions, which may significantly affect the earnings (I1).

The survey dealt with even the risk decreasing methods utilized by enterprises. According to this, most of the companies chose using futures, options and swap transactions during the past years and even relating to the future. Rather few enterprises consider changing-over foreign currency booking; only 10% of the respondents would choose it.

### Illustrating the Risk of Changes in Exchange Rates through a Practical Example

The change in the exchanges rates may have significant, often extreme effects on the economic events, which is illustrated in the next Figure.
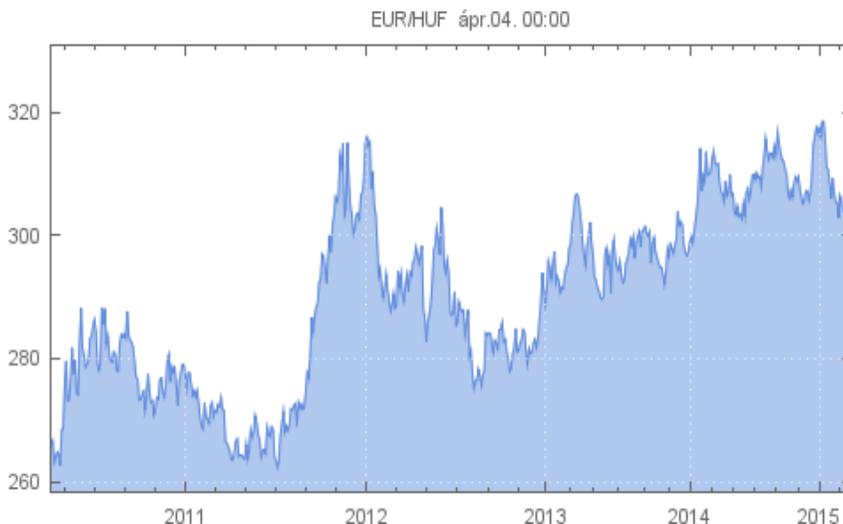


EUR/HUF ápr.04. 00:00

The Figure illustrates clearly, that nowadays the exchange rate of EUR declined from 320 HUF to 280 HUF comparing it to the beginning of 2012, and later it increased around a 320 HUF value. The fluctuation of exchange rate may be significant per days, or even per hours. Considering the fact that an enterprise pays its account using a 60-day-deadline, it can be concluded that significant fluctuation may occur regarding a period of two moths.

About 80% of the revenues of the examined enterprise dealing with trade are in EUR, but the majority of its costs payable are in HUF. In many cases conversion is necessary in order to pay the account in HUF by converting the revenues in EUR into HUF.

Significant losses may arise during conversion, if the exchange rate of HUF becomes stronger. In case of the exchange rate of 300 HUF/EUR, one can receive 300 HUF for 1 EUR, while after the strengthening of the HUF one receives only 280 HUF in case of the exchange rate of 280 HUF/EUR.

In case of HUF booking, strengthening of HUF causes loss in case of the accounts going out, while liabilities and loans in EUR at the same time cause an (unrealized) profit. Weakening of HUF would make an opposite process.

As it is illustrated in the Figure, comparing to the earlier years there was an extra high exchange rate of 311,13 HUF/EUR on the 31st of December, 2011, thus foreign currency items had to be evaluated on a very high exchange rate, which caused a financially unrealized exchange rate loss, coming from long-term and great value of loans. In this way the profitable results of operating activities due to the effect of financial operations decreased to such a degree that the annual earnings became negative.

**The Opportunity of Using Their Own Bank Rate of Exchange to Reduce the Rate of Loss in case of Kereskedő Ltd. Company**

The company faced with the ratio of the unrealized exchange rate loss during the evaluation and making the statement at the end of 2011. As it was very significant, introducing other alternatives for decreasing the exchange loss became necessary. By this time begin to think about using their own bank rate of exchange instead of applying the exchange rate of the Hungarian National Bank.

In case of accounts coming into the company or trade receivables the own bank exchange rate gives the value of the account in EUR. All this calculated to the date of financial completion, regarding the difference between the two values, it can be concluded that what rate of exchange loss or exchange gain could realize in EUR during the exchange rate fluctuation between the time of completion and financial completion. Table 1 contains the result of the calculation.

Table 1: Exchange Loss and Gain of Kereskedő Ltd Company at the End of 2012 in Cases of Using Own Bank Exchange Rate

A Data: in HUF

| Ledger account No. | Description | Balance in HUF 31.12.2012. | Calculated balance with EUR booking |
|---|---|---|---|
| 8761 | Expenditures for foreign exchange reserves converted into HUF | -38.888.384 | 0 |
| 8763 | Expenditures for assets and liabilities in foreign currency financial (receivables from customers exchange rate) | -239.305.931 | -212.982.278 |
| 8764 | Expenditures for assets and liabilities in foreign currency (Year End evaluation) | -40.185.129 | -34.960.950 |

| 9761 | Incomes for foreign exchange reserves converted into HUF | 34.189.514 | 0 |
|---|---|---|---|
| 9763 | Incomes for assets and liabilities in foreign currency financial (receivables from customers exchange rate) | 255.100.619 | 232.141.723 |
| 9764 | Incomes from assets and liabilities in foreign currency (Year End evaluation) | 54.119.269 | 47.878.022 |
| | **Total:** | **25.029.573** | **32.076.517** |
| **Differences:** | | | **7.046.944** |

Source: Data of „Kereskedő" Ltd. Company

From the view of the company, the positive effect of using own bank exchange rate mainly reveals during the conversions. In case of applying own bank exchange rate, exchange rate differences do not arise because payments happen in the same currency. As 80% of the revenues of the company are realized in EUR, it is obvious, that neglecting the conversion during booking in EUR would decrease the ratio of exchange rate fluctuation affecting mostly the company at present (in case of Hungarian National Bank booking).

There are several external factors affecting the exchange rate as well, which mean that booking with own bank exchange rate alone cannot prevent the company from realizing exchange rate losses.

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(I1)http://www.deloitte.com/view/hu_HU/hu/sajtoszoba/sajtkozlemenyek/9d8f215f5d3e9310 VgnVCM1000003156f70aRCRD.htm, Time of download: 2012.09.23
(I2) http://www.eco.hu/deviza-arfolyam/reszletek/, Time of download: 2014.04.02

# PSYCHOLOGICAL PROFILE OF THE ACCOUNTANT FRAUDSTER

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**Abstract:** *Corrupted professional accountants are vital for planning, creating and hiding financial fraud. No financial fraud can be made without help from an expert in Accounting. Through this paper we try to raise awareness of the necessity of having ethical professional accountants and we promote rigorous psychological testing for candidates to the Accounting profession. The purpose of this paper is to present a psychological profile of a fraudster in the field of Accounting and recommended profiles for the candidates to the profession. We presented the fraud triangle of opportunity, motivation and rationalization so we can begin to enter the mind of the accountant fraudster. Then we presented the profile of the character prone to financial fraud as shown in Accounting literature. Further, we presented psychological tests backed by specialty literature that could be useful to select candidates fit for the Accounting profession. The literature presents us with recommended psychological profiles for the professional accountants. A great psychological test used for hiring in the Accounting profession is the Keirsey Temperament Sorter II, used by the government, military, universities, non profit organizations and religious organizations in the USA. The recommended personality types for Accounting are the supervisors and inspectors from the guardians branch for low ranking accountants and the fieldmarshals and masterminds from the rationals branch for high ranking accountants.*

**Keywords:** accounting ethics, personality test, accounting psychology test, fraud

**JEL classification:** M41

## 1. Introduction

The Accounting profession demands ethical behaviour and performance from it's members. Not only the existence but also the compliance with the existing Code of Ethics is required from the professional accountants.

The existence of a Code of Ethics does not mean all professional accountants will comply with it hence the necessity for having professional accountants with an ethical character, wanting to behave in an ethical manner and willing to report and punish the members who break the Code of Ethics. It is more than just appearing ethical in the eyes of the public. The very vigour and attractiveness of an economy and in equal measure business credibility depend essentially on the quality of the human factor. Avoiding problems related to culture, ethics and professionalism, morality and good conduct turns the business world into a ' jungle ' of the economically strong.

As a response to the financial scandals, governments around the world have reacted by increasing regulation in the Accounting profession. The accounting profession is one of the most regulated professions in the world. Some authors (Horomnea, 2013) consider the profession to be over-regulated. Excessive regulation does not prevent all unethical behaviour but it certainly restricts achieving a true and fair view, the target of the accounting profession.

## 2. The fraud triangle

Fraud is considered a disease by specialty literature authors. (Robu, 2013) says that in order to counter fraud we must know the origin of fraud, we must determine the factors of fraud, the operating mechanism of fraud, the profile of the fraudster and the profile of the defrauded. Following this course of action, measures of fraud detection and fraud prevention can be found. In this paper we will be focusing more on the profile of the fraudster.

**Why People Commit Fraud**
**Famed criminologist Donald R. Cressey**

Opportunity

Fraud
Triangle

Motivation                                          Rationalization

Even the best systems of internal control cannot
provide absolute safeguards against irregular activities.
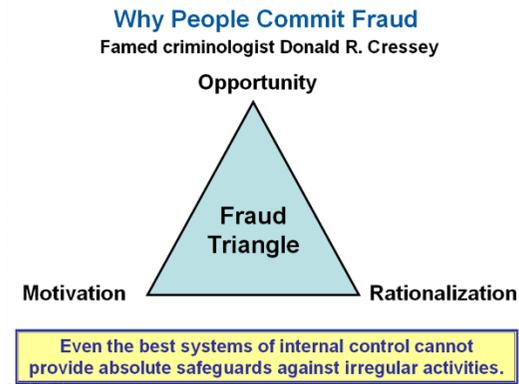
**Figure 1:** The fraud triangle
Source: http://controls.ucmerced.edu/Pages/Fraud-Triangle.aspx

Opportunity starts from the fraudster's belief that he or she will not be caught if fraud is committed. This belief can be generated by identifying weaknesses of internal audit and controls. In times of crisis the management focuses on company survival and disregard internal audit and controls. Adapting the internal control system of a company to a new economic context is delayed and this fact can be exploited.

Motivation is a very important factor and it manifests such as: financial needs, the need to report results that are superior to the actual results of the company so that the fraudster can receive a bonus for being an efficient manager, professional aspirations and the need for their fast achievement, the competitive environment of the fraudster's profession, the personal desire to beat the system. Fraudulent financial reporting is more likely to increase in times of crisis.

Rationalization. Fraudsters feel the need to justify their actions. Their justifications are like the following: the fraudulent financial reporting is beneficial to the company, there were no other options in the time period the fraud was committed and that it was just a temporary solution. Surprisingly, the fraudsters are in many cases persons who proved their professional value and moral integrity in the past. Committing fraud requires the participation of top management, chief accountant and people with powers of control in a company as well as low ranked accounting staff. (Stanciu, 2011)

We must also take notice of the difference between creative accounting and financial fraud. Creative accounting involves accounting practices adapted to the company and the evolution of the economic activity of the company. It relies on a speculation of the lack, ambiguity, and flexibility of laws, accounting norms and regulations. Creative accounting respects the law but not it's spirit. The purpose of creative accounting is to present a distorted image of a company, prosperous and attractive in order to mislead and draw in investors and to get bank credits easier and cheaper. It can also be used to present the

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company to the state tax collector institutions as being on the brink of bankruptcy so as to reduce amount of taxes paid. On the other hand, fraud is a clear violation of accounting regulations and principles, also violating the law. (Horomnea et al., 2012)

## 3. Psychology of the character prone to financial fraud

Favouring circumstances must exist for fraud to happen. One of the most important, if not the most important circumstance is the having a high rank in a company. A position of superior hierarchy offers responsibilities and powers such as: the ability to control much of the staff and the ability to control transactions performed by the respective company. Most frauds are committed by directors. A perpetrator must be a person with great intellectual capacity, experience, culture and specialty culture as well as creativity, strong pride, self confidence and ambition. It must also be noted that the fraudster must have detailed knowledge of the respective company, knowledge of the workings of internal audit and controls their weaknesses. This person is attracted to adventure and risky situations and has the ability to lie easily, to dominate and persuade staff members to assist in masking the fraud. One such person is not likely to crack due to stress and does not have remorse for committing fraud. (Horomnea, 2012)

## 4. Psychological tests
The questionnaire is the instrument often used for a psychological test. The specialty literature presents us with examples of studies regarding the application of questionnaires for psychological testing on professional accountants or future professional accountants:
- Nourayi and Cherry (1993) discovered that Sensing type (or S type) personality students have increased school performance compared to Intuition type (or I type) personality students;
- Landry et al. (1996) discovered that most Sensing-Thinking-Judgement (or STJ) students have high computer skills, skills needed to be competitive in the accounting profession;
- Schackleton (1980) and Jacoby (1981) used the KTS tool to research personality types for accounting practitioners and they found out that most practitioners are ISTJ type (short for Intuition-Sensing-Thinking-Judgement);
- Wolk and Nikolai (1997) found that Accounting undergraduates are mostly ESTJs while most graduates and Accounting professors are STJs;
- Bealing et al. (2006) used the KTS questionnaire on a sample of 127 Accounting students and confirmed that the great majority of Accounting undergraduates are ESTJs.

### 4.1. The Myers-Briggs Type Indicator
This test is based on the theory proposed by Carl Gustav Jung. It is a research tool which uses a questionnaire of 120 questions from the following areas: introverted/extroverted, sensing/intuition, thinking/feeling and perception/judgement. According to him, humans can be classified in 16 groups of behavioural patterns. The patterns are obtained by combining four psychological functions, based on individual preferences:
- Extroversion (E)-Introversion (I), it refers to the preference for the outer world or for the inner world and how the person restores energy (by being alone or by socializing);
- Sensing (S)-Intuition (N), it refers to the favourite method for obtaining information about the world around us;
- Thinking (T)-Feeling (F), meaning the favourite way of taking decisions;
- Judgement (J)-Perception (P), or the person's view on surrounding world and exterior events (a person may choose between a structured and planned life or a

flexible and adaptable life).

The preferences are personal, long lasting and no option can be considered to be right or wrong. We have to also consider the influence of the social environment, personal choices, personal qualities and flaws if we are to make a complete psychological description of a person. We can't take into account in this study all the social influences, the personal choices and personal qualities and flaws of a person so this is a limitation of the current study.

### 4.2. The Keirsey Temperament Sorter

Keirsey and Bates (1978) created a questionnaire for the means of psychological testing and called it the Keirsey Temperament Sorter (or KTS). The KTS II questionnaire is an up to date, improved version of the initial KTS questionnaire. Keirsey, in the making of this instrument started from the ancient studies of Plato and Hippocrates and also considered the improvement of the Myers-Briggs Type Indicator (MBTI) questionnaire. The KTS test is now very popular and widely used by the government, military, universities, non profit organizations and religious organizations in the USA. Keirsey classified human behaviour in four: artisan, guardian, rational and idealist.

For the KTS test, people must answer all questions and should try to offer real behaviour answers and not desired behaviour answers. The respondent have to be informed that there are no right or wrong answers and that statistically 50% of the population will agree with him or her. The actions mentioned earlier must be taken because people will often offer an answer accepted or desired by the community in which the respondent lives, fearing critics or persecution from others in the community. It is a problem called the "desirable social model". In order to overcome this psychological barrier, a respondent is often asked to offer the answers which one of his or her colleagues would offer. (Randal & Fernandes, 1991).

| ARTISAN | GUARDIAN | RATIONAL | IDEALIST |
|---------|----------|----------|----------|
| Promoter (ESTP) | Supervisor (ESTJ) | Fieldmarshal (ENTJ) | Teacher (ENFJ) |
| Crafter (ISTP) | Inspector (ISTJ) | Mastermind (INTJ) | Counselor (INFJ) |
| Performer (ESFP) | Provider (ESFJ) | Inventor (ENTP) | Champion (ENFP) |
| Composer (ISFP) | Protector (ISFJ) | Architect (INTP) | Healer (INFP) |

**Figure 1:** Keirsey's human behaviour classification
Source: http://www.keirsey.com/aboutkts2.aspx

### 4.3. Differences between the MBTI and KTS tests

Myers created his test by focusing on what people think and feel while Keirsey and Bates created their test focusing on behaviour, which can be observed;
Myers created his test based on the work of Carl Gustav Jung and focused on the Extroversion (E)-Introversion (I) dichotomy. On the other hand, Keirsey and Bates started from the ancient works of Plato and Hyppocrates and focused on the Sensing (S) – Intuition (N) dichotomy;
Myers classified behavioural types by psychological functions while Keirsey classified them by temperament;
Myers test is a linear model with four factors/ psychological functions. On the other hand, Keirsey's test is a bit more complicated system.

The KTS questionnaire has fewer questions than the MBTI questionnaire. According to their authors, the KTS II improved questionnaire can be completed in 20 minutes. Also, respondents have access to individual answers. In the case of MBTI questionnaire, respondents had access only to the general score.

Another advantage of using the KTS questionnaire instead of the MBTI one is lower costs for the researchers.

### 4.4. Reccomended psychological profiles for Accounting

The guardians are models of stability and fit to serve in social institutions. They have an innate talent for managing goods and services. They are hardworking but prefer to work in a constant rhythm in the existing system and don't like change. They are disciplined and helpful. They tend to accomplish their duties, are cautious and respect authority. They are practical people, thorough and punctual and desire for procedures to be respected and they don't mind teamwork. Around 40-45% of the world current population is made of guardians and they work in the professions and jobs most needed by human society.

In the specialty literature, authors like the ones mentioned at the beginning of the Psychological tests section state that most professional Accountants are STJ types, supervisors (ESTJ) and inspectors (ISTJ), which are subgroups of the guardians family. According to Bealing et al. (2006) ESTJ personality type people, a subgroup of the guardians are fit to have financial and accounting related professions such as: auditors, credit analysts and budget analysts.

Supervisors (ESTJ) tend to associate with others and become leaders. They feel comfortable as leaders and in return cooperate easily with their own leaders. From their point of view, a position of high hierarchy offers not only powers but responsibility as well and they assume responsibility easily. They are skilled at organization and inventory. They judge people on the basis of compliance with programs and procedures. Only 10% of the world's current population is considered to be represented by supervisors.

Inspectors (ISTJ) are responsible. They like to see responsibility in other people as well. They respect laws and regulations more than any other personality type. Not only do they hate unauthorized behaviour in an institution but try to make sure the laws and regulations are respected. They do not hesitate to report violations of laws, rules and regulations of any kind. They are perseverant, committed to their duties and appreciate people who know their duties and fulfil them. They keep their work environment clean and in order. They are less talkative and less social than supervisors. They tend to wear simple clothing and not be noticed. Only 10% of the world's current population is considered to be represented by inspectors.

Most people who work in accounting are STJ types and many who work in the field of Economics are also STJ types but they do not reach the top of the hierarchy in a company. Those who do reach top hierarchy in a company, such as an audit company are people with the NTJ personality type. The field marshal (ENTJ) and the mastermind (INTJ) are branches of the rationals.

The rationals focus on problem solving and system analysis. They are interested in abstract concepts, in complex systems such as computers and social systems such as companies and government. They are pragmatic, skeptical, reserved, ingenious, independent and have a strong will. They believe in logic and seek knowledge and achievements. They appreciate intelligence and put value on technology. The rationals disregard authority, they do not care for political correctness, being polite, do not care for customs, traditions and habits. On the other hand, they are natural born leaders. They usually seem distant and cold but are in fact focusing on solving problems. The rationals are rare, only 5-10% of the world's current population representing them.

The field marshals (ENTJ) have great capacity for strategic analysis, for defining concepts, for creating back up plans, for organization, coordination and leadership. They aim for reaching objectives and disregard rules and regulations. They are able to plan in

advance and are able to see both short term and long term objectives. They like to work based on a detailed plan. They usually act on reason and not feeling, having no remorse for firing an employee and they do not tolerate people repeating a mistake. Only 2% of humanity are considered to be fieldmarshals.

The masterminds (INTJ) excel at creating back up plans and alternative solutions to solve a problem. They are capable of understanding complex, multi staged operations. They are rarely encountered outside of their office or laboratory. The can be capable leaders but they are not thrilled to take the lead. They prefer to wait "in the shadows" until others prove their incompetence of being leaders. They consider efficiency to be vital in a company and act swiftly if they discover a waste of resources. The masterminds do not feel bound by rules and regulations and they are not impressed by authority. They are hardworking and dedicated to achieve their goals. Of all the rationals, they are the most precise in their actions and have a strong will. They find it easy to take decisions and do not rest until the problems are solved. They have a theoretical mind and always "think before they act". Only 2% of humans are considered to be masterminds.

## 5. In conclusion

'The relationship between ethics, morality and accounting is not a theoretical speculation. Is essential to the health of the economic environment, such relationship leads to true and fair view and  most importantly, it generates business partners' credibility in each other.

Referring to fraud, it is considered a disease by specialty literature authors. In order to counter fraud we must know the origin of fraud, we must determine the factors of fraud, the operating mechanism of fraud, the profile of the fraudster and the profile of the defrauded. Following this course of action, measures of fraud detection and fraud prevention can be found. The fraud triangle presents the three elements of fraud: opportunity, motivation and rationalization.

Favouring circumstances must exist for fraud to happen. One of the most important, if not the most important circumstance is the having a high rank in a company.  A position of superior hierarchy offers responsibilities and powers such as: the ability to control much of the staff and the ability to control transactions performed by the respective company. Most frauds are committed by directors.

Research in Accounting and Psychology provide us with tests to find a professional accountant's personality: Myers-Briggs Type Indicator and Keirsey Temperament Sorter. We can distinguish 16 types of human behaviour. The *supervisors* and the *inspector*s are recommended as low ranking accountant and the *fieldmarshals* and *masterminds* are recommended for high ranking accountants. Most professionals and professors in the field of Accounting are STJs, even most students are ESTJs. Those who reach top management however are not STJs but NT types, with ENTJs as chief accountants and INTJs as audit partners.

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# PSYCHOLOGICAL PROFILE OF PROFESSIONAL ACCOUNTANT IN ETHICAL CONTEXT

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**Abstract:** *The purpose of this paper is to present the psychological profile of the professional accountant in an ethical context through the speciality literature. The starting point of this paper was Carl Gustav Jung's book, Psychological Types. In the book, Jung presented the idea of personality type. As methodology, relevant articles of speciality literature from international databases have been used. According to literature, the most used methods for realizing a psychological profile are the Myers-Briggs Type Indicator test (MBTI test) and the Keirsey Temperament Sorter II (KTS test). The MBTI test focuses on way of thinking and perception while focuses on behaviour. Through this article we propose the improvement of the speciality literature regarding the multidisciplinary aspect or research in Accounting-Psychology. We also highlight the need to improve ethical behaviour in the Accounting profession. Currently the general public perceives a lack of transparency regarding the professional accountants' activity worldwide.*

## 1. Introduction

In any profession performance is an objective for the practitioner, a necessity for employment and a demand from the general public. In order to achieve performance in the accounting profession education and professional training leading to the formation of skills are required. Also the existence and compliance with a Code of Ethics are required.

The existence of a Code of Ethics does not mean all professional accountants will comply with it hence the necessity for having professional accountants with an ethical character. The health of an economy depend essentially on the quality of the human factor. Avoiding problems related to culture, ethics and professionalism, morality and good conduct turns the business world into a ' jungle ' of the economically strong.

Governments around the world responded to the crisis of confidence caused by financial scandals by regulating the accounting profession. The accounting profession is considered to be one of the most regulated professions in the world. Some authors (Horomnea et al, 2012) consider the profession to be over-regulated. Excessive regulation does not automatically prevent unethical behaviour but it certainly restricts achieving a true and fair view, the target of the accounting profession.

## 2. Reviewing the literature regarding psychological profiles and professional accountants

Carl Gustav Jung (1921) presented the idea of personality type in his book, *Psychological Types*. He noticed differences in human psychology and called the types of personality

introverted and extroverted. Introverted people prefer the inner world of ideas and concepts. Extroverted individuals prefer the outside world, full of objects and other individuals. Carl Jung connected personality type with basic psychological functions: thinking, feeling, sensing and intuition. He describes the extreme limit of each personality type. A real life person may tend to one of the extremes but will have characteristics from both psychological types. Humans possess all of the following psychological attributes: thinking, feeling, sensing and intuition but have the predisposition to rely only on some them. This predisposition determines psychological type.

According to Storr (1983), establishing personality types does not help only to understand differences between humans. It can also help researchers to create a methodology for empirical research regarding personality type, useful in Accounting research. Sensing, abbreviated S in the speciality literature means establishing the existence of objects and phenomena. Thinking, abbreviated T means determining the sense, logic and purpose for things and phenomena in the surrounding world. Feeling, or F means attaching value to elements in the surrounding world.

Schloemer, P.G. and Schloemer, M. S. (1997) state that humans perceive the surrounding world by sensing (S) or intuition (N). People with S personality type process received information sequentially. People with I personality type start from abstract concepts and create a general framework for perceiving the world. Intuitive people(I personality type) no not like detail oriented work. People take decisions either by thinking (T personality types) or based on feeling (F personality types). T type humans have a logical decisional process, based on objectives while F type humans have a subjective decisional process, based on personal values. According to Schloemer, P.G. and Schloemer, M. S, 61% of auditing firms' partners have I type personalities while only 20% of auditing firms' employees have I type personality. This is explained by the necessity of the auditing firms' partners to have a broad vision and an abstract thinking, the need to have skills to solve unstructured problems. Employees do not have such needs.

Research in learning types lead to the creation of numerous models regarding ways of learning. A model used frequently is Kolb's model or Experience Learning Model. Loo (2002) mentions that T type personality people use abstract conceptualization and F types use concrete experience.
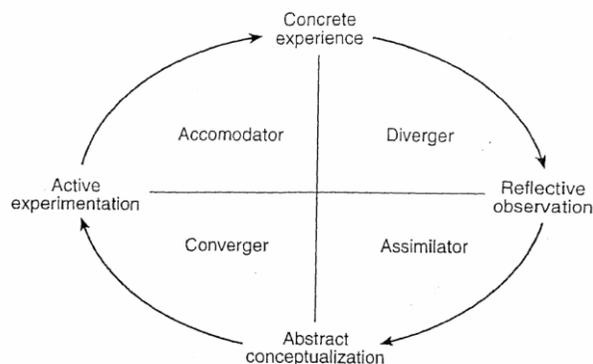


**Figure 1:** Kolb's model for learning types
Source: Bealing, W. E. Jr., Baker, R. L .&  Russo, C. R. (2006). Personality: What It Takes To Be An Accountant, The Accounting Educator's Journal, pp.119-128

Baker et al. (1986) discovered that most Accounting students are Converger type learners (or C type learners). According to Kolb's learning model, C type learners use abstract conceptualization of knowledge and active experimentation of what they learn. On the

other hand, Holley and Jenkins (1993) discovered that most students in Accounting are Assimilator type learners (or A type learners). According to Kolb, most A type learners reflect on what they observe then conceptualize knowledge without practical experimentation. Loo (2002) examined a sample of 109 students in Accounting and confirmed the existence of a high number of A type learners.

A lot of research in Accounting regarding personality type is based on using the Myers-Briggs Type Indicator (or MBTI). It is a research tool which uses sampling. It is a questionnaire of 120 questions related to preferences. The questions are from four areas: introverted/extroverted, sensing/intuition, thinking/feeling and perception/judgement. In theory, all humans to ever live could be grouped in 16 personality types.

Nourayi and Cherry (1993) discovered that S type personality students obtain greater school performance than I personality types. ). Landry et al. (1996) focused on researching the link between MBTI types and computer skills. They discovered that most Sensing-Thinking-Judgement (STJ) students have high computer skills. The accounting profession must keep up with technology especially in computers in order to achieve performance. Competent professional accountants also have high computers skills. Wheeler (2001) discovered that students with Thinking (T) type personality and Sensing (S) type personality students learn easier the courses taught by Accounting professors.

Keirsey and Bates (1978) created a tool similar to MBTI and called it Keirsey Temperament Sorter (KTS). This tool became widely known and used at large scale in Psychology. Starting with 2003, KTS was improved and it is currently called KTS II and it is still the most used tool in Psychology. Bealing et al. (2006) used the KTS questionnaire on a sample of 127 Accounting students. They discovered that the dominant personality type for future accountants is ESTJ, with a percentage of 26,23% of total students. According to Bealing et al., the jobs suitable for ESTJs are: auditor, credit analyst and budget analyst. They also researched the 'darwinian survival characteristic' (students assimilate Accounting knowledge to 'survive' school) and the student auto-selection characteristic (students choose the Accounting field before prior to choosing faculty studies. They found that students' auto-selection characteristic is the one prevailing in the Accounting field. These results match with results from Brightman's (2002) research. According to Brightman, over 65% of economic students are extroverted, over 65% have S type personality, over 70% use Thinking (T type) and over 70% use Judgement (J type).

Kreiser et al. (1980), Schackleton (1980) and Jacoby (1981) used the KTS tool to research personality types for Accounting practitioners. They found out that most Accounting practitioners are ISTJ type. A fact worth mentioning is that prior research used samples of USA certified public accountants and not worldwide sample of professional accountants. Also worth mentioning is that most research was conducted in time periods before financial scandals erupt and thus, the need for research in this field has risen again.

Wolk and Nikolai (1997) compared personality types for graduates and undergraduates and faculty Accounting professors. They found that undergraduates are mostly ESTJs while most graduates and Accounting professors are STJs but not dominant ESTJ.


**3. Psychological profile of the professional accountant in the vision of the employer**
According to employers, the psychological profile of the ideal candidate for a job in accounting is as follows:
- able to make changes, both mental and professional changes;
- able to carry out tasks ;
- able to develop and consolidate collaboration with internal and external company clients;
- compatible with the company's organizational culture;
- focused on results;

- having organizational, negotiation and communication skills;
- having persuasion skills.

Sources used were job advertisements for accountants published by the employers on the Internet. It should be noted that employers in job advertisements do not focus on the desirable character of an accountant but on the strictly necessary skills for the job advertised.

Many authors in the literature mention that focus should be placed on ethical character. According to Horomnea (2013) 'the relationship between ethics, morality and accounting is not a theoretical speculation. Is essential to the health of the economic environment, such relationship leads to a true and fair view and most importantly, it generates business partners' credibility in each other.

## 4. The gap between public perception and the profession

The American Association of Certified Accountants realized in September 2012 a study titled "Closing the Value Gap". The study used a sample of 250 accountants, 1500 consumers and opinion leaders worldwide in order to better understand the value offered by the accounting profession and the value the public believes it offers.

There is a gap between the way in which the profession sees itself and the way in which the public sees the profession. Most professional accountants believe that the public sees them as trustworthy while only half of the public sees professional accountants as trustworthy. Almost half of respondents stated that professional accountants act in the interest of employer companies or in self-interest rather than public interest.

This gap is partially caused by the lack of understanding of the role of professional accountants in business success. Richard Sexton, executive committee member of PricewaterhouseCoopers for policies and reputation insisted that ' As accountants, it is important to get out of this obscurity. Although some conversations will be challenging, it is important to become better at explaining what we do, how we do and how we generate value'.

The public still regards professional accountants as overall trustworthy, like doctors, nurses, architects and engineers and more trustworthy than bankers, politicians, journalists and lawyers.

According to the study made by ACCA in 2012, the steps to follow in restoring credibility in the accounting profession are, in random order:
- engaging in discussions with stakeholders and the public about what it means to be an accountant;
- conversation about audit, about what audit is and what it is not because recently audit is the target of several critics;
- taking initiative and explain how professional accountants add value;
- addresing real issues about ethical problems and conflict of interests;
- developing social and communicating skills, useful in increasing public trust in the profession.

According to the study, 70% of professional accountants believe that the profession itself is partially responsible for the financial crisis after 2008. Also 13% of study respondents stated that their trust in professional accountants decreased in the last five years. Currently, the profession continues to lose credibility and if it does not succeed to educate the public and various interest groups of it's value, it's credibility will decrease more.

## 5. In conclusion

Employers do not focus on the desirable character of a possible professional accountant employee but instead focus on skills strictly required to fulfil service obligations. Many authors in the literature mention that focus should be placed on ethical character.

There is a gap between the way in which the accounting profession sees itself and the way in which the public sees the accounting profession. This gap is partially due to the lack of understanding from the public of the role of the professional accountants in a business' success. The profession will continue to lose it's credibility if it does not succeed to educate the public and stakeholders about it's value. The perceptions about professional accountants have evolved, at least partially, from media representations, tensions among professional accountants, tensions between the members of the accounting profession and members of other professions and from ignorance. The stereotypes are influenced by cognitive, affective, social and emotional mechanisms. Stereotypes about professional accountants are so robust that many significant changes in the profession such as the changing of gender proportion of all professionals has little impact on the public's perception about the profession.

Research in the field of Accounting and Psychology has lead to the use of two tests to find a professional accountant's personality: Myers-Briggs Type Indicator and Keirsey Temperament Sorter. We can distinguish 16 types of human behaviour. The profession has specific templates recommended for it's members. Most professionals and professors in the field of Accounting are STJs. Those who become top managers are not of STJ type but NT type, with ENTJ type as chief accountants and INTJ type as audit partners.

## 6. Acknowledgement

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# USERS' NEEDS: A PREMISE FOR CORPORATE REPORTING CHANGE

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**Abstract:** *The topic of corporate reporting is very actual being subject of preoccupation of the main international regulatory and professional organisms in the accounting area. Hence, our study targets a priority research area. Its main objective is to discuss the concept of user needs and to emphasize how the needs of users of corporate financial reports have developed in time and how these needs are the main factors influencing the actual changes in the framework of the corporate reporting. In the nowadays society of knowledge, characterized by the variety and growing needs of corporate reports users, the regulatory organism are trying to respond. During time the concept of user of corporate reporting, referring here at financial reporting has changed from the owner of the business, to the manager and nowadays to a larger category of users. From the seven categories of users identified in 1975 by the Accounting Standard Steering Committee (investors, creditors, employees, the group of business partners, the state authority and the public), the most important seem to be the ones representing the capital providers. Analysing the latest IASB and the IIRC conceptual framework we could observe that both have a decision usefulness objective. Therefore, their main objective is to guide companies to make available reports that will help capital providers in the decision process. IR is considered to be a further step in the corporate reporting, therefore, by analysing it conceptual framework we observed how the needs also of the other categories of users are to be accomplished by using this type of reports. Also IR comes as a continuation/response of IASB framework, which recognizes its limits in the first paragraphs, saying that the financial information supplied by the companies in accordance with the framework is not sufficient and that the users' needs to consult also other pertinent materials. Thus, the IR is composed from financial and non- financial information, and argues that is not representing more reporting, but better.*

**Keywords:** user needs, usefulness, corporate reporting, knowledge society

**JEL classification:** M40, M41

## Introduction

This paper aims to discuss the "user needs" concept as it is defined by the main conceptual frameworks and to show how the concept evolved. There will also be, some discussions about how these needs are really accomplished by the nowadays corporate reporting.

The "user needs", concept is a complex one, and represents the basis of the conceptual frameworks (McCartney, 2004). In the actual context of re-discussing the conceptual framework issued by the International Accounting Standard Board (IASB) in collaboration with the Financial Accounting Standard Board (FASB) in 2010, regarding the financial reporting. And, nevertheless the issue of the new conceptual framework regarding the integrated reporting by the International Integrated Reporting Council (IIRC), there is a need of trying to clarify the concept of usefulness and of the users' needs. There are question marks in what it concerns the conceptual framework and doubts that these are really preoccupied by the users' needs. Is there a real need of conceptual frameworks? Which are responding better to the user needs?

Considering that the needs are different and that the usefulness is something that cannot be fully defined, what is useful for someone can be useless for someone else, to identify the users of corporate reporting and to define their need is a hard job, which arose and still arise the interest of many scholars.

This article is based on the review of the literature and on the analysis of the IASB and IIRC frameworks in order to identify their perception of user needs. The paper is composed of three parts. In the first part there is a review of the evolution of the user concept, continuing with a second part which identifies the categories of users as they are defined by the special literature, and in different international organizations documents, and identifies their interest. In the third part of the paper there is the analysis of the user concept in the two conceptual frameworks. We finish with some conclusion.

## 1. Evolution of user concept

In the first book of accounting written in Romanian language, Nechifor, the author of the book from 1837, states his motivation: "to put in the hands of my fellows a book in the Wallach language, made in Austrian way". His motivation was actually to teach the Romanian merchants the rules of the commerce and how to keep track of their accounts using the double entry bookkeeping system. This was actually, also the intention of the first author from the accounting history literature, Pacioli, to help merchants from the early ages (15th century) to know their business. Starting from these accounting history facts we want to emphasize that accounting was born as a necessity for a group of persons. In the first century of using accounting these people were the owner of the business. Therefore, during the nineteenth century the users of the accounting information were the owners.

Together with the changes in the business environment and its increasing complexity the users of accounting results and reports have changed. The business transformed from a simple fact of commerce to corporations with complex activity of production, selling, using complex financial transactions, that needs to have managers and/or committees of directors. For the early 20th century, Fraser and Nobes (1985) were clearly showing in their study that the managers of the corporation are the main users of financial statements (the stewardship concept). During the 20th century and coming to nowadays the group of users of accounting results, namely reports, have diversified and the corporation reporting has developed from simple financial reports to supplementary non-financial components.

Who are the users then? Accordingly to McCartney (2004), the user is whoever is interested and finds the financial reporting of the company useful for its interest.

The user concept gain a central importance once that the first conceptual frameworks were issued. Accounting reporting needed to establish its role therefore accomplishing the "users' needs" was the main declared purpose (McCartney, 2004; Zeff, 2014).

These were based on the presumption that the financial reports are responding to the users' needs, nevertheless the first conceptual framework projects offered the reader a *self acompli*, an evident truth, with no theoretical justification. These was not actually the case, the first frameworks were very ambiguous and lacking important elements, such as defining the user, defining the needs, etc. (McCartney, 2004; Zeff, 2014). Therefore, the user needs were not identified and accomplished.

Accordingly with the special literature, the concept of user, as it is now presented by the IASB conceptual framework is modeled by two objectives: a decision one (creditors) and stewardship (Gebhardt, Mora and Wagenhofer, 2014). The main users of the financial reports, as it will be seen next, are the providers of capital (investors and creditors) and no more the owner of the business, nor the managers.

In what it folowes we extracted from the literature the groups of users and identified their interest in the corporate reporting.

## 2. Users and their interest

In 1975, the Accounting Standard Steering Committee (ASSC), from UK, has identified a list of users with the right to obtain information about the corporation (Sabau, 2013):

- the group of investors – including shareholders and the holders of securities;
- the group of creditors – including existing and potential holders of bonds and loans for stocks and short-term secured and unsecured loan providers;
- the group of employees – including current, prospective and former employees;
- the group of advisors, analysts – including financial analysts, economists, journalists, statisticians, researchers and other providers of advisory services;
- the group of business partners – including customers, suppliers and competitors, those interested in mergers and acquisitions;
- state authorities – including the tax authorities and organizations responsible for oversight of industry and commerce and local authorities;
- the public – including tax and fee payers, political parties, companies dealing with customer protection.

To these seven categories, there are studies that add also the accounting academics as users of corporate reports (Deegan and Rankin, 1997). This is a reality because they use the financial and non-financial reports, in order to study and notice different issues. Therefore, the users are many and different, they are not a homogenous category and their needs are different.

Some categories of users are privileged before others by the conceptual frameworks. The IASB and FASB, when they started their work together regarding the conceptual framework for financial reporting, in their discussion paper from 2006, have identified the primary users of the financial corporate reporting as being: investors, lenders and related advisors (PAAinE, 2009). Hence the most important category of users became the capital provider, as we will also see in the analysis of the framework. In this regards, McCartney (2004) was arguing that: "the real purpose of financial statements is not to meet user needs *per se*, but to provide 'information that can be used...[to] make decisions that affect the allocation of capital resources' (Miller et al., 1994, p. 12), in which case the only users who matter are the ones making those decisions."

Moreover, in the Guiding Principles of the Corporate Reporting Users' Forum (CRUF) it is emphasize that: "Accounting standards that govern the preparation of corporate reports should principles-based and comprehensible to the financially literates. These standards should not result in outputs that are at odds with economic reality"."Corporate reports should be prepared with the objective of providing a fundamental source of information for investors and creditors on which to base their decision" (CRUF, 2006).


## 3. Discussion on the "user needs" concept in the IASB and IIRC conceptual frameworks

For this part of our paper we used the IASB conceptual framework from 2014, and the integrated reporting framework.

The IASB conceptual framework "sets out the concepts that underlie the preparation and presentation of financial statements for external users." (IASB framework, 2014) Commenting on this conceptual framework, Gebhardt, Mora and Wagenhofer (2014) were arguing that: "An ideal framework needs to be sufficiently flexible to promote the evolution of standards. Thus, it should be comprehensive, but not too detailed in its prescriptions. Consistency between standards and the Conceptual Framework is desirable…" This is indeed desirable, but still not real.

A very important element which is found in the framework is the objectives and the uses of the financial reporting. The main objective of the financial reporting as it is defined by the revised framework of IASB is the decision usefulness for the capital providers: "The

objective of general purpose financial reporting is to provide financial information about the reporting entity that is useful to existing and potential investors, lenders and other creditors in making decisions about providing resources to the entity. Those decisions involve buying, selling or holding equity and debt instruments, and providing or settling loans and other forms of credit."

The stewardship is left behind. But as is also commented by Gebhardt, Mora and Wagenhofer (2014), the two objectives can require different accounting informations. The decission usefulness will require information which helps improve price effcency on the market and on the other hand, stewardship require information wich can help economic efficency improvment (Gebhardt, Mora and Wagenhofer, 2014). In a way this choice of the IASB is argued by the fact that "many existing and potential investors, lenders and other creditors cannot require reporting entities to provide information directly to them and must rely on general purpose financial reports for much of the financial information they need. Consequently, they are the primary users to whom general purpose financial reports are directed." Therefore, the main users as defined by the framework are the investors, lenders and creditors, and they can obtain information needed for their decisions from the financial reports. The other types of users as they are mentioned in the framework (regulators, members of the public) could use the financial reports only if they find them useful. It is assumed that these other groups can obtain information from entities not only from the financial reports, but on demand or on the basis of a contract.

What we would like to mention here is that in the framework is mention the fact that the financial reports "do not and cannot provide all of the information that existing and potential investors, lenders and other creditors need. Therefore those users need to consider pertinent information from other sources."(IASB conceptual framework, 2014) This means that a user needs not only the financial reports, for this reason non-financial reporting, such as the environment reports, followed by sustainability reports and corporate social responsibility reports, had developed in the last century.

The IASB conceptual framework defines also the qualitative characteristics of the information provided in the financial reports. Therefore, "If financial information is to be useful, it must be relevant (ie must have predictive value and confirmatory value, based on the nature or magnitude, or both, of the item to which the information relates in the context of an individual entity's financial report) and faithfully represents what it purports to represent (ie information must be complete, neutral and free from error). The usefulness of financial information is enhanced if it is comparable, verifiable, timely and understandable." Thus, here is defined the concept of usefulness by the framework, and it takes into account the information needed by the capital providers.

As it was mentioned previously, in the IASB framework, the information provided in the financial reports of the corporations are sometimes not sufficient for the users. There are specialist that are saying that the financial reports are too technical or too long and that there is a lack of connectivity between the information provided in the financial reports and the strategy of the company (William and Laing, 2009; Murphy, 2014). As a consequence, in 2013 it was issued by the International Integrated Reporting Committee the first draft of the conceptual framework for Integrated Reporting.

The IIRC framework mentions in its first paragraph that: "This Framework identifies information to be included in an integrated report for use in assessing an organization's ability to create value…." (IIRC framework, 2013 available online at http://www.theiirc.org/international-ir-framework/) The IIRC specifies on its website that the purpose of IR framework "is about better reporting, not more reporting" (http://www.theiirc.org/the-iirc/about/). Therefore, IR defines its primary purpose as being the explanation to the providers of capital on how an organization creates value over time. This type of reporting will contain financial and non-financial information. Even if the main purpose of IR addresses to the providers of capital, then the framework  mentions also that: "An integrated report benefits all stakeholders interested in an organization's ability to

create value over time, including employees, customers, suppliers, business partners, local communities, legislators, regulators and policy-makers." Therefore, IR addresses to all categories of users, one of its guiding principle being the stakeholder relationship. This means that an organization using IR will not only present figures that can provide information about future cash flows, for example, but also will show how understands the needs of its stakeholders and how it responds to them. The IR conceptual framework lets more space of interpretation; therefore, some of the concepts are not understood in the same way by all the corporations that want to publish IR.

**Conclusion**
Corporate reporting has change over time influenced by the changes in society but also at the request of the users. Many times the corporate reports were arguing that address users needs but instead the information contained it was too technical and hard to be understood (Sinnett and Laing, 2009; Murphy, 2014).
Even if during time, there were identified seven categories of users, the main attention in the actual conceptual frameworks is given to the capital providers. As the users are not a homogenous category, the conceptual framework issued by IASB for the financial reporting has chosen to address to the capital providers being sure that this is the category that mostly uses the financial reports.
IR conceptual framework presents also the capital providers as the main users of the corporation reports, but it take into consideration also the other categories of users, the stakeholders of the company.
The analysis of users needs is an endless story. What is sure is the fact that the reporting has change at the requirements of the users. The international regulation organism have discussed again and again their conceptual framework in order to get the public consent.

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# THE 'EPS' OF THE IFRS AS A BENCHMARK OF CORPORATE PERFORMANCE

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**Abstract:** *The measurement of the corporate's performance; efficiency and effective use of resources has an increasing role nowadays. In a globalizing and strongly competitive market environment the adequate, up-to-date, reliable and accurate information is inevitable for the companies in order to operate efficiently. Accounting is a part of corporate information system that's primarily objective is to capture the economic changes and to present their effect on the wealth and income of the companies. The performance of companies is interpreted in many ways and there is an extensive literature that discusses performance measurement and depending on the objective and the interested parties there are several methods from simple indicators to the more complicated models. According to the most frequently used definition, performance measurement is the measurement process of the effectiveness and efficiency of activities (Neely et al., 1995). Based on the accounting information of the companies many performance indicators can be shaped that could be useful benchmarks. The companies listed on the stock exchange must put special emphasis on the measurement of their performance and its presentation in the financial statements compared to the non-listed companies as the investor's primary aim is to maximize the returns on their investments. The national level regulations in this area are not unified; hence the comparison of companies is problematic. The listed companies must present their financial statements in accordance to the International Financial Reporting Standards (IFRS). The standard boards realized the lack of comparability as a result of the non-unified performance measurement. Their opinion is that earnings per share (EPS) is a comparable indicator and shows a consistent picture about the earnings of the companies so in 1997 they issued the IAS 33 'Earnings per share' standard. The IAS 33 provides a standardized method to calculate the EPS that is able to inform the* investors *reliably about their earnings on their shares. In this study our aim is to introduce the theoretical framework of the standard issued by the International Accounting Standards Committee (IASC), the present the calculation methods of the basic and diluted EPS indicators. We will also the practical application of the method by analysing the financial statements of the 30 companies of the Deutscher Aktienindex (DAX). The current study focuses on the method of performance measurement supported by the IASB that alleviates the comparison of companies and not identical with the performance measurement methods used in the discipline of finance.*

**Keywords:** IFRS, earnings per share, basic and diluted EPS, DAX
**JEL classification:** M41

## 1. Introduction

In the last few years a global demand occured for a commonly accepted and generally applicale international accounting system (Droppa – Becsky-Nagy 2015). The International Accounting Standard Committee (IASC) was formed in 1973 and turned to International Accounting Standard Board (IASB) in 2001. Their aim was to compile the International Accounting Standards (IAS) and International Financial Reporting Standards (IFRS) (Darabos, 2014). IFRS is a system of rules based on the theoretical framework of

principles and guidelines and its primary objective is to regulate the unified reporting obligation of the companies that are in its scope in order to ensure the comparability of the company's performance (Orban, 2014). With the creation of IAS 33 standard the standards board's purpose was to enhance the comparability of performances via unifying the methods and guidelines that focus on the calculation of the earnings per share. As a result of the regulation of this indicator the comparison of economic entities with each other in the same time period or the same economic entity's performance in different time periods became possible (IAS 33). The application of IAS 33 is compulsory for companies that

- Entities whose ordinary shares or potential ordinary shares are publicly traded
- Entities in the process of listing ordinary shares or potential ordinary shares in public markets (IAS 33).

The standard defines the calculation methods of two types of EPS indicators as we can see it in Figure 1, the basic EPS and the diluted EPS. In cases of both indicators the earnings connected to a common share are described.
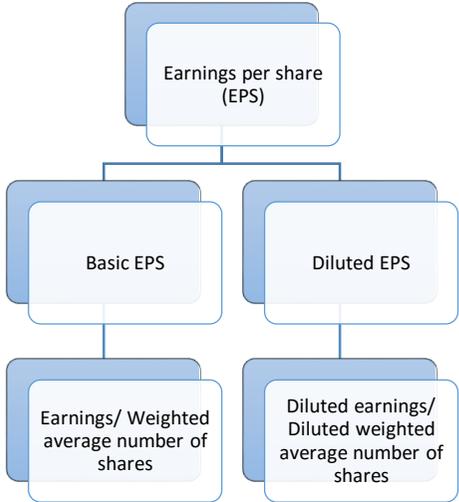


**Figure 1:** The different types of EPS indicator in IAS 33
Source: Own illustration based on IAS 33

## 2. Basic EPS

In the calculation of basic EPS the company's net income is divided by the weighted average number of the issued shares. Common shares are equity instruments that are subordinated to the other classes of equity instruments (Lakatos et al., 2013). A deficiency of the basic EPS is that while the easy calculation of common shares increases the transparency and consistency of the indicator, the calculation of the net income is affected by many other standards. The different alternatives offered by the regulation for example the application of different valuation methods can lead to the variability of the indicator.

In the calculation of the EPS we cannot take into account the Other Comprehensive Income (OCI) because the EPS is an indicator that represents the divisible income for the stakeholders of the company. As OCI contains mainly non-realized income categorizes we cannot calculate with it in case of EPS.

*Calculation of basic EPS*
When we calculate the numerator of Basic EPS than the profit or loss from continuing operations is adjusted for:

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- Non-controlling interest's share of profit
- Dividends on preference shares (after tax), differences arising in settlement of preference shares, and other similar effects where preference shares are classified as equity.

In the denominator there is the weighted average number of shares, that is the
- Time weighted average number of shares issued from date consideration receivable
- For additional shares where no consideration received – time weighted average number of shares from beginning of year /date of issue of shares with consideration (e.g. bonus issue)
- Restate comparatives (Lakatos et al., 2013).


## 3. Diluted EPS

The dilution is the decrease of the profit per share or the increase of the loss per share based on the assumption that there were conversion of convertible instruments, options and warrants were exercised or with special conditions new common shares were issued that diluted the ordinary shares (IAS 33). The diluted EPS calculated with this method represents the least favourable case for the holders of common shares
The possible methods of dilution and the process of calculation:
- *Convertible securities:* The net income must be modified with the after-tax effects of dividends and interest that is connected to common stocks with dilutive potential and for any other changes in income that could be a result of the conversion of the potential common shares. The denominator should include stocks that would be issued on the conversion.

- *Options and warrants:* In the calculation of diluted EPS we must assume the exercise of outstanding dilutive options and warrants. The assumed proceeds from exercise should be regarded as having been used to repurchase ordinary shares at the average market price during the period. The difference between the number of ordinary shares assumed issued on exercise and the number of ordinary shares assumed repurchased shall be treated as an issue of ordinary shares for no consideration.

- *Contingently issuable shares:* Contingently issuable ordinary shares are handled as outstanding and they are being involved in the calculation of basic and diluted EPS as well if the conditions stand. If the conditions have not been met, the number of contingently issuable stocks included in the diluted EPS calculation is based on the number of shares that would be issuable if the end of the period were the end of the contingency period. Restatement is not permitted if the conditions are not met when the contingency period expires (IAS 33).

In the analyses of the data of the financial statements of the 30 companies of Deutscher Aktienindex (DAX) we investigated how accurately the financial statements meet the requirements of IAS 33 and how the different cases of dilution appears in their reports.

**Table 1:** The companies of DAX Index and the appearance of dilution in their EPS

| Companies | The appearance of EPS in the Report and reasons of dilution |
|---|---|
| Adidas AG | basic EPS = diluted EPS |
| Allianz SE | share-based compensation plans |
| BASF | basic EPS = diluted EPS |
| Bayer AG | basic EPS = diluted EPS |
| BMW AG | deferred shares |
| Commerzbank AG | basic EPS = diluted EPS |
| Continental AG | basic EPS = diluted EPS |
| Daimler AG | stock options |
| Deutsche Bank AG | deferred shares |
| Deutsche Boerse AG | basic EPS = diluted EPS |
| Deutsche Lufthansa AG | basic EPS = diluted EPS |
| Deutsche Post AG | convertible bonds |
| Deutsche Postbank AG | basic EPS = diluted EPS |
| Deutsche Telekom AG | basic EPS = diluted EPS |
| E.On SE | basic EPS = diluted EPS |
| Fresenius Medical Care | potentially dilutive shares |
| Henkel AG | basic EPS = diluted EPS |
| Hypo Real Estate | information is not available about the value of EPS |
| Infineon Technologies AG | basic EPS = diluted EPS |
| Linde AG | share option schemes |
| MAN SE | basic EPS = diluted EPS |
| Merck & Co. | basic EPS = diluted EPS |
| Metro AG | basic EPS = diluted EPS |
| Munich Re AG | basic EPS = diluted EPS |
| RWE AG | basic EPS = diluted EPS |
| SAP AG | potentially dilutive shares |
| Simens AG | convertible bonds |
| ThyssenKrupp | basic EPS = diluted EPS |
| TUI AG | stock options |
| Wolkswagen | basic EPS = diluted EPS |

Source: Own compilation based on the financial statements of the companies of DAX Index from 2013

Out of the 30 examined companies 29 published their calculated EPS indicator in accordance to the form described by the International Financial Reporting Standards. As we can see in Table 1 in the cases of 19 companies the value of basic EPS was the same with the diluted EPS. These companies did not have potential common shares that conversion could lead to the dilution of their earnings per share indicator. We could observe 10 companies where potential ordinary equity appeared that might have diluting effect. The diluting effect of the convertible securities appeared as a result of the use of convertible bonds in cases of 2 companies, furthermore the potentially convertible shares diluted the value of EPS in 4 companies. In cases of 3 companies the use of stock options was the reason of the dilution. 1 economic entity's diluted EPS was caused by share-based compensation plans.

**4. In conclusion**

The purpose of the IASB is to create an indicator that is calculated with the same method based on unified guidelines in order to provide a consistent framework of corporate performance measurement that is able to provide comparable information about the companies. Earnings per share (EPS) indicator was chosen by the IASB as a benchmark of corporate performance that is able to evaluate performance without being influenced by the market assessment. Companies that are listed on the stock exchange or in the process of going public are obliged to present the value of this indicator in their reports.

Based on the companies of the DAX 30 Index that shares are publicly traded on the stock exchange we can state that 97% of these companies met the requirements imposed by the International Financial Reporting Standards so we can conclude that the reporting discipline of the companies is positive. The calculation method of the basic and diluted EPS was described in detail in the financial reports of the companies. In cases of 10 companies out of 30 occurred events that led to the issuing of potential common stocks that may have diluting effect on the value of the EPS indicator and could have worsen the value of the earnings per share indicator.

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# EVOLUTION AND QUALITY OF FINANCIAL REPORTING IN ROMANIA: AN OVERVIEW FROM 1990 TO PRESENT

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**Abstract:** *The results of a business activity are concentrated in the financial reports; accounting is the instrument that provides these reports to internal and external users in order to help users to make useful economic decisions. At international level, the accounting is standardized by IASB (former IASC) which elaborate financial reporting standards (known as IAS / IFRS) in order to improve the quality and transparency of reporting. The changes in business environment (globalization, mergers and acquisition transactions, internationalization, corporate social implications) requires a continuous updated of financial reporting. The accounting information is useful to their users if comply with quality characteristics, defined through the Conceptual Framework of Financial Reporting issued by IASB (the new form of Conceptual Framework is in place starting 2010). Starting 1990, the researchers (namely academics) had to focus on new kind of works about accounting and accounting research; the process was difficult and is not end. Initially, the academics inspired from French accounting books and translated them with some changes/improvements correlated to Romanian economy. Gradually, some journals founded and the academics and practitioners begin to publish their work in a more scientific manner. In this paper, we will try to present an evolution of financial reporting in Romania, to identify if the alignment to international financial reporting standards improved the quality of reporting, and to investigate whether the adoption of the International Financial Reporting Standards for the individual financial statements of Romanian listed entities has improved the value relevance of the accounting numbers. The study uses data of entities listed on the Bucharest Stock Exchange, prior and post the adoption of the International Financial Reporting Standards for the individual financial statements. The year 2012 represents the year in which Romanian entities listed on the regulated market had to prepare their individual financial statements in accordance with the International Financial Reporting Standards. Due to the fact that the analysis aims to capture the quality ante and post the adoption of IFRS for individual financial statements, this analysis is conducted on a five-year period of time, namely between 2009 and 2013. The year 2011 is the year prior to the one in which entities had to prepare their individual financial statements in accordance to IFRS, and the year 2013 represents the second year of reporting accordingly IFRS requirements.*

**Keywords:** reporting, IAS/IFRS, quality of reporting, Romanian accounting, empirical researches

**JEL classification:** G32, M10, M41, M49, O16

## 1. Introduction

The results of a business activity are concentrated in the financial reports; accounting is the instrument that provides these reports to internal and external users in order to make useful economic decisions. At international level, the accounting is standardized by IASB (former IASC) which elaborate financial reporting standards (known as IAS / IFRS) in order to improve the quality and transparency or reporting. The accounting information is useful to their users if comply with quality characteristics, defined through the Conceptual Framework of Financial Reporting issued by IASB (the new form of Conceptual Framework is in place starting 2010). The changes in business environment (globalization, mergers

and acquisition transactions, internationalization, corporate social implications) requires a continuous updated of financial reporting. In this paper, we will try to present an evolution of financial reporting in Romania and to identify if the alignment to international financial reporting standards improved the quality of reporting. What is special in Romanian economy? The tumultuous history of Romania brings us today to face the market economy; starting to 1990, the accounting switched from socialist centralized reporting to corporate reporting (capitalist system). A long and difficult road starts for accountant professionals.

*Landmarks in accounting history*

To put in time line the history of accounting we can summarize the accounting reporting as follows (Albu *et al.* 2010):

a. Pre-communist era (1837-1950) when the accounting system uses the elementary basics based on double entry concepts; the ancient reports and registers in Sibiu proves it (Radu, 1995); the first regulation of accounting is considered to be The Organic Laws (1831 Walachia and 1832 Moldavia), issues during Cuza Voda' reign. The scholar of era, Nichifor Emanoil translated the German accounting laws; the translation / interpretation is considered the equivalent of Luca Paccioli in Romania (Rusu, 1991). During this period (1837-1950) the major events occurred and enhanced the evolution of Romanian economy:

    (i)   Foundation of National Bank of Romania (1880);

    (ii)  Issue of Code of Commerce (1887);

    (iii) Issue of first accounting book by Stefanescu Th. (1873);

    (iv) Issued the first accounting review - General Journal of Commerce and Accounting (ro. *Revista Generală de Comerţ şi Contabilitate*) (1908);

    (v)  Foundation of economic school Academy of High Commercial and Industrial Studies (ro. *Academia de Inalte Studii Comerciale şi Industriale*) (1913);

    (vi) Creation of National Romanian State (1918))

    (vii) Body of Chartered Certified accountants and Authorized accountants of Romania (ro. *Corpul Contabililor Autorizaţi şi Experţi*) (1921);

    *(viii)*     Iacobescu published the accounting book General concepts about accounting (ro. *Conceptii generale despre contabilitate*) (1928) an expression of Romanian accounting thinking; together with Al Sorescu conceptualized the patrimonialist current in Romanian accounting;

    (ix) Evian published his ideas about accounting in Double-entry accounting (ro. *Contabilitatea dubla*) (1945).

b. Communist era (1950-1990). The Second World War brings new regime in Romania: soviet influence and planned economy. Starting this point all accounting books were translations of soviet community. The financial reports became less important for financial decisions and bookkeeping (recording process) increases in importance; the information is not available and a trend of secrecy is developing. The accounting profession is no more important and the Chartered Certified accountants and Authorized accountants of Romania is dissolved.

c. Contemporaneous era (1990-present). The dramatic changes in Romanian history, the events from December 1989, create the environment for new approaches in all domains, including accounting. The translation to a new accounting system proves to be difficult and exhausting, full of laws, regulations, and standards. In the past 20 years, a lot a changes occurred in order to improve the accountant activity and reporting; we started with French approach, and continued with Anglo-Saxon's approach. Romania join the European Union in 2007 and the alignment to European Directives and International Standards becomes necessary. The current accounting regulations are Order of Minister of Finance 1802/2014 Accounting´s regulations regarding the individual financial statements and consolidated financial statements.

## 2. Literature review

Starting 1990, the researchers (namely academics) had to focus on new kind of works about accounting and accounting research; the process was difficult and is not end. Initially, the academics inspired from French accounting books and translated them with some changes/improvements correlated to Romanian economy. Gradually, some journals founded and the academics and practitioners begin to publish their work in a more scientific manner. In the Tabel 1 we summarized the most important Romanian journals indexed ISI and BDI.

**Tabel 1:** List of journals

| Journal | Year of First Issue[*] | Indexation |
|---|---|---|
| Amfiteatru Economic | 1999 | ISI, IF[**] = 0.07 |
| Romanian Journal of Economic Forecasting | 2000 | ISI, IF = 0.047 |
| Economic Computation and Economic Cybernetics Studies and Research | 2004 | ISI, IF = 0.030 |
| Transylvanian Review of Administrative Sciences | 2005 | ISI, IF = 0.062 |
| Anale. Seria Stiinte Economice. Timisoara (Univ. Tibiscus) | 1994 | BDI[***] |
| Analele Universitatii din Oradea-Stiinte Economice | 1994 | BDI |
| Theoretical and Applied Economics / Economie Teoretica si Aplicata | 1994 | BDI |
| Economia. Seria Management | 1998 | BDI |
| Euroeconomica | 1998 | BDI |
| Annales Universitatis Apulensis Series Oeconomica | 2002 | BDI |
| Revista de Management si Inginerie Economica | 2002 | BDI |
| Contabilitate si Informatica de Gestiune / Accounting and Management Information Systems | 2002 | BDI |
| Administratie si Management Public | 2003 | BDI |
| Audit Financiar | 2003 | BDI |
| Revista Tinerilor Economisti / The Young Economists Journal | 2003 | BDI |
| Analele Universităţii Ovidius. Seria Ştiinţe Economice / Ovidius University Annals. Economic Sciences Series | 2004 | BDI |
| Economy Transdisciplinarity Cognition | 2004 | BDI |
| Studii si Cercetari de Calcul Economic si Cibernetica Economica | 2004 | BDI |
| Acta Universitatis Danubius. Oeconomica | 2005 | BDI |
| Analele Stiintifice Ale Universitatii Alexandru Ioan Cuza din Iasi – Sectiunea Stiinte Economice / Scientific Annals of The Alexandru Ioan Cuza University of Iasi – Economic Sciences Section | 2005 | BDI |
| Bulletin of The Transilvania University of | 2005 | BDI |

| Journal | Year of First Issue[*] | Indexation |
|---|---|---|
| Brasov - Series VII: Social Sciences And Law | | |
| Review of General Management | 2005 | BDI |
| The Annals of The "Stefan cel Mare" University Suceava. Fascicle of The Faculty of Economics and Public Administration | 2005 | BDI |
| Buletinul Universitatii Petrol-Gaze din Ploiesti Seria Stiinte Economice | 2006 | BDI |
| Journal of Applied Economic Sciences | 2006 | BDI |
| Revista de Evaluare | 2006 | BDI |
| Romanian Economic and Business Review | 2006 | BDI |
| Valahian Journal of Economic Studies /Revue Valaque d'etudes Economiques | 2006 | BDI |
| Agora International Journal of Economical Sciences | 2007 | BDI |
| Analele Universitatii Constantin Brancusi din Targu-Jiu, Seria Economice / Annals of The Constantin Brancusi University of Targu Jiu, Economy Series | 2007 | BDI |
| Revista Economica | 2007 | BDI |
| Studia Universitatis Vasile Goldis Arad, Seria Stiinte Economice | 2007 | BDI |
| Analele Universitatii din Craiova, Seria Stiinte Economice | 2008 | BDI |
| Analele Universitatii Eftimie Murgu Resita, Fascicola si Studii Economice / Annals of "Eftimie Murgu" University of Resita, Fascicle si Economic Studies | 2008 | BDI |
| Review of Economic and Business Studies | 2008 | BDI |
| Journal of Academic Research in Economics - JARE | 2009 | BDI |

**Source:**
http://uefiscdi.gov.ro/userfiles/file/CENAPOSS/rev_rom_isi_30_iulie_2014_factori.pdf
[*] Based on journal site
[**] Impact Factor
[***] International Data Bases Indexation (ro. Baze de Date Internationale)

The table presented below includes only the ISI journals and journals indexed in international data basis (BDI) according to Romanian authority (UEFISCDI). The papers published in these journals covers mainly, financial accounting, managerial accounting, audit, taxation, finance topics. For present research, the financial accounting area is relevant. The implementation of IAS/IFRS in Romanian accounting rises many researches. Ionașcu *et al.* (2010) state that the need for empirically certify the presence or absence of IFRS benefits is more stringent in countries in which the politics has determined the adoption of international accounting standards, rather than the business environment. Moreover, Albu and Albu (2012) state that the incentives of IFRS adoption in Romania, as well as the benefits of this process are often expressed in general terms, referring to economic development.

Albu *et al.* (2013) provided a comprehensive description of the IFRS adoption process in Romania and their research results indicate that the level of International Financial Reporting Standards implementation are rather reduced, emphasizing significant differences between companies. Săcărin (2013) conducted an analysis of the mandatory application of IFRS by the Romanian listed entities and the results indicate that there is a limitative influence of IFRS on the companies` earnings and equity. *The advantages and disadvantages are debated by Cucui and Diaconeasa (2011). IAS/IFRS standards adoption, at the beginning for banks and later for listed companies open the way for more empirical studies based on financial data from Bucharest Stock Exchange website (Sacarin et al. (2013), Tudor Tiron et al. (2011)).* A special attention received the measurement in accounting, both in empirical theories of evaluation bases and practical issues about evaluation and presentation in financial reports. The fair value concept and the quality of reporting are disseminated in relevant researches (Pitulice and Nichita, 2014; Vladaia and Petrescu, 2013, Paunescu and Nichita, 2011; Bonaci and Tiron Tudor, 2011). The ethical behavior in economic fields and how is possible to integrate it in day-by-day business activities is debated by Sobolevschi and Petcu (2008) they conclude that the Romanian attitude in founding the Boards of companies or to hire managers in big companies conducted to failure of these entities and the shareholders of them haven't any support from nobody. Stegaroriu *et al.* (2011) conducted a research about Romanian ethical attitude and Poland attitude in business. The new business models (Alexa, 2014) requires new reporting tools in order to capture the real performance of entity. The XBRL language tries to uniform the terms used in financial reporting, and creates reports that are more compact and qualitative. Some new papers deal with link between financial accounting and risk management; how financial instruments can improve the accounting process and reporting (Nichita, 2014, 2015).

## 3. Methodology of research and regression model

The aim of this research is to investigate whether the adoption of the International Financial Reporting Standards for the individual financial statements in the case of Romanian listed entities has improved the value relevance of the accounting numbers, fact reflected in an improved financial reporting quality. In order to test this hypothesis, we have implemented the modified Barth, Landsman and Lang Model (2008).

### 3.1 Sample selection

This research aims to provide an investigation of the financial reporting quality exposed by the entities listed on the Bucharest Stock Exchange, prior and post the adoption of the International Financial Reporting Standards for the individual financial statements. The year 2012 represents the year in which Romanian entities listed on the regulated market had to prepare their individual financial statements in accordance with the International Financial Reporting Standards.

Due to the fact that the analysis aims to capture the quality *ante* and *post* the adoption of IFRS for individual financial statements, this analysis is conducted on a five-year period of time, namely between 2009 and 2013. The year 2011 has been chosen as the year prior to the one in which entities had to prepare their individual financial statements in accordance to IFRS, and the year 2013 represents the second year of reporting accordingly IFRS requirements.

The sample consists of companies listed on the Bucharest Stock Exchange, the primary market, compiling both tier I and tier II, which publish their individual financial statements in accordance to IFRS. Thus, a few restrictions are required for this study, as it follows:

- Companies present their financial statements for the year 2012 according to the International Financial Reporting Standards – IFRS 1;

- Companies operating in the financial sector (both banks and insurance companies) were eliminated from the study, due to homogeneity considerations - these financial institutions have specific reporting regulations considering their activity, on the one hand, and they present higher assets, fact which would alter the research results` significance, on the other hand);
- Companies have to be listed on the Bucharest Stock Exchange in all the five analyzed years, namely 2009, 2010, 2011, 2012 and 2013.

After implementing the above-mentioned restrictions, the final sample consists of 49 companies listed on the Bucharest Stock Exchange. In order to collect the data for this research, we have accessed the Thomson Reuters Database. For the companies and the years were this database did not provide the information we were interested in collecting, we have consulted the annual reports of the companies, as well as the official publication from the Bucharest Stock Exchange and entities` websites. Table 2 presented below captures the sample industrial structure:

**Table 2: Sample industrial structure**

| Industry* | Number of entities | Percentage | Exchange Segment |
|---|---|---|---|
| Mining and quarrying | 2 | 4% | |
| Manufacturing | 31 | 64% | Bucharest Stock Exchange Primary Market |
| Electricity, gas, steam and air conditioning supply | 1 | 2% | |
| Construction | 3 | 6% | |
| Wholesale and retail trade; repair of motor vehicles and motorcycles | 4 | 8% | Companies listed in each of the five years: 2009, 2010, 2011, 2012 and 2013 |
| Transportation and storage Accommodation and food service activities | 4 | 8% | |
| TOTAL entities | 49 | **100%** | |

Source: The authors` own projection
* Nomenclature of economic activities in Romania - NACE codes Revised

**3.2 The research model**
The following regression model (the modified Barth, Landsman and Lang (2008) model) is used in order to test whether the value relevance of the Romanian listed companies` accounting figures has improved due to the IFRS adoption.
The modified Barth, Landsman and Lang Model (2008) is presented below:

$$P_{it} = \beta_0 + \beta_1 BVE_{it} + \beta_2 N_{it} + \varepsilon_{it} ;$$

Where:
- P - share price;
- BE - book value of earnings per share;
- N - net income per share;
- Ɛ - regression error;

i - company, and
t - year.

In the Barth, Landsman and Lang Model (2008), the dependent variable is represented by the residual value of shares (noted $P^*$) and determined by regressing the share price (noted P) on fixed effects of country and industry. In the original model, this crosssectional approach was imposed by the fact that the authors analyzed companies operating in different countries and reporting in accordance with different accounting standards (US GAAP and IAS/IFRS).Though, in the model implemented by us, namely the modified Barth, Landsman and Lang Model (2008), we have set as dependent variable (see Equation 1 above) the share price (variable noted P), and not the $P^*$ variable from the original model, all the independent variables from the original model being implemented as in the original model. According with previous researches, this model assures that the accounting information are being found in the public sector through assessing the P variable (share price) six month after the financial year end (Lang, Raedy, and Yetman, 2003; Lang, Raedy, and Wilson, 2006; Barth, Landsman, and Lang, 2008).According to the regression model, the value relevance parameter is represented by the R Square ($R^2$) value from the regression output. Consequently, a higher $R^2$ value signals a higher relevance of the accounting numbers/figures.

### 3.3 Research Results

This section introduces the main results of the regression implemented in order to assess the influence of IFRS adoption for individual financial statements on the value relevance of accounting figures exposed by the Romanian listed entities between 2009 and 2013. The period prior the IFRS adoption is represented by the years 2009 and 2010, while the post adoption period is 2012 and 2013. Thus, the year 2011 represents the transition year, year in which companies had to restate their individual financial statements in accordance with IFRS, although the first year of IFRS reporting was the following year, namely 2012.
The descriptive statistics for each of the five analyzed years (2009, 2010, 2011, 2012 and 2013), is in the following table:

**Table 3:** The value relevance of accounting figures

| Regression results – The modified Barth, Landsman and Lang Model (2008) | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|
| Multiple R | 0.93 | 0.99 | 0.997 | 0.998 | 0.992 |
| *R Square ( $R^2$ )* | *0.87* | *0.98* | *0.994* | *0.995* | *0.985* |
| Adjusted R Square | 0.86 | 0.98 | 0.993 | 0.995 | 0.984 |
| Standard Error | 8.49 | 6.05 | 2.53 | 2.24 | 3.43 |
| Number of observations | 49 | 49 | 49 | 49 | 49 |

**Source**: Authors` own projection (SPSS Statistics 19 Program)

As mentioned in the previous section, the value relevance parameter is represented by the R Square ($R^2$) value from the regression output of the modified Barth, Landsman and Lang Model (2008). By analyzing the corresponding value of $R^2$ from the above table (Table 2), it can be noticed that both in 2012 ($R^2$ = 0.995) and in 2013 ($R^2$ = 0.985), the value relevance of accounting figures is higher than in the years 2010 ($R^2$ = 0.98) and 2009 ($R^2$ = 0.87). As a result, the Romanian listed entities expose a higher value relevance of earnings and net income post IFRS adoption for individual financial statements. However, this increase in the value relevance of the accounting figures is not endogenous to the IFRS reporting, meaning that it cannot be entirely related to these reporting standards (IFRS), being influenced by other factors. Still, the IFRS adoption contributed to a higher

value relevance of the earnings and net income exposed by the analyzed Romanian entities.

Consequently, this increased value relevance of the accounting figures in the years following the IFRS adoption for the companies` individual financial statements (2012 and 2013) can be associated with an improvement of the financial reporting quality exposed by the Romanian listed companies. Accordingly, the research hypothesis is being validated, namely, companies listed on the Bucharest Stock Exchange through 2009-2013 which present their individual financial statements according to IFRS expose a higher financial reporting quality (a higher value relevance of accounting figures: earnings and net income) post adoption.

## 4. Results, analysis, discussions and conclusions

The capital markets are known as a major conductor of transparency, fact that increases the investors` confidence in the financial reporting output, namely the financial statements presented by the listed companies. Because Romania is an emerging economy, this aspect becomes more stringent and the Romanian listed companies have to face a vital need of exposing financial statements of high quality. Since the year 2012 was the first year when the Romanian listed companies had to present their individual financial statements in accordance to the International Financial Reporting Standards (IFRS), this research aims to investigate the financial reporting quality exposed by the publicly traded companies from Romania *ex ante* and *ex post* the IFRS adoption (for the individual financial statements). The sample consists of 49 entities listed on the Bucharest Stock Exchange between 2009 and 2013. In order to assess the financial reporting quality, the value relevance approach was conducted. Thus, by implementing the modified Barth, Landsman and Lang model (2008), we have investigated the value relevance of the accounting figures in the years prior (2009 and 2010) and post (2012 and 2013) the IFRS adoption for the Romanian entities` individual financial statements. The main results of this research indicates that, in the years following the IFRS adoption, the value relevance of accounting figures (earnings and net income) has increased, fact which signals an improved financial reporting quality of the Romanian companies listed on the Bucharest Stock Exchange.

As for further research directions, the study can be improved by assessing the financial reporting quality through other models existing in the accounting literature (such as accrual models). Moreover, the aim of future researches might include other emerging economies across the European Union (such as Poland, Hungary, the Czech Republic or Bulgaria) in order to obtain comparable results.

As any scientific product, this research confronts its own limitations. Firstly, the sample size is rather small (49 companies), as well as the number of observations (245 observations), fact which can tackle the results `significance. Still, the same companies were analyzed in all the five years (2009, 2010, 2011, 2012 and 2013) and the results are relevant to all the 49 Romanian listed companies. Secondly, the research results are not entirely attributed to the IFRS adoption, meaning that other factors may determine the increased value relevance of the accounting figures post IFRS adoption.

## 5. Acknowledgments

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# PRESENTATION OF SPORTING PLAYER'S RIGHTS IN HUNGARIAN AND INTERNATIONAL ACCOUNTING

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**Abstract:** *Incipiently, sport had been a civil activity then sports organizations, clubs, leagues and societies appeared in growing numbers throughout Europe in the 19th century. It had launched only for purposes of pastime and entertainment but it moved to social, political and economic levels later. After the Second World War, sports done in form of civil and private activity become equal to the public interest. The right to do sports is a constitutional right. In the 21st century, the demand on sport makes great strides and it pulls the development of the economic fields of sports as well. Today, sport is already considered as an independent industry, several countries have developed sport markets. According to estimates, sport accounts for 4% of the EU's GDP. The actuality of research is given by the fact that the economic branch of sports develops continuously which is due to that more and more amounts already stream into sports in our days. In Hungary, sport is mainly state aided and has mostly financing problems while the sport businesses existing in the more developed Western Europe are principally sponsored by the private sector. The government considers sport as a strategic branch and manages as such because they see the international breakthrough potencies in sport as well. All this can explain the substantial contribution to this segment.The research covers an economic subject. The purpose of this research is to examine the differences of the accounting systems applied by a domestic and an international sport business; how they demonstrate the available player roster in their books; how they account for the incomes and expenditures incurred with the players. For the leaders of the businesses to be able to make quick and appropriate economic decisions in this intensively changing world, it is essential that an enterprise should have a well-functioning accounting system based on up-to-date information. International Financial Reporting Standards (IFRS) are intended to provide the comparability across borders. In order to make accounts of two or more businesses comparable, it is necessary for this treatise to touch on the field of the international accounting regulation as well. In relation to the international accounting standards, the research concerns the investigation of the intangible assets to a great extent because the player value is proved in this way and by profit-and-loss statement with respect to the player transfers.*

**Keywords: sporting** player's rights; accounting; intangible assets, International Financial Reporting Standards

**JEL classification:** M41

# 1. Sporting player's rights

Appearing of the player's rights concept itself can be ascribed to Sporting Act entered into force in 1996. Actually, the concept of player's rights itself is really necessary because of two reasons. On the one hand, from the aspect of that the payment has to be legal during a player transfer between different sport businesses. On the other hand, it is necessary to regulate the possibility for allowing the sportspersons to leave their present club under any circumstances or irrespectively of certain reasons. We can also determine that the relevance of the player's rights itself is subjective at different sports, sport organizations and sportspersons – the importance of the definition emerges principally in case of the spectacle sports.   The Sporting Act I of 2004 being currently in force in Hungary states that the player's right is "a right to use the physical and mental abilities relating to sporting activity of a sportsperson in the context of sporting activity" (Princzinger, 2010).

The subject of this research requires that we should touch upon those *legal transactions* which come to fruition during each player transfer. These legal transactions come into existence by employment contracts or agency agreements within frame of which the player's rights can be sold or lent. In our country, the professional sportspersons are employed in frame of working time in most cases. Conditions of the agreements are that the contractually fixed amount shall be accounted as wage costs according to the accounting rules (Berkes et al., 2012). The lender can claim a counter-value in exchange of the lending. Purchasing the use of the right is qualified as a sporting certificate (it could be temporary or permanent), it can also involve a payment of counter-value. The other important factor stated by the Sporting Act is when the employment contract or agency agreement of a sportsperson is expired then he/she can have disposal of his/her own player's rights independently. Insofar as he/she sells these rights again then he/she shall be obliged to pay 1% of the counter-value to the sport association and 4% to the fund of the sport association supporting the junior training (Princziger, 2010).

Regarding the transfer of the sportspersons, the European Commission made the first major decision in 1995, on the occasion of the Bosman transaction. Since that point, the European law (the Treaty of Rome) has been regulating the rights related to the freedom of sportspersons. In addition, it ruled to terminate a former so-called limitation by quotas which regulated the number of the players with other citizenship in case of a club. Another important goal is to preserve the integrity of the economic competitions appearing in sports.

Nowadays, as in many areas, borders in sports have also faded. Sportspersons have chance to prove not only in their home countries but at an international level as well. In Hungary, selling and buying of the player's rights are regulated by the license.   The following things contribute to the players' current value: the marketing value i.e. the public image obtained during the sports events, the associated emotional effects, the subjective adjudication of their performance. Transfer of the player's value as a right representing assets is realized in direct or indirect finances (Princzinger, 2010). One of the main income sources of the sports organizations could be the players' transfer mentioned before. Extent of the income depends on internal and external conditions. The player choosing system and the position of the club are ranked among the internal conditions while the international performance and image of the country can be external conditions (András, 2009).

## 2. The Hungarian accounting system

The accountancy is essential not only for the managing entity but its external environment as well. It is required from the managing as well as external actors that the accountancy has to help on forming a reliable and real image about the venture. Information provided by the accountancy should reach the user in time since these ones are considered as useful in this case only (Siklósi-Veress, 2012). The accountancy can be treated as one of the most important communication-purposed information architectures for a managing entity (Baricz, 2009). The account regulated by Act C of 2000 contains the information relevant for the internal and external users. Legal obligation of a managing entity is to make an account. What is required from the Accounting Act is that it shall be in accordance with the relevant directives of the European Community and it shall take the international accounting principles into consideration. Insofar as the directives of the European Union have no regulation in connection with the given area then the international accountancy reporting standards shall prevail. Possibility and obligation of using the international financial reporting standards are worded by the regulation 1606/2002/EK (Accounting Act, 2000).

### 2.1. The Hungarian reporting obligation

According to Act C of 2000 entered in to force in January 2001, an account has to be made and published by each of the following parties: preliminary companies, continuously operating entities, ventures under changing as well businesses being under bankruptcy proceedings, liquidation, final settlement and every managing entity covered by the accounting act (Accounting act, 2000). Parts of the annual accounts are the balance, the profit-and-loss statement and the additional annex. The business report is not part of the account but it needs to be prepared simultaneously (Kozma, 2001a).

### 2.1.1. Balance to be struck as part of the report
The balance needs to be struck as part of the report; values of the sportsperson's rights are also indicated here among others. The balance is nothing but such a bilateral statement which contains the company's assets and liabilities contractedly, with regard to a specific time and stated in value of money. The property means each material and non-material goods owned by the undertaking (Kozma, 2001b).
Subject of the research at asset side of the balance requires the analysis of the first group of fixed assets so we now touch upon the investigation of intangible assets, particularly rights representing assets.
The *intangible assets* are such non-material goods (non-materialized) which permanently serve the activity of undertaking for more than one year. Only records in value need to be kept about the intangible assets. At the end of the year, these assets need to be valued individually.
We state the player's rights as *rights representing assets.* The rights representing assets are such non-material goods which alone personify negotiable rights and originate from property. For example the brand name, the concession rights and the player's rights are classed among the rights representing assets. Those rights are negotiable on which there is effective demand and the seller has disposal of those ones. Namely, rights representing assets can be gained only by financial contributions or purchase; rather by purchase in case of sports. The rights representing assets need to be indicated at net value (Éva, 2007). Net value = Gross value - accelerated depreciation - depreciation according to the plan + reversal of the accelerated depreciation + value adjustment (Sztanó, 2006). We can account for depreciation if value of our asset has become loss-making in comparison with

the previous year. The contractor has the opportunity to estimate these rights at market value (Éva, 2007).

### 2.1.2. Profit-and-loss statement to be prepared as part of the report

In this paragraph, the profit-and-loss statement to be prepared as part of the report will be shown because the outcome arising in the course of accounting the buying and selling of the player's rights is indicated here. Task of the profit-and-loss statement is to provide information about the outcome arising as a result of certain events during the business year, about structure and allocation of the outcome. The profit-and-loss statement itself is such an accounting document which contractedly states the periodical revenues and expenditures of a managing entity in value of money, in bound structure and with regard to a specific time. The outcome resulting from the difference between revenues and expenditures is also indicated. The report contains the profit-and-loss statement in a bound form but there is the opportunity to detail the rows further if a real demonstration of the activity requires it (Himber et al, 2006).

The contractor has the opportunity to choose what method is used for making the report: classification of expenses by nature or classification of expanses by function. Both procedures contain the same category of results; the difference between them is the method for calculating one of the categories. Most of the sports ventures apply the classification of expenses by nature (Himber et al, 2006).

The buying and selling of the player's rights is not a main activity of the sports ventures therefore the outcome arising from sales is not indicated as a stock and it does not affect the row of the net revenues from sales. In the profit-and-loss statement, the outcome affects the rows of the other revenue and other expenditure from sales of the intangible assets. The revenue by buying and selling itself means *other revenue* for the undertaking. The other revenue does not form a part of the net revenues from sales, it arises during a regular activity and it belongs neither to the financial nor to the unscheduled revenues. Writing the sold rights representing assets off the books involves other expenditures. The *other expenditure* comes into being in the course of the normal business and it is qualified as neither financial nor unscheduled expenditure (Helgertné-Kurcsinka, 2008). The other revenue and other expenditure appear in the result category of the business activity. This is the category of result which contractedly shows how fruitful a venture is (Baloghné et al., 2006).


## 3. International accounting system

Thanks to the global processes occurred over the last few decades, changes took place in the undertakings, the economic life and the area of accounting was formed much as well. A lot of undertakings have cross-border activities building international connections up.

The financial statements to be prepared by the undertakings reflect the international rules of the firms' own country. This could cause problem in that case if the company is also in the international life. The differing content and rules make the comparability and the performance measurement more difficult, particularly for the enterprises, their owners, their existing and potential investors, other decision-makers as well as authorities. The above-mentioned different international accounting principles enhance the necessity for establishing a uniform harmonized accounting system which is unanimous worldwide as well.

Since 1st January 2005, the EU's and EEA's (European Economic Association) companies, banks, financial institutions, insurants and their subsidiaries, which are quoted on the stock market, have been obliged to apply the *International Financial Reporting Standards* (hereinafter IFRS). It means that these ones have to prepare consolidated (contracted)

financial statements according to the International Accounting Standards (hereinafter IAS)/IFRS. In certain Member States, there are opportunities to prepare consolidated and individual financial statements for firms not quoted on the stock market, in accordance with IFRS. Since 2007, those undertakings have also been obliged to apply the mentioned above which trade only with their debt instruments on the stock market. The firms not quoted on the stock market, preparing consolidated statements, can choose that they compile their reports according to IFRS or in accordance with the Hungarian regulation (Lakatos et al., 2013).

### 3.1. Presenting the financial accounts

Necessity for financial statements can be found in that the information provided by the reports is relevant not only for the leaders but wide range of the external users as well. The Hungarian equivalent of the financial statement is the report. The following items can be found within standard frame of Presentation of Financial Statements, (hereinafter IAS1): principles to be applied during the international accounting, general information and the regulations regarding structure and content of the financial statements. Based on these, as in the Hungarian accounting regulation as well, the financial statements consist of several elements which are the following (Beke, 2014):

- balance reflecting the financial position of an entity at the end of a period,
- comprehensive profit-and-loss statement,
- report about changing of the equity during a period,
- cash flow,
- additional comments.

The most important demand on the financial statements is the fair presentation. Only a minimal content is specified with regard to all elements of the financial statements. This standard deals with presentation only, not with assessment (Lakatos et al., 2013).

### 3.2. Balance to be struck as part of the financial accounts

Among the International Financial Reporting Standards, we can find the requirements on striking a balance which are regulated by IAS1 standard i.e. presentation of the financial statements. The standard specifies the rules regarding the balance, its items to be presented compulsorily, its possible format and the individual items. IFRS does not regulate all elements as well as sequence for rows of the balance; the standards merely list those elements which have obligatory to be indicated without reference to the nature of activity (Beke, 2014). If it is required by the nature of activity then the following things are totally accepted: enlarging the rows of balance with further elements, modifying the sequence of items, another kind of groupings – this is a decision of the managing entity.

The focus of research is the *intangible assets* i.e. the buying and selling process of the player's rights – it is regulated by the Intangible Assets Standards (hereinafter IAS38). Nowadays, it can be determined that the knowledge and its information materialize and become conspicuous as intangible assets in this knowledge-based society. Both the domestic and the international regulatory devote a separate section to this asset group. According to the IAS38, the intangible assets are non-monetary identifiable assets without any physical appearance. Since these ones are counted among the assets, therefore further definition applies to them, namely, that a future profit will derive from these ones which is enjoyed by the managing entity (Bartha et al., 2013).

### 3.3. Profit-and-loss statement to be prepared as part of the financial accounts

The comprehensive profit-and-loss statement (Other Comprehensive Income, hereinafter OCI) has also been affected by the international accounting regulations. IAS1 deals with the concepts relating to the profit-and-loss statement (P/L) in particular. This standard regulates the content of profit-and-loss statement, its elements to be presented compulsorily, its procedure, the items to be indicated compulsorily in the profit-and-loss

statement or among the complementary data and their possible forms (Beke, 2014). IAS1 does not regulate the other comprehensive profit-and-loss statement concretely. There are terms regarding the items to be recognised only, which are the following (Lakatos et al., 2013).

Sales of the intangible assets are regulated by the *Revenues Standards* (hereinafter IAS18). Transfer of the intangible assets is accounted in net way. While sales of a right representing assets have affected the rows of other revenue and other expenditure in the Hungarian accounting, here IAS18 deals with the regulation of revenues from sales. Based on term of the revenue (the revenue is a gross profit inflowing in connection with the activity of a managing entity during a specific period, without contribution of the owners), that amount can be indicated only as a revenue which was collected by a managing entity on its own behalf (Beke, 2014).

## 4. Summary of differences

In the previous chapters I presented in detail the specialities of Hungarian accounting rules and IFRS with regards to the sportsman's rights. The following table summarizes the similarities and differences of the two accounting systems.

**Table1:** Summary of differences between Hungary's Accounting Act and IFRS

|  | IFRS/IAS | Hungary: Accounting Act (2000. C. Act) |
|---|---|---|
| Scope of regulation | Use of IFRS/IFRIC is obligatiory to the entities who made decisions about it. | Use of Act is obligatory to all business forms, which are specified in the Act. |
| Orientation of regulation | Particular topics | Report as a whole |
| Components of financial statements | ▪ A statement of financial position (balance sheet)<br>▪ a statement of comprehensive income for the period (or an income statement and a statement of comprehensive income)<br>▪ a statement of changes in equity for the period<br>▪ a statement of cash flows for the period<br>▪ notes, comprising a summary of accounting policies and other explanatory note | ▪ the balance sheet<br>▪ the profit and loss account<br>▪ the notes to the financial statements |
| Business report | No regulation | Obligatory, but not as a part of the report |
| Format of income statement/profit or loss statement and of the balance sheet | No strict regulation, or scemes just recommendation for the format of income statement. | Obligatory sequence of the items, optional format |

|  | IFRS/IAS | Hungary: Accounting Act (2000. C. Act) |
|---|---|---|
| Main lines/categories in balance sheet | ▪ Property, plant and equipment,<br>▪ Investment property<br>▪ Intangibles assets<br>▪ Financial assets<br>▪ Investments accounted for using the equity method,<br>▪ Biological assets<br>▪ Stocks,<br>▪ Trade and other receivables<br>▪ Cash and cash equivalents,<br>▪ Trade and other payables,<br>▪ Provisions,<br>▪ Financial liabilities<br>▪ The effective tax liabilities and assets,<br>▪ Deferred tax liabilities and deferred tax assets<br>▪ Minority interest, presented within equity,<br>▪ The parent company's equity attributable to owners of capital and reserves. | ▪ Fixed assets<br>▪ Current assets<br>▪ Accrued and deferred assets<br>▪ Equity<br>▪ Liability<br>▪ Provisions<br>▪ Accrued expenses |
| Appearance of sportsman's right in the balance sheet | IAS 38 Standard- Intangible assets | At asset side of the balance sheet, in the group of fixed assets (rights representing pecuniary values) |
| Value of intangibles assets in the balance sheet | net value or fair value | net value |
| Methods of income statement | By nature and by function of expenses (NOE or FOE) | By nature and by function of expenses |

|  | IFRS/IAS | Hungary: Accounting Act (2000. C. Act) |
|---|---|---|
| Main lines/categories in income statement | As a minimum, a company shall include in the statement of (comprehensive) income the following lines (1. IAS):<br>▪ Revenue<br>▪ Finance costs<br>▪ Share of the profit or loss of investment in associates and jointly controlled entities (accounted for using equity method)<br>▪ Tax expense<br>▪ A single amount comprising the total of (i) the post-tax profit or loss of discontinued operations and (ii) the post-tax gain or loss recognised on the disposal of the assets or disposal group(s) constituting the discontinued operation<br>▪ Profit or loss<br>▪ Each component of other comprehensive income classified by nature<br>▪ Share of the other comprehensive income of associates and joint ventures accounted for using the equity method<br>▪ Total comprehensive income | Main (obligatory) categories in the income statement::<br>▪ Operatnig profit or loss<br>▪ Result on financial ttransactions<br>▪ Profit/loss on ordinary activities<br>▪ Extraordinary profit<br>▪ Profit before tax<br>▪ Tax liability<br>▪ Profit after tax<br>▪ Use of retained earnings for dividends<br>▪ Approved dividends<br>▪ Profit or loss for the year |
| Buying and selling of sportman''s right | IAS 18 Standard- Income | Other revenue and other expenditure |

Sources: Own compilation based on Ildikó Orbán Mrs Tamás. Dékán, 2014

**5. In conclusion**

Accounting plays a crucial role in the information systems of companies. The financial reports of sport companies provide reliable information about the wealth, profitability and financial situation of enterprises. The Hungarian domestic sport companies, as they are not listed on the stock exchange, are not obliged to make the financial reports in accordance to the International Financial Reporting Standards. In the comparison of Hungarian and international company's reports there are significant differences in the applied accounting methods and these differences lead to different results in the financial statements in many cases. The main topic of this article is the appearance of sport rights as 'rights representing pecuniary values' in the financial statements and my purpose is to highlight the similarities and differences of the international and Hungarian accounting rules. Both systems present fairly the financial position of companies but there are differences in the valuation principles, alignment and classification and as a result of these differences the financial statements can give a different picture about the wealth, profitability and financial

situation of enterprises. Frames of this treatise do not allow me to touch upon the analysis of each economic event of the two enterprises thus further researches are required. The comparison of the different accounting systems is a relevant and interesting topic that provides the opportunity of further researches.

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# THE EFFECT OF GLOBALIZATION ON FRAMEWORKS AND CONCEPTS IN ACCOUNTING

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**Abstract:** *In today's fast changing economic environment the accounting data of business organizations have to provide relevant information about the income and financial conditions of firms in order to show a faithful picture. Over the past few decades global markets have gone through significant changes, nevertheless social and economic transformation, the development of information technology, and the expanding variety of financial transactions have created new challenges in financial reporting. Because of these quick changes in the economic environment and the more unpredictable and uncertain competition in the case of some balance sheet items, fair valuation of these items has arisen beside the historical cost-based measurement – especially in the case of financial instruments. Growing international trade has resulted in increased import and export activities, and the horizons of investors and borrowers have become global, which has increased the level of their risks. Practices and markets have developed which help firms manage the added risks of doing business abroad. The importance of financial instruments has increased considerably in line with the dynamic development of capital markets. Financial instruments used by not only financial institutions but other organizations as well have become more and more sophisticated, thus enhancing the role of related regulation. Financial instruments, including derivatives, are the most uncertain elements in the global financial system, affecting its stability the most. The latest financial crisis has raised the question of whether the current accounting concepts brought about the crisis or not. Answering this is difficult, since the crisis encouraged the re-thinking of several accounting issues. The research question focuses on attesting that more and more current practice of fair valuation does not decrease the usefulness of the information in financial statements. The main finding of this paper is that measuring certain financial instruments at their fair values corresponds to the concepts of the accounting paradigm of the information economy.*

**Keywords:** usefulness of financial information; financial instruments; relevance; faithful representation; fair value; IFRS

**JEL classification:** M40; M41

## 1. Introduction

Nowadays, significant changes in the global economy, among other impacts, have increased the importance of financial instruments, which can be found in every business entity's balance sheet, but in the case of some corporations (for example banks and investment companies) the business activities might be presented faithfully only through these items. Nevertheless, the recognition based on the traditional accounting concepts and framework cannot be faithfully represented. Loss of information is basically concerned with the over the counter (OTC) transactions, as these deals are exposed to higher level of risk. Measuring certain financial instruments at historical cost decreases the usefulness of the reported information, since the requirement of relevance is biased because of the

increased level of uncertainty affecting negatively the decisions made by investors. For this reason it is very important to develop a uniformalised accounting regulation system, but according to Crawford et al. (1997) in the case of these types of financial instruments it is a fundamental problem for the main standard setter bodies (Financial Accounting Standards Board – FASB, International Accounting Standards Board – IASB) to develop standards by which they are faithfully measured and represented. Nevertheless, financial instruments play an important role in analysing the financial position of business entities. The main purpose of regulation is to help increase their understandability by setting rules regarding the disclosures and measurement of financial instruments (Balázs et al., 2006; Fenyves, 2013).

In the past few decades one of the major sings of globalization could be indicated by the increasing role of banks and other financial institutions too (Máté, 2010). According to Irvine (2008) and King (2006) the effect of globalization could be experienced in accounting and in accounting standard setting as well confirmed by factors such as the increased use of derivatives, restructuring the existing accounting concepts and frameworks. These alterations are clear evidence of the changes in accounting thought and paradigm shift, the main purpose is to adjust the accounting concepts and measurement methods to the needs of the business environment.

## 2. Literature Review

The continuous and growing changes in the world economy affect every area of business activities. Because of the recent financial crisis the level of confidence of many participants in various markets has decreased, and in order to maintain the stability of the financial system, the harmonization of financial reporting is needed. Due to various problems of global capital markets, the trading volume of certain financial instruments has decreased, and the markets of several financial instruments have turned inactive, thus the suitability of accounting regulations has become questionable. When the financial crisis broke out, fair valuation of new financial products became a major issue due to losing confidence in them. Fair values of many financial instruments were available immediately, but as a consequence of the crisis quite often these markets did not exist anymore, which ceased the availability of fair values; examples are CDOs (Collateralized Debt Obligations) and corporate bonds. The issues of fair valuation, CDOs and the financial crisis of 2007 and 2008 are described by Deventer (2008). All these factors revealed that in order to improve decision-making it is essential to ensure transparency in financial reporting, to reduce asymmetric information, and to share and manage risks (Fekete, 2009; Deventer, 2008). Insights in auditing related to the financial crisis are discussed by Sikka (2009). Nour et al. (2013) examining the role of derivative instruments in the financial crisis, highlight the lack of control and poor transparency. Because of the strengthening level of globalization, its consequences and effects cannot be evaded, and this has been greatly affected by recent the financial crisis, thus a harmonized accounting system is a need of globalization (Barlev and Haddad, 2007). The fall of financial stability and the accumulated risks drew attention to the importance of information obtained from financial reports (Apostolou and Apostolou, 2008). The financial crisis has also raised the question of whether the current accounting concepts brought about the crisis or not. Answering this question is difficult, since the crisis encouraged the re-thinking of several accounting issues, among which two areas are emphasised: fair valuation and loan loss reserves (Tardos, 2009; Wallace, 2009).

In the case of prevailing relevance many authors argue one disadvantage of fair value, i.e. it is not immediately realizable, and it only provides useful information when the business entity manages its portfolio based on fair value. Concerning reliability it can be problematic that market information is not always available, and thus it does not reflect the risks associated with cash flows (Kovács, 2012; Balázs et al., 2006). Benston (2008) underlines the costs of producing fair value information and the possibility of manipulating them. The

analyses of Cantrell et al. (2014) indicated that the predictive ability of loans measured at historical cost is better than when they are measured at fair value. Consequently, in this case relevance, faithful representation, and the usefulness of information could prevail at a limited level.

Since fair valuation is mainly associated with accounting for financial instruments, it is essential to examine and understand the background to this area. Considering the recent related literature the value-relevance of financial instruments has been verified, especially the value-relevance of securities and derivatives. This is proved by authors such as Petroni and Wahlen (1995), Barth et al. (1999), Eccher et al. (1996), Nelson (1996), Venkatachalam (1996), Park et al. (1999), Beaver and Venkatachalam (2000), Barth and Clinch (1998) and Power (2010). In sum, during the last decade the growing use of derivative financial instruments and the increasing instability of the global financial system have intensified and sharpened debates about whether various securities and derivative instruments increase or decrease the risk of business organizations, affecting faithful representation based on their financial statements and decision usefulness, relevance and faithfulness of the reported information.

## 3. Transformation of Frameworks and Concepts in Accounting

Over the past few decades accounting has gone through significant changes along with financial globalization, and according to Irvine (2008) it affects standard setting in accounting as well. The author identifies four reasons why "national standard setters operate in an increasingly globalized environment:

1. there is a recognized and growing need for international accounting standards;
2. no individual standard setter has a monopoly on the best solutions to accounting problems;
3. no national standard setter is in a position to set accounting standards that can gain acceptance around the world; and
4. there are many areas of financial reporting in which a national standard setter finds it difficult to act alone" (Irvine, 2008:15).

As a result of globalization accounting concepts appear to be transforming. The increased emphasis on fair valuation, the reappraisal of the conceptual framework, the evolution of the principle-based accounting, and the change in the application of relevance and reliability are the evidences of these developments. The lack of relevant accounting information led to reporting inconsistencies and caused revolutionary shift in accounting paradigms. The tendency is about to move to an accounting paradigm that fits the economy in an information age. Revolutionary change occurs when a crisis or anomaly result in a movement of fundamental accounting thought. This movement is represented by transformation from an industrial economy to an information economy, increased globalization, improvements in data accessibility, and higher level of information processing capabilities. These fundamental changes in accounting can be viewed as a paradigm shift. The older, industrial paradigm was mainly based on historical cost and rules, and focused on transactions and allocations. The new, information paradigm is principle-based, emphasises fair value, and highlights economic events (Shortridge and Smith, 2009). Table 1 illustrates the main elements of each accounting paradigm.

| Accounting paradigm in industrial economy | Accounting paradigm in information economy |
|---|---|
| Reliability | Globalization, faithful representation replaces reliability |
| Allocation of costs | Fair values |
| Transaction focused | Economic event focused |
| Rules based | Principle based |

**Table 1:** Accounting paradigms
Source: edited by the authors based on Shortridge and Smith, 2009:12

It is very difficult to identify the beginning of these revolutionary changes in accounting, but it can be suggested that greater demand for financial derivative instruments over the last few decades contributed to this process as a result of increased risk from foreign currency transactions. As the use of derivatives grew, it became obvious that different information is needed to be reported in the information economy which also resulted in modifications in the conceptual framework (Shortridge and Smith, 2009). Nevertheless Penno (2008) notes that these significant changes, such as shift to fair value measurement, more information technology, more sophisticated valuation methods have enlarged the level of vagueness (uncertainty) in conceptual frameworks. This inconsistency also causes problems in accounting for derivatives and hedging because of the intensive financial engineering that has created previously unexpected products (Penno, 2008).

In the IFRS (International Financial Reporting Standards) Framework relevance and faithful representation are the fundamental qualitative characteristics of financial information. Relevance helps users make a difference in their decisions, however to be useful, financial information must also represent the economic phenomena faithfully. Comparability, verifiability, timeliness and understandability are qualitative characteristics that enhance the usefulness of information as well. Comparability enables users to identify and understand similarities in, and differences between items. Verifiability assures users that information represents faithfully the economic phenomena. Timeliness means that information is available to decision-makers in time in order to influence their decisions. Classifying, characterising and presenting information clearly makes financial information understandable. According to the Framework, the going concern assumption is an underlying assumption, which presumes that an entity will continue in operation. An item is recognized in the financial statements, when it is probable that any future economic benefit associated with the item will flow to or from the entity; and the item's cost or value can be measured with reliability (IFRS Framework, 2010). Formerly faithful representation was a part of reliability, and nowadays it stands alone and replaces the term reliability, however it is included within the recognition criteria of the conceptual framework.

Nowadays the information economy is characteristic of an increasing number of developed countries; and according to DeLong and Summers (2001) in the information economy technological development and the ease of access to information helps in the globalisation of the business elite. These changes, together with an increased role for the service sector, have resulted in more space being created for intangible assets, and as a consequence the relationship between the book- and market value of the different elements of property owned by owners. On this basis it can be established that the accounting data characteristic of the industrial society do not meet the demands of decision-makers.

One of the main features of the information economy is that it requires resources for business activities other than physical ones, which implies that the information produced by the industrial paradigm in the information economy does not comply with the needs of business entities thus resulting in anomalies and inconsistencies.

Although estimating fair value often encounters difficulties, the use of processes involving consistent estimates can be considered an important advance in departing from historical cost measurement. Change and the acceptance of the new paradigm take time, and additionally certain standards can contradict each other. The overlaps in the temporary transition period can be among the problems encountered, which in part can be solved with the new and old paradigms, although the method used for the solution can be fundamentally different. Since accounting is classified as a social science, the consequent changes are accompanied by a behavioural dimension as well, which also has an effect on the accounting paradigm. Although accounting must react to changes in the economic

environment, at the same time it cannot influence the behaviour of those who use accounting. The task of the paradigm is thus to adjust accounting theories and methods of analysis to the continually changing environment (Shortridge and Smith, 2009).

Despite the fact that fair value measurement of some financial instruments has become dominant, there is no clear evidence regarding the valuation and disclosure of these items, as they are totally differ from items such as inventory or tangible assets. The losses of derivative financial instruments in 1990s highlighted the importance of measuring these kinds of balance sheet items at fair values, although at that time it was only one of the basic requirements for management information systems, it affected financial reporting systems a decade later. Regarding the financial statements prepared under International Financial Reporting Standards it is essential to measure nearly all financial instruments, and all of the derivatives at their fair values. By using this method, the transparency of financial statements can be enhanced, and the investors can also obtain a clearer view on the financial position of the firm (Balázs et al., 2006; Orbán, 2013).

The most relevant economic value of an asset can be defined as the current value of the cash flow income which derives from it, which in itself includes any secondary offer price of the asset for which there is an active market. When an asset has no active market, the income must be defined according to another substitute valuation process. For those assets which have no market, an internal information system is necessary to support the values presented in the balance sheet. In relation to accounting information systems, it can be stated that their primary focus is responsibility, the effectiveness of decisions, particularly financial risks and profit, and maintaining professional integrity, since the market value and certain asset values can be questioned if they are characterised by uncertainty and by behaviour which lacks integrity. Basically, the intentions of investors and creditors give legitimacy to an economic entity by providing resources for its activities.

In certain cases applying the principle of prudence can distort market information; this can also mean a return to a kind of natural conservatism and a cash turnover perspective which can maximise utility and minimise financial risk. However, the majority of decisions taken by those using accounting information are related to financial risk. In order to ensure that users receive the necessary information, historical and replacement costs and heterogeneous market valuations are required, although they do not need to show all the possible elements of content. From the point of view of creditability and commonality of accounting concepts, the fine tuning of the content of financial statements is essential in today's changing world economy (Raar, 2008).

Working capital is used to produce goods and services, the traditional accounting concepts are connected to these activities, but in the case of financial instruments the value is created by their ultimate user. The valuation of these items must be based on the discounted expected cash-flows related with them. Because of this valuing these instruments the traditional accounting concepts and framework could be problematic, and this explains why an alternative accounting framework is needed in order to achieve usefulness of the reported financial information.

Financial instruments measured at fair value on the basis of relevant information and market prices create the possibility for the management to follow investments on a clearer path and so achieve greater profit with them. The risks of the assets set in operation are basically determined by the predicted costs and the demand of the given market, but given that the yield and risks of financial assets are affected by market expectations and macroeconomic trends, these assets are more susceptible to changes in the environment and to the moral risks of market actors. Consequently, the values must be determined as the expected current value of future cash flow with the use of the appropriate discount rate of the risk. So, within the traditional accounting framework and concepts it can be problematic in many cases to determine the value and income, and this explains why a new, alternative, accounting approach is necessary. The determination of income based on historical cost and the realisation principle basically serves to measure income from

production and the provision of services, and it is not realistic to assume that it can be adapted to measuring the complex nature of the income deriving from the financial markets characteristic of today's economy and from products developed through financial engineering. In the case of measurement of financial instruments such as held for sale shares or derivatives (options, futures, forward and swaps), accounting concepts must be applied which make it is easier to satisfy the fundamental requirement of presenting useful information, and thus showing the real content of the economic activity in a more comprehensive way (Ishikawa, 2005). Thus, the accounting data have potential information content; the aim being that they provide represented information that is relevant and faithful for investors, to increase market effectiveness and to help decision-makers. Changes in the accounting regulations can have a market-distorting effect, since the profit structure and the elements that affect the entries in the balance distort the investors' judgements of value (Krumweide, 2008; IASB, 2013).

On the basis of King (2006), one of the signs of the paradigm shift in accounting is that both the FASB and the IASB are gradually changing from historical cost to measurement made at fair values. In addition the paradigm change is also driven by the fact that the demand for derivative instruments has increased significantly in the past decades, in an attempt to manage the increased risk of transactions related to stocks and foreign currencies. The increased use of financial instruments has given rise to contradictions in terms of what must be shown according to the industrial society paradigm, and what kind of information is necessary in the new information economy (Shortridge and Smith, 2009). In our opinion the appearance and spread of measurement based on fair values brings with it a new interpretation of relevance and faithful representation. Considering the aims of financial reporting, measurement based on fair values helps to increase the usefulness of financial information, and at the same time there is still a demand for the appearance of historical cost measurement.


## 4. Conclusion

Taking the above factors into account we can conclude that in the further development of the international regulation of accounting concepts, frameworks, and financial instruments, it is essential to reduce the uncertainties associated with them in order to allow the balance sheet to show the most current values. This idea is also supported by the fact that nowadays many areas can be found in IASB's Conceptual Framework where there is less guidance on measurement and recognition, and considering assets and liabilities, useful information can be achieved when the flow of economic resource is not probable.

We also draw the conclusion that measuring held for trading, available for sale financial instruments, as well as derivatives at their fair values and recognizing them as assets or liabilities in the financial statements – satisfying the information demands of stakeholders – reduces inconsistency and increases transparency and the effectiveness of investments. As a consequence of this, there is an increase in the usefulness of reported information, especially in the case of financial instruments which have an active market. In the case of financial instruments developed through financial engineering, especially in the case of derivatives, traditional accounting framework and concepts are not an appropriate method of measuring value and income. The main finding of this paper is that measuring certain financial instruments at their fair values corresponds to the concepts of the accounting paradigm of the information economy, emphasizing a principle-based view, shifting towards fair valuation, and focusing on economic events in financial reporting.

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# COMPARATIVE ANALYSIS FOR THE PRACTICAL PRACTICE OF COST CALCULATION

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**Abstract:** *Basic topic of our treatise is to introduce the system of cost calculation. Our reason for choice of this topic is that, in the economic environment of today, it is very important for a production company to have the most possible accurate knowledge about costs of the activity. This informational demand emerges in case of more and more managing entities since the cost cutback is often the only tool for retaining the competitiveness – of course, within certain frameworks. There is a frequent question among the corporate owners and management: "How could our costs be cut – even if only to a small extent?" One of the devices is the moderation of the activity costs, in order to do this it is essential to know how much the production of the unit of product costs for the company, that is to say, how many its first cost is. Our goal is to aim the attention at values and importance of the management information system as well as information obtained during determination of the cost, the differences in results of the individual cost calculation methods and the reasons of differences. In addition, our intention was to know and acquaint a complex cost calculation procedure in depth during which we endeavoured to form a system theory of a kind.*

**Keywords: cost calculation, costing using equivalent units, activity-based calculation**

**JEL classification: M41**

## 1. INTRODUCTION

It is growing evidence that the enterprises, without applying the managing accounting, are not able to solve the problems connected with costs and expenditures effectively (LAÁB, 2010). The undertakings are not able to take actions in time without knowledge of the reasons of problems and the points of intervention; this can lead to deterioration of their market position and could incidentally be fatal in case of the functioning. It is required to think in a future-oriented way and make rapid but well-grounded decisions for the long-term perpetuance and the successful operation (BECSKY-NAGY - DROPPA, 2015); its sole device is a well-structured management information system.

The considerable transformation in the current cost structure makes its effect felt more and more keenly. While the general costs had a less importance in the 19th century then these ones are already decisive within the total cost in the 21$^{st}$ century (BODA-SZLAVIK, 2010). Shrinkage of the corporate direct costs derives from appearance of the "new" informational or knowledge-based society. The other important issue is the structure and accountability of the resources. Instead of the traditional resources, the information and the competence become the key to success; their value will be revaluated increasingly (BÖCSKEI, 2013). However, these ones are difficult to manage or cannot be managed at all by the previous methods which require the establishment of new requirements and elaboration of new solutions (KAPLAN-COOPER,1998) .

Moreover, other social and human limits need to be demolished. Today in Hungary, an

adequate importance is still not attributed to incorporation of the managerial accounting into the corporate processes (KARDOS et al, 2007). The Hungarian society's attitude, fears and reservations relating to the changes and novelties already hampers the establishment of managerial accounting, managerial informational system within the corporation, let alone the introduction of newer, more modern cost accounting methods (LAÁB, 2011). This phenomenon is especially typical within circle of the small and medium-sized corporations where, beyond the mentioned obstacles, the establishment of a managerial informational system is often not performed due to financial difficulties (SINKOVICS, 2007). However, the goal of this kind of informational system is just   to eliminate, moderate the financial difficulties and to improve the performances (ZÁRDA, 2009).

## 2. MATERIAL AND METHOD

We demonstrate the determination of first-cost of the produced products through two methods then, based on the obtain values; we examine which one of the two methods is more effective. We compare the results to the accounting prices. After deducing the two methods, we examine the rate of the allocated costs within the total cost then, analysing the methods separately, we examine the first-costs calculated in the single phases, their relation and differences compared to each other and the reasons of differences. Finally, we compare results of the first and the second methods with each other as well as we view their differences compared to the accounting prices.

The corporation providing data to this essay performs more activities in parallel. During the cost calculation system, we take the activities, products strongly interconnected with the live animals. Since the production of the necessary fodder and eggs is also performed within the corporation thus we calculate the first-cost of these products as well.

## 3. RESULTS AND VALUATION

Costing using equivalent units

At first, we determined the rate of the direct and indirect costs as well as the equivalent numbers. The income statement prepared through a classification of expenses by function contains the sum of the direct and indirect costs (CZIPSZER, 2002). According to it, 96% is deductible from the total costs and 4% was an overhead. Configuration of the equivalent units happens based on the accounting prices used in the corporation.

Then, it was needed to divide the costs according to whether they have an overhead content. Certain expenses fully contained economic overheads. A more larger rate was represented by the costs which included both direct and indirect costs such as energy and utility charges. During the dividing, by means of the equivalent units, we determined each product's quantity stated in lead product, that is to say, we multiplied the original quantities by the equivalent numbers then we divided their amount by the above-calculated cost ratio to be partitioned. As a result, we obtained that how large cost of a given expense is for one unit of a lead product. And then, the costs for the other products could also be determined through multiplying the cost unit by the equivalent numbers. After the dividing, a summary of the obtained cost units was the next step.

At time of determining the actual first-cost, we firstly charged the cost of the single crops on the duck feed and goose feed – in rate of their accounting prices. By adding this expense to the feed costs determined previously, we obtained their actual first-cost. And we distributed this feed cost on each age group of the live animals then the costs increased in this way were charged on the single live animal age groups with regard to the egg costs (HANYECZ, 2006).

Activity-based calculation

The other method, which we used for determining the first-cost, was the activity-based calculation. This is the method which is currently applied by the corporation. In order to determine the first cost as accurate as possible, it was required to divide those overheads about which is known that they can be charged on the single activities by means of the proper projection base (VERŐ, 2004). On this basis, the cost calculation process can be compartmentalized into nine phases:

1. Allocating the overheads of machine operation by means of the proper projection bases. Determination of the projection bases was performed according to the waybills (hours of operation and the kilometres travelled) continuously kept.
2. Allocating the costs of sector. For dividing these ones, determination of those projection bases was also required which were the days spent in machine and the feeding days.
3. Determining of the first-costs of crop production in reference to one unit of each cultivated plant variety.
4. Calculating the cost of duck feeds, goose feeds and other feeds produced in a mixing plant.
5. First-cost of the breeding animals: determining the animals in the breeding stock, more precisely the firsts costs of the eggs.
6. Dividing the indirect costs occurred in the hatching plant.  Division of the costs happens between the duck eggs and the goose eggs. We use costing using equivalent units during the cost allocation where the equivalent number of the duck egg is 1 and of the goose egg is 2. The cost determined in the previous step is the basic material cost of a baby animal while the hatching cost is its cost of production.
7. Determining the first costs of baby ducks and geese. As I mentioned before, the first-cost of a baby animal is composed of two parts: the basic material cost i.e. the first cost of an egg and the hatching cost.
8. Determining the first-cost of ducks for sale as well as reared and weaner geese. Here, except the first cost of a baby animal, we already take all costs incurred into consideration which are related to the animal husbandry. We divide the obtained total cost by the number of pieces.
9. Calculating the first cost of animals for breeding. This is not a recent age group but a livestock kept with the ducks for sale as well as the reared and weaner geese in parallel.

Comparative analysis of the results obtained

In case of the costing using equivalent units presented at first, we divided 95.5% of the total cost recorded by expenses for the single cost holders. If we multiply the actual first cost obtained as a final result by the number of pieces then the result will be 6 367 255 052.48 HUF which shows the total amount of the products produced. If we do this calculation with the data obtained during the activity-based calculation then the result will be a much more higher value, namely, 10 609 413 848.19 HUF. This amount is the same as the sum of the allocated costs because, in this case, the costs were already "put in their place", that is to say, each factor in the class of accounts No. 7 is recorded on account of the appropriate cost holder. It was not possible in case of the accounting using equivalent units therefore a correction of the first-cost was needed after performing the calculations. Difference between the 6.4 million HUF mentioned above and all the allocated costs is given by that the amount of 6.4 million HUF contains cumulative costs actually because, for example, we already carried the costs of plants' cultivation forward to the single feeds at the beginning. So, it is important to emphasize that this amount states only a value, the value of products possessing by the corporation, since the plants and feeds mentioned before can simultaneously be found in each year. Similarly, the eggs and the single age

groups exist side by side, not distanced from each other.
Sheet 1 shows the calculated first-costs and their deviation from the accounting prices.

Sheet 1: **First-costs and account prices of the products**

| Serial number | Description | Quantitative unit | Accounting price | First-cost | | Difference | |
|---|---|---|---|---|---|---|---|
| | | | | 1st method | 2nd method | 1st method | 2nd method |
| 1st | Silo maize | HUF/kg | 7,00 | 13,32 | 3,46 | 90,24% | -50,57% |
| 2nd | Fodder wheat | HUF/kg | 46,00 | 87,51 | 77,73 | 90,24% | 68,98% |
| 3rd | Fodder maize | HUF/kg | 45,00 | 85,61 | 43,73 | 90,24% | -2,82% |
| 4th | Fodder oats | HUF/kg | 45,00 | 85,61 | 201,76 | **90,24%** | 348,36% |
| 5th | Sunflower | HUF/kg | 90,00 | 171,21 | 75,36 | 90,24% | -16,27% |
| 6th | Duck feed | HUF/kg | 73,82 | 10,35 | 69,88 | -85,98% | -5,34% |
| 7th | Goose feed | HUF/kg | 70,45 | 9,87 | 68,18 | -85,98% | -3,22% |
| 8th | Duck egg | HUF/pc | 80,00 | 52,24 | 60,67 | -34,70% | -24,16% |
| 9th | Baby duck | HUF/pc | 136,00 | 134,21 | 105,06 | **-1,31%** | -22,75% |
| 10th | Duck for sale | HUF/pc | 779,49 | 654,49 | 712,61 | -16,04% | -8,58% |
| 11th | Young duck for breeding | HUF/pc | 4 361,03 | 3 039,69 | 4 485,81 | -30,30% | 2,86% |
| 12th | Goose egg | HUF/pc | 324,00 | 168,91 | 357,15 | -47,87% | 10,23% |
| 13th | Baby goose | HUF/pc | 550,00 | 500,04 | 567,74 | -9,08% | 3,23% |
| 14th | Reared goose | HUF/pc | 927,32 | 1 170,15 | 932,53 | 26,19% | 0,56% |
| 15th | Weaner goose | HUF/pc | 2 238,64 | 2 640,57 | 2 108,69 | 17,95% | -5,80% |
| 16th | Young goose for breeding (Golden G.) | HUF/pc | 6 656,28 | 5 310,07 | 4 738,08 | **-20,22%** | -28,82% |
| 17th | Young goose for breeding (Lippitsch) | HUF/pc | 12 083,95 | 9 232,27 | 11 085,97 | -23,60% | -8,26% |

Source: Own calculation based on data of the examined corporation

For the cultivated plants, the second method has brought a more accurate result, with one exception In case of the fodder oats, the difference at the costing using equivalent units is slightly higher than 90% compared to the equivalent number but it still approaches better in comparison with the 384.36% defined in the second case. The actual value of the differences is 40.61 HUF as well as 156.76 HUF. We obtained the best result in case of the fodder maize – 1.27 HUF –, with less than 3% deviation.

In point of the duck feeds and goose feeds, the activity-based calculation resulted in better value as well. The differences are 5% and 3% compared with the accounting prices. By means of the costing using equivalent units, we obtained less than 15% of the accounting price as a first cost. Its reason was that we immediately charged the amount exceeding the 1 billion HUF of the purchased materials on the live animals since we had no information whether it is mixed into the feed so whether it forms the basic material of the feed or not, namely whether it is an independent product.

During determining the costs of the duck eggs and goose eggs, the second method proved to be more reliable as well. By the costing using equivalent units, we obtained a value more lower than the accounting price in spite of that we also took the hatching costs into consideration during this step. If we had taken the hatching costs into consideration not in case of the first costs of eggs then the first costs would have been even more lower but the difference in case of the baby animals would have appeared in this way as well. In case of the activity-based calculation, the first-cost of an egg includes the basic material cost; the hatching cost enlarged the first-cost of a baby animal. That is to say, the hatching cost is added to the expenses of an egg which together form the base of the production cost of a baby animal.

During allocation of the breeding animals' cost, the activity-based calculation took just the following things as a starting point: quantity of the own produced eggs and the costs incurred to this end. This was possible because the quantity and cost of the purchased and own produced eggs were available in the statements. There was no possibility for this correction in case of the first method. During allocation of the hatching cost, we took the total quantity – own produced and purchased – of the eggs into consideration in both cases.

We can see, at time of examining the first-costs of the live animals, that we obtained a good result by applying the first method, in contrast to the preceding. Moreover, in case of the baby ducks, this determined the costs more accurately than the activity-based calculation. The costing using equivalent units gave the first-cost of a baby duck with a slightly more than 1% difference while this divergence reaches almost 23% in the second case. In case of baby geese, the situation is already not such favourable but the values obtained here is also acceptable.

In case of the other live animals, the second method resulted in a more accurate first-cost, with one exception. In case of the Golden Goose-typed geese, both methods calculated the first-cost with a big difference, but the first one showed only 20.22% in comparison with the 28.82% of the second one.

It can be observed that the longer the elapsed time is, the higher the cost of each age group is. Of, course, the older an animal is, the higher the amount of the feeding and other husbandry costs is.


## 4. CONCLUSIONS

In case of most products, the activity-based calculation produced more accurate results. However, the first-costs determined by the costing using equivalent units are not negligible as well. It is worth determining the first-cost of each product by means of more methods in parallel since the individual methods can result in different outcomes and successes. During the first-cost determination, the application of other methods and their combinations are to be considered as well. In case of the costing using equivalent units presented firstly, like the depreciation charge for example, the simple costing can provide a more realistic image about the single product's loadability with expenses.

We can improve the results of the activity-based cost calculation and we can obtain additional information insofar as we also think over the application for a more developed version of the time-controlled activity cost calculation. According to it, the determination of

the activities' costs starts from the time spent on it. It is worth examining that, for example, in case of the reared and weaner geese, how the costs change when if there is not enough capacity to carry the animals to the slaughterhouse in time. This time, the managements can calculate with two alternatives if they do not want to sell them alive: either they can hire another corporation to perform the cut or they will keep the animals until enough capacity is available in their own abattoirs. It is essential to examine the cost commitment of these two options because keeping the animals further can increase the first-costs while the cutting cost will already form a part of the processed products' cost unit.

Task of the controller as well as the corporate management is to carry out an analysis and evaluation procedure meeting the informational requirements during which they explore the problems as well as the deficiencies and they work out action alternatives for the elimination (KÖRMENDI-TÓTH, 2011), . The analysis should be started already at the beginning, at cost of the eggs. In our opinion, the essential question in here is the following: Should we purchase it or should we produce it by ourselves?

Cost calculation system of the investigated enterprise meets the requirements of today; it provides information about each phase of the production process, allowing them to recognize the problems in time, to determine the intervention points and to respond immediately. The allocatable parts of overheads have fully charged on the cost holders so the expenses accounted and projected on them provide a reliable real basic for the managerial decisions. It was possible because records of the corporation are sufficiently detailed; these ones provided an appropriate starting point during the cost allocation.

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# CORPORATE GOVERNANCE MECHANISMS AND EARNINGS MANAGEMENT: A STATE OF THE ART

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**Abstract:** *Extant research have for long identified that corporate governance has the potential to affect both financial performance and the opportunistic behavior of managers. Studies on the influence of corporate governance mechanisms on firm performance do not often assess the possibility that reported earnings can be misrepresented by managers with the scope of achieving various objectives. This paper examines the relationship between corporate governance mechanisms and earnings management practices. According to prior empirical studies in the field, corporate governance can reduce the extent of manipulative practices and increase the quality of financial reporting. As stated above, this study examined prior research investigating different corporate governance mechanisms that can have negative impact on earnings management practices. In this regard the legal system and the effects of takeover were examined as external mechanisms of corporate governance on manipulative behavior of managers. Internal mechanisms of corporate governance were also assessed. Board independence was found to enhance certain monitoring behaviors of managers while an audit committee can oversee the internal control for financial reporting and the quality of financial information. This paper contributes to corporate governance literature by providing detailed reviews of different corporate governance mechanisms on the most documented practice of creative accounting: earnings management. Limits of the current research are explored as well as the scope for future research.*

**Keywords:** corporate governance quality, creative accounting practices, quality of financial reporting, literature review

**JEL classification:** M41

## 1. Introduction

Earnings have the potential to influence a large category of users of financial information. Being a pivotal item in terms of decision making in the economic field, earnings have a powerful influence on the business activities and its management decisions. Given the fact that earnings can influence or impact contractual outcomes related to financial leverage or compensation of managers, a strong incentive to adjust it to a desirable level was documented extensively in the literature.

When incentives meet the flexibility of accounting regulation, earnings management practices arise (Healy and Wahlen, 1998).

In the light of previous accounting scandals documented in the literature, a large body of research assessed both corporate governance mechanisms and earnings management. The main idea approached in the literature in terms of corporate governance impact on earnings management practices is reflected in the assessment of the impact of the first on the latter. As such, the large majority of empirical studies documented so far that corporate governance mechanisms have the potential to decrease the scope for accounting manipulation.

The subject is timely and relevant for at least two arguments. First, in the light of former global crisis, a large body of literature started to focus extensively on corporate

governance mechanisms when arguing for demarches that have the potential to decrease the scope for earnings management activities. Second, given the current high uncertainty and divergence of interest, the economic environment is relying entirely on the quality of financial reporting.

Defined as "a deliberate intervention in the process of financial information presentation in order to capture personal gain" (Schipper, 1989), earnings management practices are a topic of high interest today. On the other hand, corporate governance mechanisms, board of directors and audit committee in particular, are responsible for monitoring managers on behalf of shareholders and overseeing financial reporting process by company law. Therefore, the mechanisms of corporate governance have the potential impact earnings management practices.

The objective of this paper is to examine some of the effects of some of the corporate governance mechanisms both internal and external on the level of earnings management as documented in the literature.

The remaining of this work is organized as follows. Section two reviews extant literature related to the objective of this study and presents prior results in the field, comprising also the research questions developed. In section three the main findings are presented, as documented in the literature in terms of the impact of corporate governance on manipulative practices. The latter section presents the main conclusions, the limits and scope for future research.

## 2. Revisiting prior corporate governance and earnings management research field

As stated above, this study is aiming to augment the literature by analyzing and summarizing the findings of the papers approaching the effect of corporate governance mechanisms on earnings management practices. By using a similar research method like in Webster and Watson (2002), a concept-centric rather than author-centric research was conducted. It is out of the scope of this paper to develop a theoretical framework for the relationship between corporate governance and earnings management, so the literature review process was not conducted with reference to such theoretical framework. Moreover, the current paper can serve as a starting basis for developing such theoretical framework.

As reflected in the literature, the act of managing earnings does not necessarily reflect the true performance of the company, case that may contribute to shareholders and investors taking inaccurate decisions in regard of the companies. On the other hand, effective board monitoring was documented as having an important impact on reducing the scope for manipulation.

Defined as the system by which business corporations are directed and controlled, corporate governance structure comprises the distribution of rights and responsibilities among different participants in the organizations such as, the board, managers, shareholders and other stakeholders. Including both internal and external mechanisms, such system is regarded today as one of the most important items responsible with the quality of financial reporting.

Broadly speaking, two types of earnings management were assessed and documented so far in the literature: real versus accrual-based earnings management (Kothari *et al.,* 2005). Real earnings management, regards the manner in which firms may structure transactions with their related parties in order to manipulate earnings (Cohen and Zarowin, 2008); accrual-based earnings management comprises estimations and judgments used on discretionary bases according to various incentives. As Kang and Kim (2011) asserted, management could influence reported earnings by making operating decisions discretionally. One of such discretionary decisions to manipulate reported earnings is imbedded in the accrual-based accounting that makes use of estimations and judgments to achieve desired goals.

Previous empirical studies that explored the relationship between corporate governance and firm performance, both in the developed and developing countries, approached as main objective the quality of financial reporting. As stated above, the large majority of such studies concluded that good governance mechanisms can impact on the discretionary behavior of managers (Klein, 2002).

As earnings management practices became more complex with time, the mechanisms of corporate governance were more and more approached and their role examined. As such, audit committee has also been discussed in relation to earnings management. It was argued that firms with large institutional shareholders are more likely to act in the interest of the investors, because large institutions have more resources and ability to monitor, discipline and influence managers (Hartzel and Stark, 2003). Remuneration committee was also assessed in the literature, when executive compensation was examined, given the cases documented when stock-based incentive lead to higher earnings manipulation and insider trading. This latter argument was empirically supported, among others, by the study developed by Cheng and Warfield (2005).

Most recent literature, turned to corporate governance aspects to explain the existence and magnitude of earnings management practices. At institutional level, Leuz *et al.,* (2003) examined the systematic differences in earnings management across a large number of countries. Their results documented that earnings management is expected to decrease as investor protection increases because strong protection limits insiders' ability to acquire private control benefits and reduces their incentives to mask firm's performance.

From international level, to firm`s level, authors tried to examined which dimensions of corporate governance can reduce the probability of restatement. Among the mechanisms documented, the incidence of independent directors with a background in accounting or finance on the board and/or audit committee, and the presence of the CFO on the audit committee was found to be significant (Xie et al., 2003; Agrawal and Chadha, 2005). Institutional ownership was also found to be significant given its impact on the on the informativeness of earnings and on discretionary accruals (Chung *et al., 2*002). The main argument for this latter mechanisms proactive role in decreasing the scope for earnings management is that that higher institutional ownership reduces the agency cost of information asymmetry, and therefore reduce earnings management.

Given the scope of this paper and based on the above results, two research questions were formulated as following:

RQ 1: *What is the scholarship field of corporate governance mechanisms impact on earnings management research?*

RQ 2: *What is the future for corporate governance mechanisms impact on earnings management research field?*


**3. Findings – Discussions based on relevant empirical work that documented the association of corporate governance and earnings management**

This segment of the paper comprises the assessment of both external and internal corporate governance mechanisms impact on earnings management practices. In this respect such items as: board composition; duality; board size; number of board meetings; board gender ratio; audit committee; managerial ownership and concentrated ownership, were approached in connection with manipulative practices. In this regard, Table 1 and Table 2 comprises the main results documented in the literature.

a) External corporate governance mechanisms and earnings management:

**Table 1:** The legal system/Effects of takeover and earnings management

| Authors/ Year | External corporate governance mechanisms | Results |
|---|---|---|
| Perry and Williams, 1994 | Effect of takeover | Under management buyout, firms are more likely to manage earnings downward so that managers can purchase firm shares at a lower price. |
| Comment and Schwert, 1995 | Effect of takeover | When firms face a higher probability of being acquired or losing control, they have more incentive to engage in practices to reduce this likelihood. |
| Wu, 1997 | Effect of takeover | When dealing with management buyout companies are using earnings management practices in order to purchase firm shares at a lower price. |
| Shleifer and Wolfenzon, 2002 | Legal system | It is likely for managers to divert earnings when there is greater legal protection. |
| Leuz et al., 2003 | Legal system | Countries with lower investor protection usually have a higher magnitude of earnings management. |
| Ball et al., 2003 | Legal system | Institutional arrangements of a country is the most important factor in controlling managers` self-interest, reducing opportunistic earnings management and improving the quality of financial reporting. |
| Burgstahler et al., 2006 | Legal system | Countries with stronger legal systems have lower earnings management magnitude. |
| Chin et al., 2009 | Legal system | Foreign-owned firms in Taiwan with stronger levels of investor protection have reduced earnings management to meet the target level of earnings from outsiders. |
| DeFond et al., 2007 | Legal system | When dealing with weak investor protection rights the magnitude of earnings management are severe and the level of earnings informativeness is low. |
| Billet and Xue, 2007 | Effect of takeover | When there is a higher probability of being acquired or soling control, companies tend to increase the levels of accruals. |
| Shen, 2007 | Effect of takeover | It is more likely that firms would use more conservative accounting policies to reduce their takeover risk. |
| Braga-Alves et al., 2009 | Effect of takeover | Companies would engage in earnings management practices upward to reduce or avoid the likelihood of a successful takeover. |

Source: Author`s projection

Both legal system and effect of takeover were assessed, as mechanisms of corporate governance. When the institutional environment provides better legal protection managers'

self-interest can be controlled to a certain extent. In this regard, previous empirical studies documented that a strong legal system can deter manipulative practices. On the other hand, takeover force can put market pressure on managers to act in the best interest of the shareholders. The results documented in the literature so far linked both decreased and increased levels of accruals with takeover risk.

b) Internal corporate governance mechanisms and earnings management:

**Table 2:** The ownership structure/Composition of boards and earnings management

| Authors/ Year | Internal corporate governance mechanisms | Results |
|---|---|---|
| Dechow et al., 1996 | Composition of boards | Firms with extensive earnings management levels are more likely controlled by insiders than outsiders. |
| Peasnell et al., 2000 | Composition of boards | Board independence can reduce the magnitude of earnings management practices. |
| Fan and Wong, 2002 | Ownership structure | East Asian earnings informativeness measured by earnings return relation is related to ownership structure. |
| Anderson and Reeb, 2004 | Ownership structure | Ownership structure can influence firm earnings quality. |
| Song and Windram, 2004 | Composition of boards | Firms with large proportion of outside directors in the committee have less income increasing earnings management. Also, an increase in proportion of short term stock options held by directors in audit committee is more likely to reduce the effectiveness of monitoring managers to have high level of earnings management. |
| Abbott et al., 2004 | Composition of boards | Audit expertise can control fraud and earnings restatements, which are measures that affect earnings management. |
| Bedard et al., 2004 | Composition of boards | Audit committees with financial expertise can reduce earnings management. |
| Agrawal and Chadha, 2005 | Composition of boards | When the CEO comes from the founding family, the firm tends to lack independence and have a higher probability of restatement of accounting information. |
| Ali et al., 2007 | Ownership structure | Ownership structure has an impact on firm earnings quality. |
| Sánchez-Ballesta and García-Meca, 2007 | Ownership structure | Lower level of insider ownership is associated with less earnings management. |
| Jiraporn and DaDalt, 2009 | Ownership structure | Founding-family-owned firms have less incentive to manage earnings, as they do not have high pressure to meet or beat earnings expectations. |
| Turner and Vann, 2010 | Composition of boards | Audit committee independence can reduce opportunistic earnings manipulation. |
| Srinidhi et | Composition | Female directors can improve board governance in |

| | | |
|---|---|---|
| al. (2011) | of boards | terms of monitoring CEOs, improving board attendance, and improving communication; these aspects are likely to improve earnings quality. |
| Huson et al., 2012 | Composition of boards | The results document that the compensation committee makes decisions regarding discretionary expenditure in the executive's terminal year when setting cash compensation for executives, and intervenes to reduce payments when managers make up accruals. |

Source: Author`s projection

Internal mechanisms of corporate governance were also assessed in the literature in connection with earnings management practices. In this respect, the composition of the board of directors was expected to play an important role in converging the interest of managers and that of the shareholders. Also, it was documented as an important feature the role played by the non-executive directors that must comprise independent directors appointed on the basis of experience and competence. The main argument in favor was based on the fact that such directors are expected to act in such a manner that maximizes the value of the firm, being inversely related with earning management practices as empirical studies above documented it. Given the fact that independent directors do not pursue self-interests such as executive compensation and the misappropriation of assets, any pressure coming from shareholders to meet or beat expectations related to the performance of the firms cannot affect them. On the other hand, when such directors engage in manipulative practices, such demarches will negatively influences the performance of companies and a positive relationship can be documented.

Gender composition, as internal mechanism of corporate governance can also play an important role in terms of deterring earnings management practices. In this regard, prior empirical studies documented that female directors are more averse to the risk of litigation and reputation loss and they would choose and monitor internal and external auditors more closely. Empirical studies like those conducted by Srinidhi et al., 2011 tested whether the proportions of female directors, female non-executive directors, and female audit committee members are correlated with opportunistic earnings management and documented a significantly positive correlation.

The audit committee also was tested in prior research in connection to earnings management practices. Based on the fact that audit committees are filling various roles for the organization, management, shareholders, creditors, and other stakeholders, their role assessed extensively in the literature regards the enhancement of the credibility of financial statements. Audit committee has been explored in prior literature and how it relates to earnings management using various constructs of audit committee effectiveness such as size of the board (Xie et al., 2003) or composition and independence (Klein, 2002). Compensation committee on the other hand, is one of the most important item of interest comprised in the assessment of board composition. Given the fact that compensation motivation is one of the most documented incentives for engaging in earnings management practices, such function was extensively approached in prior research. Since managers are willing to boost earnings in order to earn higher bonuses, accrual or real earnings management activities take place. That is the main reason why executive compensation and the discretionary behavior of managers is currently explored extensively in the literature. As such, prior research assessed the main function of the compensation committee in terms of incentives plan design viability for top managers (Cornett et al., 2009).

## 4. Conclusion, limits and scope for future research

Prior research documented that corporate governance can reduce the scope for earnings management practices and limit the manipulative behavior of managers. In this respect, various mechanisms of corporate governance were tested in connection with earnings management practices and both internal and external mechanisms were documented as having an effect on such unfair practices. For instance, an institutional environment that provides better legal protection can control managers' self-interest to a certain extent. Other external mechanisms, as the takeover force was found negatively associated with earnings management practices in most of the prior research.

Also, internal mechanisms of corporate governance as: board composition; duality; board size; number of board meetings; board gender ratio; audit committee; managerial ownership and concentrated ownership, were found as having a negative relationship with earnings management activities.

One of the most explored item in the literature was the board independence. In this regard it was found important in enhancing certain monitoring behaviors in managers, including the misappropriation of assets. Overall, board independence was found to constrain managers' opportunistic behavior. Part of internal mechanism of corporate governance board gender was also empirically tested in prior research. In this respect, female directors were found able to develop trust leadership, which requires managers to share information, being more likely risk averse to frauds and opportunistic earnings management. Audit committees can oversee internal control for financial reporting and increase the quality of financial information.

The main limitation of our study was the sampling of the literature. Since only the sources that were written in English language were used, this could results in an important limit. As further research, we intend to assess empirically the association of corporate governance both internal and external mechanism and earnings management practices in the Romanian economic environment since no study was been conducted so far in this respect.

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*SUB-SECTION: AUDIT*

# PROFESSIONAL JUDGEMENT: A MUST IN THE AUDIT OF FINANCIAL STATEMENTS

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**Abstract:** *Professional judgement involves the application of auditor's knowledge, skills and experience during all stages of the audit. Our article aims to study professional judgement in the audit of financial statements. It should be applied correctly and consistently in order to obtain a fair view of financial statements and to meet all financial users' need for information. Being a mix of cognitive, technical, theoretical and cultural factors it was and is studied worldwide. The study highlights the fact that audit of financial statements needs professional judgement during all level at the audit. At the beginning the auditors must use it in order to select an audit client and judge the risks associated with it. During the planning stage the financial statements risks must be assessed and the proper level of procedures set for each financial statement line. Professional judgement must be used also during the testing phase when using techniques as sampling, when analysing complex transactions in which substance over form principle should be respected. Last, but not least a correct opinion should be given for the financial statements of each company. All in all, professional judgement becomes a must for auditors in the complex situations met.*

**Keywords**: professional judgement; audit; financial statements.

**JEL classification:** M 40, M 42.


## 1. Introduction

The economy transforms our world, the companies being the engine of this transformation. Today humans live in a globalized economy where information, especially of financial nature is a precious one. The citizen of our century affirms: "Time is money". This citizen is one of the users of financial statements, he can be an analyst, investor, creditor, employee or supplier of economic entities.

This user is interested in the quality of financial statements, seeking an opinion on the accuracy and correctness of economic information.

Financial audit provides users an opinion on the financial statements of the economic entity. To form an opinion, auditors should draw conclusions on the evidence obtained, which should be sufficient and appropriate, in order to provide assurance to users of financial statements that these are not materially misstated. There is always a risk of possible errors or fraud.

Financial audit techniques and procedures are used in order to draw conclusions on the financial statements of viable economic entities. In auditing financial statements, the auditors use sampling methods in order to provide a reasonable opinion that financial statements are free of material misstatements.

Using audit techniques is not sufficient. The auditor must use his professional judgement, the product of his experience and knowledge, in order to draw viable correct conclusions.

Various researchers have questions regarding professional judgement. The issue was debated in Romania and especially abroad, with studies in well developed capital markets.

Carpenter et al (Carpenter et al., 1994) argue that the auditor's judgment is a cognitive, a technical and also a cultural phenomenon. The authors point out that the auditor's judgment has several dimensions. We are talking about a cognitive dimension, which is based on theoretical knowledge acquired during the years of study and specialized courses, on a technical scale solidly endorsed the audits within individual work experience and not least, the a cultural dimension, which is the cultural specificity of each individual.

Xiling Dai (2010) concluded that professional judgement for accountants and auditors means taking into consideration the management and environment business characteristics of the company, in spite of the weaknesses in accounting theory and technology.

According Ferguson's study in 2011, professional judgement requires objectivity and independence, but the study reveals that human beings are naturally inclined to an unconscious bias. This means that auditors must struggle to become independent and sceptical against their own nature, otherwise they risk an inappropriate audit opinion.

## 2. Case study

The study reveals the fact that the audit of financial statements needs professional judgment, coming up with valid arguments proving this hypothesis.

The main factors influencing professional judgment are technical, cognitive and cultural, listing among them: the precision and confidence of the auditor, experience, communication skills (so-called "soft skills"), ethical behaviour, professional knowledge, independence objectivity and technical skills.

According ISA 200, professional judgement is "the application of relevant training, knowledge and experience, within the context provided by auditing, accounting and ethical standards, in making informed decisions about the courses of action that are appropriate in the circumstances of the audit engagement."

According to the Explanatory Dictionary of the Romanian language, the noun "judgement", from the French term "rationnement" has the following meanings: 1. operation of reason consisting of a chain of judgments, based on which a conclusion is draw; 2. rational argument stating or denying a fact; 3. arguments used by anyone to his point of view.

According to the same dictionary, the adjective "professional" has the following meanings: 1. care related to a profession, in relation to a profession; which is related to a profession; 2. professional secret = information hold thanks to a profession, not entitled to disclose it to anyone; 3. professional education and specialized training for skilled workers 4. professional disease = specific disease caused by a profession or a profession; 5. (adverbial) with a professional habit.

IASB argued in 2005's Framework about the professional judgement dimension in analysing the "substance over form" situations. In these cases auditors must use their professional judgement in distinguishing the accounting form and reality of the transaction, presenting and disclosing the correct economic substance of the matter to users of financial statements.

Professional judgment can be evaluated on the basis that the conclusions reached reflect a competent application of auditing standards and accounting principles, and is appropriate in the light and in accordance with the facts and circumstances which were known by the auditor to date of the auditor's report.

Before giving their consent to provide a service to a new or existing client, an assessment should be made of professional risks involved, so from the beginning the auditor should use their professional judgment. This involves assessing the acceptability of the person or entity as audit client and professional risks associated with the service provided.

For commitments for which certain specific procedures are agreed in advance, this mission involves judgment on the adequacy of procedures to be performed. For example, the client may request the check of all travel expenses, for a longer period, higher than a

certain threshold, comparing them with supporting documents, for the purposes of internal fraud investigations. In this case judgments will not be made about whether testing will performed under a lower threshold of significance, other than that set by the client. Judgment is required, however, to decide whether the audit company may accept such commitments.

The auditor must not accept commitments where auditor's competence has little relevance or if the association with the audit firm could cause the user assigning a higher level of assurance than is justified, such as when the procedures would seem simply to link the prestigious audit firms of certain data, rather than to help assess problems.

In addition, the audit firm should not accept to perform procedures:
• that are subjective and open, thus to different interpretations;
• involving a simple reading of the work of others, only to describe their discoveries;
• constituting an assessment of competence or objectivity of a third party;
• requiring interpretation of documents outside the scope of professional accounting expertise;
• just to get an understanding of a topic.

Accounting rules and auditing regulations are becoming more numerous, and the pressures inside and outside entities may affect the way audit engagements are conducted. It becomes mandatory the judgment's analysis used by auditors also during the audit engagements.

There were situations when companies received a favorable audit opinion, before appearing cases of fraud or collapse to these companies. Examples are cases such as the S & L in the US and the UK BCCI, Enron, and Mirror Group. Issuing a wrong opinion of the financial statements could result in loss of reputation and litigation and financial losses for audit firms.

Another situation in which professional judgment becomes essential, refers to the events after the reporting period of the financial statements. These are events that occurred after the end of the reporting period but before signing the report and events occurring after signing the audit report.

These events sometimes occur after the reporting period of the financial statements, but before the date on which the audit report is issued. They have a significant effect on the financial information therefore require adjustment or disclosure in the report.

Although the auditor has no responsibility to detect subsequent events, he performs inquiries and discussions with the audited company about any subsequent events that could have a material effect on the information, taking into account any other information about future events, which comes into view inside and outside the audited entity. When performing this procedure the auditors request conclusions on subsequent events included in the representation letter.

Examples of subsequent events requiring adjustment of audit report include:
• publication of new information on emission factors for greenhouse gases after the reporting period but before issuing our report;
• work accidents that occurred after the reporting date, but on an incident which occurred before the reporting date (for example, an explosion in a mine in which a number of employees were seriously injured and died later).

There may be subsequent events requiring no adjustment, but require disclosure in the financial statements, for example, a serious spill of hazardous waste at the reporting date, which could call into question the organization's ability to continue to operate.

After the report was issued, the auditor has no obligation to perform additional audit procedures on the information in the report. However, if, after the date the report was issued, the auditor becomes aware of circumstances which, had it been known at the time the report would have caused its modification must:

- discuss the matter with management of the audited entity and, where appropriate, those charged with governance;

- determine whether the audit report needs modifications, and if so, ask management about how they intend to address this subsequent event.

If management agrees with changing the report, the auditors, using professional judgement, proceed with the audit procedures necessary in those circumstances, review the measures taken by management to ensure that any user is informed of the situation and gets the correct report.

## 3. Conclusion

In the century of speed, users of financial statements should be correctly and timely informed about the financial position and results of the entity, in order to make correct investment decisions.

In all stages of the audit professional judgement must be used to assess acceptance of a new or existing client, to test financial population of data, to draw a correct audit opinion and to perform subsequent events procedures.

Professional judgement becomes mandatory, in order to give a reasonable assurance that the financial statements present a fair view and do not contain material misstatements.

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# INTERNAL GOVERNANCE AND ROLE OF INTERNAL AUDIT IN FINANCIAL INSTITUTIONS. CASE STUDY: RISK BASED PLANNING

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**Abstract:** *The global financial crisis from 2008 was considered a trigger to reshape the financial systems and to enhance the risk management practices. Considering the developments and new guidelines that are now used it can be observed a "positive" effect of the crisis, in particular to strengthen the risk management culture and governance in all aspects. Comparing to 2008 year, the improvements that have been made to the risk management systems can be easily observed in the financial institutions.*
*For the scope of the article, the subject of this review will be focused on the internal audit function. The main aspect is to capture the new practices that are now used in order to contribute to a performing internal governance system. A case study will be presented in order to better understand how the internal audit function is designed and acting as a "line" of defence in the internal governance system. Also, it is in the scope of the article to issue some recommendations for future developments of the audit function in order to better manage its mission and the objectives. A risk based model used in the planning activities is presented.*
*The financial institutions improved significantly their internal governance system. The internal audit function is now better integrated in the internal structures and clear lines of communication were settled.*
*As the conclusion of the article is illustrating, the internal governance was frequently not sufficiently developed causing a failure in the risk management systems from the systemically financial institutions.*
*The content of the article has practical applicability, as the results and the recommendations could be used in the design of an audit function within a financial institution.*

**Keywords:** governance; audit; crisis; institutions; systemic; planning.

**JEL classification:** M42 – Auditing.

## 1. Introduction

The article aims to issue some recommendations for future developments of the audit function in order to better manage its mission and the objectives.

The paper addresses two main issues: the issuance of the new guidelines and their implementation in order to assure a better governance system and some future proposals that can have a practical applicability in audit planning.

Considering the evolution of the risk management systems after the financial crisis, it was observed an increased importance of the internal governance. The new regulations and guidelines issued by the Basel Committee and European Banking Authority addressed the internal governance as one of the main causes of the financial crisis. The risk management systems implemented within the internal governance represent now an important subject for the financial institutions. Also, this is one of the hot topics on the agenda of the supervisors.

Internal Audit, as part of the internal control system and governance of the institutions/companies is now having an increased role within the organization. New

concepts and lines of defense were defined and implemented within the organizations in order to assure a better risk mitigation and a strong risk management system.

## 2. Governance, methodologies and concepts

The internal governance is defined and requested according to the article 22 of the Directive 2006/48/EC which states that "every credit institution has robust governance arrangements, which include a clear organisational structure with well defined, transparent and consistent lines of responsibility, effective processes to identify, manage, monitor and report the risks it is or might be exposed to, adequate internal control mechanisms, including sound administrative and accounting procedures, and remuneration policies and practices that are consistent with and promote sound and effective risk management"( Article 22 of the Directive 2006/48/EC of the European Parliament and of the Council of 14 June 2006 relating to the taking up and pursuit of the business of credit institutions, Bruxelles, June 14th, 2006.).

Internal governance is important for an institution (even is a financial, or non-financial one) considering the fact that is a key element of the good performance.

Lehman Brothers collapse which marked the beginning of the financial crisis was the starting point in enhanced supervision from the national/international supervisors. A series of new guidelines were issued with the main scope of efficient and effective internal governance. As example, Basel Committee for Banking Supervision issued on October 4th, 2010 the paper "Principles for enhancing corporate governance". The main objective was to correct the weakness that resulted in an inefficient internal governance system. Even if the internal governance in-efficiency was not the main cause of the financial crisis, definitely is one of the triggers.

The financial crisis inquiry report mentioned as a conclusion that "dramatic failures of corporate governance and risk management at many systemically important financial institutions were a key cause of this crisis. (Financial crisis inquiry report, submitted by The Financial Crisis Inquiry Commission, US Government, January 2011, Washington, DC.)"

Speaking about internal governance and internal audit it is to be mentioned the connection between these two concepts, the internal control system. A strong internal control system which includes an independent and efficient internal audit function, contributes to efficient and reliable internal governance.

Internal control system, as defined by European Banking Authority, "should ensure effective and efficient operations, adequate control of risks, prudent conduct of business, reliability of financial and non-financial information reported, both internally and externally, and compliance with laws, regulations, supervisory requirements and the institutions internal rules and decisions. The internal control framework should cover the whole organisation, including the activities of all business, support and control units (Article 24, Para. 2, Section 3, Title 2, of the EBA Guidelines on Internal Governance, GL 44, London, September 27th, 2011.)"

Considering the above mentioned definition, an integrated internal control system, must be sound documented, transposed and implemented in a clear way and made available and known to all parties involved.

## 3. Three lines of defense model – a new approach

A new concept was defined by the International organizations and implemented by the financial and non-financial institutions, three lines of defense model. The main provision of the new model is related to a segregation of responsibilities between the control functions. Institute of Internal Auditors (IIA) mentions that "the Three Lines of Defense model provides a simple and effective way to enhance communications on risk management and control by clarifying essential roles and duties. It provides a fresh look at operations, helping to assure the ongoing success of risk management initiatives, and it is appropriate for any organization — regardless of size or complexity (Institute of Internal Auditors,

Position Paper issued on January 2013, Global Headquarters 247 Maitland Avenue Altamonte Springs, Florida 32701 USA.)."

The main control functions identified in a financial institution are the following:

■ First line of control is generally represented by the business and support units (e.g. Branches from a Bank, Operations functions from a Bank that acts to support the Branch personnel in the daily activities);

■ Second line of control is represented by the control functions established within an institution. Such functions are represented by Risk Control function, Security function, Compliance function, Risk Management, Financial Control and Quality;

■ Third line of defense is represented by Internal Audit function which has the role to verify all the other control functions and to give assurance over the internal control system in place. Thus the internal control system should be both, effective and efficient.

A diagram of the three lines of defense model is presented below:



**Internal Control System based on the Three Lines of Defense Model**
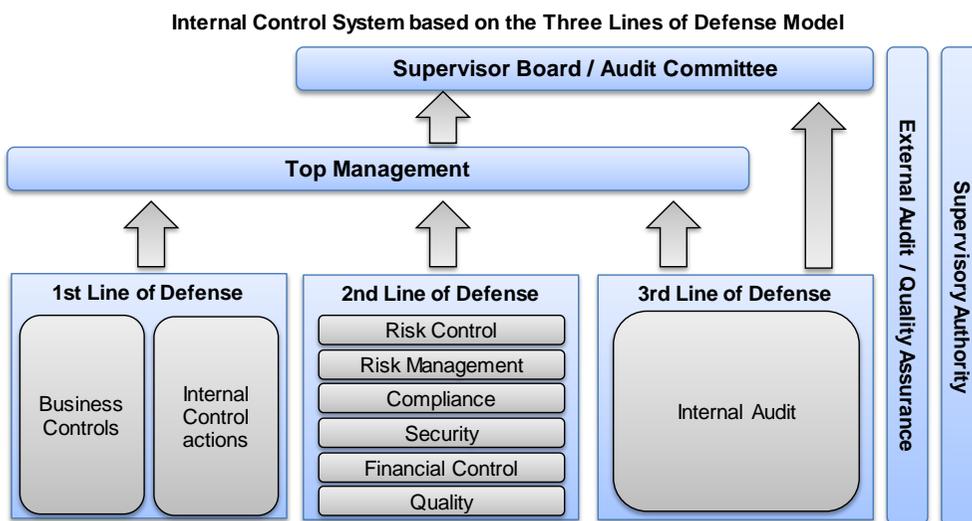
**Figure1:** diagram of the three lines of defense model.
Source: Adapted from Institute of Internal Auditors, Position Paper issued on January 2013, Global Headquarters 247 Maitland Avenue Altamonte Springs, Florida 32701 USA.

The interaction of the second and third level control functions with the Management of the institution is ensured through different reporting lines. The control functions should inform the Management bodies about any deficiencies identified related to the internal control system and also about the causes and the risks incurred also including, if the case, a dedicated analysis. Recommendations and follow-up actions should also be taken into consideration for the deficiencies presented.

In line with the definition issued by the Institute of Internal Auditors, „Internal auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes (Institute of Internal Auditors official

website, http://www.theiia.org/guidance/standards-and-guidance/ippf/definition-of-internal-auditing/)."

As, previously mentioned, a strong internal control system is based on an efficient internal audit function. Generally speaking, the role of the audit function is to provide assurance to the Top Management and Supervisory Board. The main concern is to check the quality of the control system, risk management and governance systems and processes by helping to reduce the risk of losses and possible reputational impacts.

Internal audit function is responsible to evaluate the following:
■ Compliance with regulations and laws, as well as supervisory/group requirements;
■ Management information systems and processes reliability, effectiveness and integrity;
■ Efficiency and effectiveness of the whole internal control system as designed by the institution, as well as the risk management and governance system.

### 4. Case study: Risk model used in audit planning activities.

The internal audit function uses risk assessments in their work planning as to identify the areas and processes that should be evaluated. In this way the riskier areas are assessed more often.

In the following lines is presented a risk based model used in the planning activities in internal auditing. The scope of the model is to identify the bank's branches that should be audited in the following year using a risk based approach sustained by risk indicators. As a summary, the four phases relevant in the risk assessment are detailed as follows:
■ Phase 1: Identification of processes relevant for branches in accordance with the annual risk assessment;
■ Phase 2: Identification and evaluation for the relevant processes of their inherent risk;
■ Phase 3: Assembly of existing risk indicators for the processes relevant for branches. In this phase the indicators that measure the key risks will be selected in order to measure the branches risk assessment.
■ Risk indicators are allocated only to processes rated with high or very high inherent risk. For medium and low risk rated processes, risk indicators are not required, but where considered relevant it can be taken into consideration.
■ Phase 4: Calculation and presentation the selected indicators in a panel as to analyze the risky areas from the branches and to make a prioritization of the audits.

For each risk indicator a target level was set (e.g. Average of the values registered, thresholds) based on the professional judgment. The deviation from the average or the threshold exceeded was considered as a trigger in order to identify the risky areas from each Branch. All deviations/overruns will assigned a number of strike points (judgmental determined) in order to reflect the risk associated. Having the result of the strike points assigned, the branches are ranked per decreasing audit need. The below table is presenting examples of risk indicators and their evaluation in the risk assessment process.

**Table 1:** Risk indicators and their evaluation

| Process | Inherent risk | Risk indicator relevant for Risk Assessment | Calculation method | Period under review |
|---------|---------------|---------------------------------------------|--------------------|---------------------|
| Credit Portfolio | Very High | Increase of portfolio in the Branch | Threshold exceeded / 3 point assigned | Previous two years |
| Management of Credit Risk | High | Default rate | Average deviation / 1 strike point assigned | Previous two years |
| Management of Operational Risk | High | Number of operational risk | Average deviation / 1 strike point | Previous two years |

| Process | Inherent risk | Risk indicator relevant for Risk Assessment | Calculation method | Period under review |
|---|---|---|---|---|
| | | events registered | assigned | |
| Anti-money Laundering | High | Number of suspicious transactions reported | Threshold exceeded / 2 points assigned | Previous two years |
| Fraud Management | High | Number of fraud cases reported | Threshold exceeded / 2 points assigned | Previous two years |
| Payment transactions | Very High | Number of payments performed | Threshold exceeded / 1 point assigned | Previous two years |
| Human resources | High | Personnel turnover rate | Threshold exceeded / 2 point assigned | Previous two years |

Source: Authors performance

The audit need was established taking into consideration the following three factors:
- Risk assessment: the ranking of the branches will be made in accordance with points assigned for each branch from the risk indicator assessment;
- Five years audit cycle: will take into account the date of the last audit performed as to cover the audit cycle.

Within this exercise it was presented a risk based approach in audit planning when selecting the branches from a Bank. This model can have practical application as it can be used by the audit functions to identify their audit units that must be audited.

**5. Conclusion**

As the studies presented in the article are mentioning, the internal governance was not sufficiently developed causing a failure in the risk management system implemented in the financial institutions.

After the financial crisis, the financial institutions improved significantly their governance system, generally as a requirement from the Supervisors. The internal control system was re-designed and the control functions are now sufficiently integrated within the institution governance framework. Internal audit, as a third level control function must permanently cooperate with first and second level of control and to check the quality of the control system, risk management and governance systems and processes by helping to reduce the risk of losses and possible reputational impacts. Generally speaking, Internal Audit gives assurance to Top Management and Board of Supervision about the key processes and risks.

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# FINANCIAL AUDIT AND BENCHMARKING IN THE CONSTRUCTION INDUSTRY – A STEP TOWARDS PERFORMANCE

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**Abstract:** *Knowledge on and application of the legislation and professional reasoning in a professional manner related to control and situation in the field, of the control methods and procedures, is one of the essential premises that ensures efficiency and finality in the activity of patrimony control of an entity in the constructions field. A financial audit, which aims at an integrated control, provides conclusions on the entire activity. It fully characterizes the efforts and the results and it can also show faults, deficiencies and frauds in their entirety. The stocks cannot be simply taken into account as they are in a balance sheet and say straight away that the entity has sufficient stocks and it is performant. It is necessary to have a stock audit in order to highlight the accordance between the records and the physical stocks or their movement. The same reasoning also applies to outstanding debts, purchase/selling of real estate, rents of real estates, verification of contractual obligations, declarations regarding and actual payment of taxes to the state budget and the state social security budget etc. The relationship between audit and the benchmarking plan is given precisely by the final result of a performance evaluation and in order to get to a correct result it is necessary to have correct data and financial indicators. Otherwise, the risk is to evaluate an entity as performant and shortly after that it goes into bankruptcy. Benchmarking is a support instrument for decision-making, a continuous evaluation process, a mean of looking for the most performant methods to do a given activity. It is a system of information that allows an entity to show its development strategy, a technique for determining its competitive advantages and to learn about its products, services and operations by comparing them with the best ones. This instrument is part of the flexible management techniques that are based on learning, on initiative, together with ABM, reengineering, value analysis, process performance tracking. P. Drucker (considered the founder of management principles) said that "there are few things that are as important for a company's performance as measuring performance is". It may be asserted that most current problems are caused by the management instruments that were created under economic and social conditions that are no longer applicable to the current economic context.*

**Key words:** audit; management; control; performance; benchmarking; constructions.

**J.E.L. Classification:** M40; M41; M42.

## 1. Introduction

In order to highlight the relationship between audit and benchmarking I will present the technical concepts related to the examination of the documents of an entity in the construction field and end with a brief presentation of how to instrument a benchmarking model.

The objective of any type of audit is to make use of information more effective and to perfection it.

The main elements of an audit may briefly be describes as follows:

- Examination of information must be professional and in accordance with the specific of the entity's activity;
- The purpose of this examination is to express an opinion on the information, namely, opinion with or without reserves, impossibility to express an opinion, refusal to express an opinion;
- The expressed opinion must be independent; the financial auditor who makes this examination has certain responsibilities with regard to his/her activity and must be independent;
- The examination must be made following pre-established rules, included in a standard, legal or professional norm that is seen as a quality criterion.

## 2. The key Elements of the Statutory Audit Concept are:
- The financial auditor is competent and independent, and is either an authorized individual or a legal entity;
- The examination made by the auditor is focused on the yearly financial statements of the entity, in their entirety: balance sheet, profit and loss account and the other components of the financial statements;
- The purpose of the examination: expressing an opinion regarding the exact image of the yearly financial situation and the performances obtained by the audited entity;
- The opinion expressed has as legal reference the international audit standards and the national norms.

The third parties expect the statutory auditor to protect their interests by providing professional insurance regarding the fact that:
- the financial statements are eligible and present a correct image;
- the financial statements are the responsibility of the auditor.

## 2.1. Financial Statement Accuracy
The users of the financial statements expect an audit report to be without reserves, to guarantee the truthfulness of the financial statements, for which the following may be said:
- The general manager must know the entity's business very well, as he/she is the one who can maintain or increase performance. Together with the management board, the general manager chooses the accounting treatment of data that is to be applied and the declaration practices of the entity with regard to financial statements. Thus, the management is responsible for the way the financial statements are made;
- The auditors must be sure that the yearly financial statements audited are correct and real.

The financial auditors must be independent with respect to the audited financial statements. More precisely, they did not take part in the elaboration of these documents even as consultants.

The audit report must contain the auditor's opinion on solvability and liquidity if the financial statements were made based on continuity in exploitation.

## 2.2. The Financial Auditor has the Obligation to be Sure of:
- The accounting principles applied and their fundament, especially for the main entries that define the construction activity.

The information above allow for evaluation regarding the following general risks:
- *Risks regarding the economic situation of the company* (for example, elements that might question the continuity of the activity);
- *Risks regarding general organization* (for example, the expert will approach differently an audit when the management is mainly focused on production and

sales than when the management is concerned with internal control and the quality of the financial information).

## 2.2.1. Risks Regarding the Nature of the Operations Treated
The data presented in the financial-accounting documents are of three types, each with specific risks:
- *Repetitive data* – is data resulting from current activity of the company in the construction field: selling of apartments or dwellings, purchase of raw materials and materials specific to the construction field, salaries etc.;
- *Occasional data* – is complementary to repetitive data, occurring at certain time intervals, for example: physical inventories of stores for construction materials, evaluation at the end of the cycle of the buildings and the equipment etc. These carry significant risks when not discovered in time and it is necessary for the financial auditor to know them in advance in order to organize the necessary controls;
- *Exceptional data* – results from operations or decisions that derive from current activity: sites or buildings evaluation, mergers (if the entity merges with another entity in the same activity field or in different activity field), activity reduction etc.

## 2.2.2. Risks Regarding the Systems Functioning
Both the design and the functioning of the systems must allow for prevention of errors or detection of those already incurred in order to correct them in due time.

## 2.2.3. The Risk of non-Detection During Audit
The level of the non-detection risk is in direct connection with the procedures applied by the auditor, in the sense that it cannot be completely eliminated, regardless of the techniques and procedures used by the auditor (Dobroteanu and Dobroteanu,2002).
Using the *example* of the entity GRIGORE MARIAN S.A., company in the construction field, we may infer that the non-detection risk is the only risk that can be controlled by the auditor. However, there are certain factors that may trigger the non-detection risk:
- The financial auditor does not use the audit procedures adequate to the construction field. For example, the financial auditor does not apply a verification procedure with the suppliers that issued invoices for deposits for construction materials, even if the deposits account has significant amounts, and there are no balance confirmations;
- Incorrect application of an audit procedure. For example, further enquires may be made with the management of the entity when the accounting records show a zero balance for suppliers that summon the company to pay its debts. In this case, the financial auditor must go beyond checking the invoices in the entity's archive, namely to make thorough investigations in order to clarify the summons, since there are operations that are not recorded by accounting, thus also a risk of fraud.

## 3. What is Benchmarking?
Benchmarking is for any competitiveness strategy what accounting is for financial management (Camp, 1998).
As a continuous evaluation process and a mean of searching for the most performant methods to carry out a given activity, benchmarking is a precious instrument for performance management. Simultaneously, it is a system of information that allows an entity to display its development strategy (Niculescu and Lavalete, 1999).
The benchmarking concept, which comes from the English word "benchmark", is widely used in the United States of Amercia (USA). This concept is based on the fact that the

exterior world is in continuous evolution, and lies in comparing one's own organization with one or more others, identified as reference in the domain.

The Japanese literature uses the word "dantotsu", which means "to be the best of the best", and this is precisely the essence and the importance of benchmarking.

Many companies do benchmarking even since the 1950s. The term covers a simple idea, namely that of finding a company or those companies in the world that are most performant in doing a task or a process with the view to adapt the respective process within the own company. In other words, it is about comparing with the champions in a field, to draw from their experience with the purpose to get one's own company closer to excellence.

Benchmarking began to be used on a large scale mainly for evaluating the performances of organizations, including those in the building industry.

Benchmarking is a management process that is manifested through a continuous improvement, thus a managerial process that must be done continuously in order for it to be profitable.

Only those companies that are disciplined in following the benchmarking process will be able to achieve higher performances. In an environment where change is the rule, the entities that do not take that into account are doomed to end up in very uncomfortable situations and even bankruptcy.

### 3.1. Steps to Follow in Applying Benchmarking:
- Planning, with the following phases:
  - o Identifying the research object (products, services, practices);
  - o Identifying the reference element (competitor, other company, departments, processes);
  - o Choosing the data collection method.
- Analyzing, with the following phases:
  - o Identifying the differences;
  - o Fixing the future performance target.
- Integrating, with the following phases:
  - o Communicating the data;
  - o Accepting the data.
- Acting, with the following phases:
  - o Designing and developing the action plans;
  - o Applying and following the plans.
- Maturity, with the following phases:
  - o Integrating benchmarking in current instruments and practices.

(Camp, 1998; Niculescu and Lavalete, 1999).

The term of benchmarking implied measuring. The measuring can be done in two ways. The internal and external practices may be compared and the resulting significant differences can be analyzed and taken into consideration. This result offers the opportunity of reaching the best practices.

Nevertheless, benchmarking is not merely a quantitative investigation, but it also determines the practices that are used to lead to improving performances. Consequently, benchmarking is more than studying the competition, it is a process of determining the efficiency of the leaders in a field by measuring their results and the profits that can be obtained.

### 3.2. The Benchmarking Study may be Applied to any side of a Business, Including in the Construction Industry:
It may be applied to processes and services, to the production of goods and services, generally, it may be applied to all practices and methods that contribute to the production of goods and services up until the satisfaction of all business partners – the clients.

The EU promotes, through the specialized departments, even since 1996 the concept of benchmarking as "an instrument to increase competitiveness, the quality of certain products, processes and economies". The EU Parliament document COM (96) 413 from October 9th, 1996, "Benchmarking and competitiveness of the European industry" shows that the benchmarking instruments must be used more intensively in comparing the good practices that regard all aspects and key sectors that determine the methods and ways of success of companies activating in the common area.

The importance of this management instrument is proven by the network of European institutions that promote benchmark-specific techniques, the successes of the companies that apply it, the data banks that are created and the spread of good practices in European companies.

Realizing the importance of this recommendation in Romania as well, a national project was developed that aims to create a network that promotes benchmarking and applying it in various forms in the economy. The small and medium enterprises are more interested in the application of this procedure, since it gives them increased competitiveness, shorter times for analyzing and applying results, focus on specific elements that in the company policy represent a restriction that affects the quality and costs and which, if eliminated, increase their chances of competitiveness on the market, increased mobility with the help of which it can get involved in the analysis of the strengths of a company in the same field and the capacity to master good practices.

A company in the construction industry may approach – depending on its interest – one of these directions or coherent elements from the structure of the ones enumerated, but with the distinct mention of the followed objectives, especially of the critical zones that put it in difficulty with reference to the competitor entities.

### 3.3. The Broad Objectives Approached by this Concept Allow the "Areas" Where Benchmarking Works to be Various. Thus we Have:

- Product benchmarking (comparing the characteristics, functionalities and performance of the competitors' products in the construction industry);
- Competition benchmarking (the focus is on product efficiency) in process benchmarking (comparing one's technological processes with those of a successful company and learning from its experience – a small enterprise will always draw from the experience of a large enterprise in the construction industry and it will study the stages that led the later towards performance);
- Performance benchmarking (analysis of the performance of own product, own dwellings, in comparison with direct and indirect competitors);
- Strategic benchmarking (a systematic process of evaluating alternative scenarios, making them compatible with the competitors', taking into account possible turbulences or perturbations due to the unpredictable character of market evolutions).

Establishing a reference point, a "target", as etalon, becomes an important aspect in the management of a company that must, in the end, become the producer with the lowest price for the product and to have an increasing market share.

The fundamental questions that must be asked in approaching a benchmarking project and that must be the "targets" can be synthetically formulated as follows:

- What do we want to measure and how to compute the quality cost?
- What partner do we choose for the benchmarking?
- What is the performance of the products, processes and services of the company that wants do make the project?
- How good is the performance of the company whose experience we want to master?
- Is time managed?
- Is the indicator "client satisfaction" used as base for processes improvement?

## 4. Conclusion

In order to measure an entity's performance and to apply a benchmarking project, it is necessary to have a financial audit (control) and it depends on the expressed opinion. A faulted result may be measured only after the yearly financial statements were analyzed and verified by a professional.

The relationship between the audit and the benchmarking plan is given precisely by the final result of a performance evaluation. In order to reach a correct result it is necessary to use correct data and financial indicators, otherwise, the risk is to evaluate an entity as performant and shortly after that it goes into bankruptcy.

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# CURRENT CONCEPTS ON SELECTION TECHNIQEUS IN FINANCIAL AUDITING

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**Abstract**
*The financial auditor's work evolves around the issue of an independent, professional and objective opinion on the compliance of the client's financial statements with the national accounting rules and principles. At the same time, the auditor will have to express an opinion on the ability of the company to continue its activity. An ideal situation would involve auditing all the components of the yearly accounts, but this would take time, effort and a very high cost. Fortunately, the audit team has some very useful tools for acquiring audit evidence in a fast and conclusive way - selection techniques. These techniques may be used in different phases of the audit and auditors have been using them for a long time, in fact no audit program would function without these techniques. They have become quite common as the auditors make important judgments, such as determining what type of technique to apply, whether to use statistical or nonstatistical techniques, appropriate inputs to determine sample size, and evaluation of results, particularly when errors are detected. This paper aims to theoretically present the main selection techniques, indicating how, why and when to use them. There are six selection techniques and we deal with the most frequent four of them. Our purpose is to present the characteristics and set the limits of these techniques, emphasizing sampling as the most common selection technique currently in use. A commonly held misconception about statistical sampling, for example, is that it removes the need for the use of the professional judgement. While it is true that statistical sampling uses statistical methods to determine the sample size and to select and evaluate audit samples, it is the responsibility of the auditor to consider and specify in advance factors such as materiality, the expected error rate or amount, the risk of over-reliance or the risk of incorrect acceptance, audit risk, inherent risk, control risk, standard deviation and population size, before the sample size can be determined. Selection techniques allow an auditor's judgement to be concentrated on those areas of the audit where it is most needed. It allows the quantification of key factors and the risk of errors. This is not to suggest that selection techniques remove the need for professional judgement, but rather that they allow elements of the evaluation process to be quantified, measured and controlled.*

**Key words**: accounts; audit; sampling; selection technique; procedures.

**JEL classification**: M42

## Introduction

In the beginnings of auditing, it was not unusual for the independent auditor to examine all records and documents of the audited entity. In time, economic development of companies in terms of complexity and scope has caused exhaustive examination procedure of all company records to turn into an inefficient economic procedure. In order to express a fair opinion on the financial statements, the auditors found it necessary to assess only parts of accounting records and transactions. Therefore, the assurance provided by the auditor in his or her opinion has become a reasonable one, not an absolute one. The significance of the items collected by the auditor depends on their origin and nature, on the techniques and methods necessary to ensure credibility, based on the quantity and quality of acquired information.

The techniques and methods used for gathering audit evidence generally intertwine in multiple forms, being used either individually or within a technique, as a procedure that is

part of it. Thus auditors developed the use of certain techniques for selecting the information in the documents provided by the entity, such as: sampling technique, physical observation technique, interview technique, analytical examination technique, system and significant accounts testing technique, as well as technical examination of financial statements technique. The most commonly used are: sampling, physical observation, interview and analytical examination, which will be analyzed in this article.

### 1. Sampling Technique

The principles and importance of sampling in financial auditing arise from the International Standard on Auditing 530 *"Audit Sampling and Other Selective Testing Procedures"*, approved by the International Federation of Accountants (IFAC) in 1999. The beginnings of using sampling in financial auditing date back to 1962, when the Statistical Sampling Committee of the American Institute of Certified Public Accountants (AICPA) issued a special report entitled "*Statistical Sampling and the Independent Auditor*", which laid the foundations for the use of the statistical sampling method in accordance with generally accepted auditing standards. Subsequently, AICPA issued in 1981 the professional standard "Audit Sampling", containing guidelines for both sampling methods - statistical and non-statistical.

In financial auditing, sampling is a selection method applied to an account balance or to a class of transactions in order to gather audit evidence which is sufficient, relevant and consistent with the objectives of the audit. In this process the auditor should examine a sample which is representative for different types of accounts and review the client's past events. Both auditors and researchers are faced with a critical situation when they have to decide how to select the sample and what size it should have.

Sampling, as selection technique, involves the application of audit procedures only to a part of the population to be audited - known as "sample" - in order to obtain reliable audit evidence, able to characterize the whole population. When using the sampling selection technique, the auditor should make sure that the selected sample is representative - that is, a sample composed of units holding characteristics as similar as possibile to the whole population. Only in this way are the sampling results valid for the entire population being tested. Otherwise, the findings of the sampling test can only be applied to that sample.

Sampling is used in order to check or clarify the identified error. The main purpose is to corroborate or to measure the degree of risk detected after relevant analysis. Since the auditor has neither the time nor the means to rebuild information exhaustively, sampling can provide an effective response to a valorization need. Obviously, sampling contains a certain margin of error, due to the simple fact that it is based on extrapolation or estimation. The auditor faces the difficulty of assessing the importance of this estimate to reach an acceptable margin of error, for that specific set objective. By judicious selection of the sample units, they will reach a relevant result.

The science of sampling design involves: analyzing existing resources, outside restrictions, mathematical and statistical tools available, examining the knowledge gained on the distinctive features of the sampled population and, not least, correlating all these data to obtain an optimal design, suitable to the audit objectives. The essential criteria to be applied when selecting a particular sampling design is that the sample should be designed as such to provide the required information with sufficient accuracy, at minimal costs.

The effectiveness of applying the sampling technique depends on several factors. First of all, it is influenced by the precise definition of audit objectives. The auditor must establish as clearly as possible what he or she intends to demonstrate, in order to define the characteristics that will be considered further on as an error or anomaly. Secondly, for the proper use of the sampling technique, it is essential for the auditor to choose the correct nature of the population, taking into account the specific activity of the audited entity.

The population is the entire set of data, full and accurate, from which the auditor intends to draw a sample, in order to reach a reasonable conclusion. A sampling unit may consist in a simple accounting document, such as an invoice or a receipt record, or even a line item. The auditor will define the sampling unit based on its compliance with the objectives of the audit tests. Sample size is influenced by the level of sampling risk that the auditor is willing to accept: the more willing to accept a lower risk level, the larger the selected sample.

When selecting the population to be subjected to sampling, the auditor should ensure that the error rate in that population does not exceed the maximum acceptable rate (materiality). For example, in the audit of a production entity, so as to check if all deliveries of finished products have led to the accounting recording of issued invoices, that specific population should be the delivery records, not the invoices.

There are two general approaches to audit sampling: statistical and non-statistical, and both ask the auditor to use professional judgement to correlate audit evidence resulting from sampling with other audit evidence in order to formulate an opinion. Choosing the statistical or the non-statistical approach does not directly affect the auditor's decision on audit procedures to be applied, the relevance of the acquired audit evidence compared to the individual elements in the sample or the measures to be taken if significant errors are identified.

Statistical sampling is a selection method based on the probability theory, whereby each unit of the total population has an equal chance of being included in the sample. The results of this method can be statistically evaluated, the auditor can determine whether the acquired evidence is sufficient and sampling risk can be quantified.

Instead, in non-statistical sampling, the auditor uses professional judgement to select sample units. Although sampling units are chosen so as to have characteristics that are representative for the whole population, the results of the sampling test cannot be extrapolated to the entire population, they apply only to the tested units.

The difference between the two types of sampling is that the sampling risk of a statistical plan can be measured and controlled, while a non-statistical plan, even if perfectly planned, does not provide an appropriate frame for the measurement of sampling risk.

The main similarity between the two types of sampling is that both approaches require the exercise of the auditor's judgement during planning, implementation and evaluation of the sampling plan. In other words, even if statistical methods are used, this does not eliminate the need to exercise judgement.

Moreover, the actual audit procedures to be implemented in the sampling test will be the same, regardless of whether they use a statistical or a non-statistical approach. Using a statistical plan does not mean that the auditor may alter planned procedures for collecting audit evidence to reach a final conclusion.

It is necessary for the auditor to assess the individual and situational costs and benefits related to each sampling before reaching a conclusion. Therefore, since both statistical and non-statistical sampling can provide sufficient audit evidence, the auditor chooses one of them after assessing their cost and effectiveness in the given circumstances.

In some cases, it is recommended to use statistical sampling rather than sampling just by the exercise of judgement. Before deciding which one to use, the auditor must determine auditing objectives, identify the characteristics of the examined population and assess the degree of acceptable risk. After determining these coordinates, it would be wise to use statistical sampling as long as the auditor is provided with a well-defined population and the access to the necessary documents is not restricted or hampered.


## 2. Physical Observation Technique

Physical observation means the inspection or the inventory of a set of tangible, material assets by the auditor. This type of technique is most often associated with stocks and funds, but also applies in the case of verification of securities, receivables and tangible assests. The

difference between physical examination of assets, for example, of readily marketable securities and cash, and the examination of documentary supports such as checks paid and sales documents, is important so as to respond to the various auditing objectives.

Physical observation, as a direct way of checking whether an asset is real, is considered to be one of the most reliable and useful audit selection techniques. In general, physical observation is an objective way of finding both the quantity and the characteristics of the asset. In some cases, it is also a useful method to assess the condition or quality of the asset.

For example, physical observation undertaken by the auditor on controlling inventories aim to ensure that:
- the company has provided appropriate means to allow reliable reviewing of assets; this phase is meant to study the inventory procedures and it takes place before the actual inventory;
- these tools are implemented satisfactorily; this phase consists in checking that those charged with inventorying apply the procedures correctly and takes place during the inventory;
- the inventory was properly performed; this phase consists in checking if those quantities are those used for assessing the amount of stocks and ranks, so it takes place after the inventory itself.

As a technique of collecting evidence, physical observation is usually used by the auditor to understand better how a certain procedure of internal audit or some type of control of the procedure is organized and performed. For example:
- the auditor can examine how the procedure for the reception of goods is performed;
- the auditor can search for proofs that the measures taken to physically protect company assets are effective or that cash transportation from the bank to the company and back is executed according to the rules of cash operations; or that the company provisions on cancellation of treasury documents have been completed;

Physical observation as part of organizing, performing and assessing the inventory result is the only technique that can reassure the auditor that inventory procedures were followed.

## 3. Interview Technique

The interview technique, applied in the financial audit work, is defined as a method of investigation aimed at learning about human behavior when they adopt and implement internal audit procedures or control components of accounts. The interview technique involves a dialogue between the interviewer and the interrogated subject (subjects) called interviewee.

Interviews are a key part of the audit process. They are an important way of obtaining and confirming information and facts about the way systems and controls are being operated. At the same time they represent an opportunity to create and maintain good relations between the audit department and its clients, and to impress the client with the professionalism of internal audit.

Being a delicate and demanding method, it requires a personal improvement of the people who conduct the interviews, which leads them to:
- a better understanding of what is going on in their mind and in the others' minds during the interview;
- a better understanding of the interviewee's position in his or her psychological context;
- a better understanding of the others' way to express;
- a better positioning of the interview in the broader context of the financial audit, in which the interview itself is but a small part;
- a better appreciation of how the procedures were understood and applied.

In addition, the interviewer is required to be skilled, trained for this purpose and having certain qualities: resourcefulness, honesty, accuracy in taking down the answers, adaptability, being neither aggressive nor too sociable etc.

The interview usually focuses on a certain theme and a purpose, both previously established, in a program specifically developed with the help of certain rules adapted to the investigated field, known as "orientation guides" and "questionnaires". In Annex no.4 of Financial Auditing Rules there are such guides for auditors to create the necessary questionnaires.

There are several kinds of interviews, of which:

- *free interview*, also called "deep", as it is undirected, non-standardized, informal, extensive, consisting in recording the interviewee or interviewees by using a worksheet, its role being to make everyone speak freely and broadly, without interruption to influence them in some way in exposing their ideas; though one may not acquire quantitative information, this process enables the interviewer to pick up ideas as sources for future interviews;
- *questionnaire interview*, also called "standardized", which is systematic, formal, intensive, directed. The interviewer usually deals with only one interviewee, on a series of questions in a certain order and form, from which the interviewer does not deviate.

Taking an interview requires great mental effort. It is a laborious work and should not be done more than two consecutive hours. A questionnaire interview must be carefully prepared and with more caution than seems necessary at first.

## 4. Analytical Examination Technique

This technique is a global one, designed to find only significant errors or omissions, without bringing, by itself, evidence of detected errors or omissions, as they will be later determined by other techniques (sampling, tests) that allow precise quantification.

This technique results from paragraph 63 of the Audit Regulations No.1 / 1995, relying on the information system, on documents created and circulating in the company, and it is of great importance for the efficiency of financial audit. The auditor will make a difference between documents that define a policy or guidance and those which describe or imply a procedure or an operation. Although the former clarify the latter, they are not sufficient for the auditor to know all the facts.

Documents, as information support, even if they do not fully express the facts, but their existence and content express, on the one hand the existing situation and, on the other hand, the organization of internal auditing. Often, documents no longer express reality, as the described or implied operations and procedures have evolved (for example, because of organizational changes or events after the closure of the financial year) without updating the document or accounting records.

Analytical examination consists of a set of financial audit procedures, represented by:

- comparing data from the annual accounts with previous, later and forecast data of the company or with data from similar companies and establishing relationships between them;
- analyzing fluctuations and trends;
- studying and analyzing unusual items resulting from these comparisons.

Trust limits that the auditor may grant upon application of the analytical examination technique also depend on the following factors:

- objectives of the applied procedure;
- the relative importance and nature of the evidence against the annual accounts as a whole;
- other auditing procedures applied by the auditor which have the same objectives.

In fact, the analytical examination is performed according to the auditor's judgment. If the approach is based on risks, the more important they are, the less probative value must be

given to analytical examination results, and apply detailed tests (of compliance and permanency) on the internal audit and account control systems.

A methodological aspect of the analytical examination technique is the performance of arithmetic calculations, analysis, estimates and confrontations between the information and documents set:

- upstream of the company information system (incoming documents which underlie accounting records or serve to control operations accounted for - direct confirmations, for example);
- downstream of the company information system (issued documents: copies of invoices, delivery notes, balance sheets, assets comparative statements etc.)

The procedures of the analytical examination technique have the advantage of being used by auditors in various stages of the financial auditing, such as:

- in the stage of audit acceptance and mission planning, the analytical examination can be used for a better knowledge of the company and to identify potential risk areas, thus contributing to a better mission planning;
- during the stage of company management surveillance (assessment of internal audit and accounts control), the auditor will use this technique to collect evidence regarding credibility or reasonableness of internal audit systems, of individual accounts or groups of accounts;
- during the stage of examination of the annual accounts, the auditor may use the analytical examination technique to collect evidence so as to substantiate his belief that regularity and honesty conditions are fulfilled and that they give a true and fair view of the assets, liabilities, results and financial position of the company, at the end of the year.

When, on applying analytical examination procedures, the auditors find fluctuations and unusual items, which determine relationships that are unusual or inconsistent with the information obtained from other sources, it is necessary to apply further procedures to obtain the necessary explanations.

These procedures can take place in two steps:

- through the interview technique, aiming to get from the person who manages the assets the appropriate answers and adequate assessment - for example, by comparing them with reliable information and other elements collected during the auditing process;
- by using other auditing procedures to reach a satisfactory conclusion, whenever the person who manages the assets cannot provide explanations or if the explanations are not considered adequate by the auditor.

When using this technique, the auditor may sometimes reach conclusions without a quantified satisfactory answer. In this situation it is recommended to use the additional technique of testing the revealed significant element in order to obtain the necessary quantified data.

In conclusion, the analytical examination technique proves to be of great importance by the high degree of professional decision that it involves. For this reason, the main procedures of this technique should be handled by the head of the auditing team, who sees the big picture and has the required competence.

## Conclusions

Audit reports should provide an assurance on the system under review as well as recommendations for improvement regarding the soundness and application of accounting, financial and operational controls of an organisation. The evidence has to be sufficient, relevant and reliable and for most audits the required level of assurance is obtained from a number of audit procedures. This article is concerned primarily with the way in which selection techniques help the auditor acquire sufficiency of evidence.

Sampling is the most common of all the selection techniques, but the interview is equally used in all auditing processes. Without physical observation the auditor would acquire only partial information on the audited company, while analytical examinations are performed on most account balances in order to get conclusive evidence. Errors and omissions are detected in a faster and more efficient way, while audit risk is under control whenever the selection techniques are used along with the auditor's professional judgement.

Without selection techniques, the audit team would waste a lot of time and effort analyzing huge sets of data trying to find relevant elements and cast aside the irrelevant ones. By using appropriate selection techniques, adapted to each audit phase, the financial auditor is sure to obtain a relevant opinion on the client's financial statements.

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# SECTION: MANAGEMENT, MARKETING, ECONOMIC INFORMATICS AND CYBERNETICS

*SUB-SECTION: MANAGEMENT*

# SPORTS ORGANIZATIONS MANAGEMENT IMPROVEMENT: A SURVEY ANALYSIS

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*Abstract: Sport organizations exist to perform tasks that can only be executed through cooperative effort, and sport management is responsible for the performance and success of these organizations.* **The main of the paper is to analyze several issues of management sports organizations in order to asses their quality management. In this respect a questionnaire has been desingned for performing a survey analysis through a statistical approach.** *Investigation was conducted over a period of 3 months, and have been questioned a number of managers and coaches of football, all while pursuing an activity in football clubs in the counties of Timis and Arad, the level of training for children and juniors. The results suggest that there is a significant interest for the improvement of management across teams of children and under 21 clubs, emphasis on players' participation and rewarding performance. Furthermore, we can state that in the sports clubs there is established a vision and a mission as well as the objectives of the club's general refers to both sporting performance, and financial performance.*

**Keywords**: management, performance, sport organizations, football

**JEL classification**: L 25, L 83

## 1. General background

The field of sport management exists as a response to the ever-growing consumer demand for sport products and services, which totals billions annually around the world (Covell et al., 2007).

As it was expected, the development sports phenomenon over the past few decades has influenced a variety of facets of social, cultural, and economic aspects (Snyder and Spreitzer, 1989). Multiplication sports organizations both in the sphere profit sector, but also non-profit organizations, it is a proof of the increase in demand for the products and services sporting events, and this has led diversification and improve their quality, with direct effects on the welfare.

The state monopoly on the production of products and services in the field sports activities has resulted in the appearance of the economies pluralism or joint financing and supplying these services, i.e. welfare restructuring. This new approach is based on collective assumption that the welfare is provided both by the governmental institutions, as well as those of the market economy (profit-oriented organizations) and the non profit organizations and informal groups (family, friends, neighbors). Interpreting this situation in the process of achieving collective welfare, government organizations and sports organizations can play at a time a central role in the system well-being, this fact depending on the roles and assume: the supplier directly for the services and the coordinator of the entire system.

In as regards the coordinating role of the state, it is justified because financial support on

the production of goods and services in the form of grants, allowances or contracts, through other sectors. However, this should be understood as action, both for the control of use of funds, but also to facilitate and stimulate the services may be provided by other sectors.

By diversification of forms of manifestation of the sport, a central location in this respect transcoding l sports appearance of free time, has increased and the area of adresabilitate and, by default, the increased number of those directly concerned both the production of goods and services sports, but also of consumers their products (Popa, 2006).

Sport of free time has become the largest source of revenue for sports organizations, irrespective of the sector which he/she belongs, whether public, private for profit or non-profit organizations. Increasing interest for sport has led to an increase in income values. Previously unseen as regards market sales from the scope of the consumption of sport, professionals and researchers estimating a substantial increase in the revenue from sport (Brindescu, 2009). If until thirty years ago, sports industry's success is due to the particular sport performance and high-performance, things are quite different now, when the leisure sport gaining more and more land in favor of the latter, both quantitatively, referring us to the number of people involved, but their quality and, as regards improve the quality of products, goods and services offered.

Competition is one of the prime factors underlying increase of the quality of goods and services provided by sports organizations, this reason attracting a growing number of "consumer" in its favor.

Sports industry has won over the past decades of more carefully, which has led to management professionalization sports entities (Molcut and Sarb, 2014). In leading sports organizations, over time, have been in use for a series of methods which have been diversified and have evolved with the development of science and technology. These methods are processes or means used to achieve the objectives.

Even if the methods of management are most often taken from the scope of the business organizations, they are adapted to sports organizations in such a way that the attaining to result from their application (Chelladurai, 1985).

Having regard this overview and leaning against us on the results of research carried out by the Committee for the Development of sport (CDDS) to the Council of Europe, we can say that sports phenomenon that socio-cultural, and sports organizations for profit and non-profit organizations contained in it, they have a decisive economic impact on local and regional development.

Economic aspects covered by sports industry are among the most diverse, starting with the labor market, public expenditure carried out with a view to ensuring infrastructure for sports-related costs private, both coming from organizations, but also of the natural persons, of voluntary work, a family expenses made for leisure travel, of the market of goods sports and of the market of goods and services sporting events (Encuţescu, 2007). By increasing the flow generated economic sports phenomenon can create the effect of economic and social well-being of citizens concerned, as consumers of sport.

The consumers concerned sports industry represents categories of persons highly, which can be both direct participants, as well as indirect. Direct Participants are those who practice sports in various forms, for various reasons, there are those who consume most often products and services sports organizations discounting sport most often in his leisure time.

However, those indirect are not less important, they represent that category of people who attend sporting events, either on the stadiums, either through broadcast media (radio, TV, internet).

In order to identify how a heightened degree of consumers of sport it is necessary to take into account the following basic elements (Ahlert and Meyer, 2002):

- Geographical element: his residence (urban, rural areas), the place of birth, other

places in which they have resided;
- The new demographic: age, sex, occupation, level of education, family status, the level of income;
- The element obisnuintelor behavior: attitudes, social representations, motivation, the level of involvement, your personality, culture, lifestyles, behavioral style.

*After the identification of prospective consumer's products and services sports organizations, it is necessary to know those elements which are likely to increase economic impact of sports organizations which may have an effect on economic development in the communities in which they operate. According to Andreff and Weber (1993) the impact can be of two kinds:*
- Direct impact: that starts with the degree of satisfaction created by practicing sports and participation in sporting events;
- Indirect impact: which is based on creating economic and social flows and by connections department carried out.


## 2. Data and methodology

The main of the study is to analyze those aspects of management sports organizations, soccer clubs, and based on them can be observed their quality management. On the basis of the data collected will be able to take measures as may be necessary in the future increase of professionalizing their management, and it may cause  strengthen their position in the services market in the field sport.

According to the statements referred to above, the following specific objectives are of interest:
- Evaluation of youthful sector size of the soccer clubs, and form a correct perception external environment in which they operate;
- Analysis of management of the soccer clubs where there are teams of children and under 21 clubs;
- Making proposals for the improvement of the management of the soccer clubs in order to increase their results;
- Analysis management tools used by the managers sports organizations;
- Analyze the way in which customers perceive the process of management of sports organizations;
- Analysis customer satisfaction with regard to the quality services sports organizations.

The soccer clubs are important providing services in the field of sports and leisure of the sport of performance; from this idea, it is necessary to know if they are interested in increasing the degree of inward processing in terms of the mode of driving them.

By inward processing shall be understood, in particular, make a scientific management based on principles, standards, and rules laid down and proven both on the theory and practice of management this type of organization, this condition being essential as regards organizational performance.

Given the topics dealt with in the evidence of the sentence, we attempt to examine the following assumptions:
1. Interest for the performance of a strategic management in sports clubs is reduced;
2. Organizational structures designed in sports clubs are simple mainly on the type of structures hierarchically-linear, specific small organizations;
3. Management in a football club is centralized;
4. Methods of motivation of employees and athletes in the soccer clubs have based principally on positive motivation;
5. The control function of management is essential in the sports organizations

and is commonly used to assess achievements.

For reason of the choice of investigation by questionnaire was that questions or images contained in the questionnaire have the function of stimuli triggers behaviors oral or non-oral and this "help standardisation interviews, increasing consistency questions and answers". It is demonstrated that investigation undertaken has a character quantitatively, although they have been included in the questionnaire and certain questions that respondents have failed to respond freely, with no pre-codified answers.

Investigation was conducted over a period of 3 months, during which time they have been questioned a number of 30 managers and coaches of football, all while pursuing an activity in football clubs in the counties of Timis and Arad, the level of training for children and juniors. The questionnaire used in the investigation carried out has a complex structure and the data have been examined with the use of SPSS 19 statistical software[13].

Within the framework of this research have been used two categories of variables: variables responder's profile characteristics (category in which they have been included: responder's position in the club, length of service in the club and the education level of respondent) and, respectively, the variable profile of the club sports category to which they belong: The profile football club, structure type sports and year of setting up football club).


## 3. Results

Analysis of the data is a complex process and systematically which, by means of statisticos and mathematical techniques, it proposes to extract from the database formed by all the necessary information. Univariate analysis data contains a combination of techniques of statistical analysis which take into account only one variable.

The purpose of the univariate inferentiale analysis is to compare data distribution observed at the level of a sample with a theoretical distribution for testing significance of test results obtained. For inferentiale univariate analysis is carried out may be used a series of statistical tests. Selecting appropriate statistical test must be made on the basis of the level of measurement of variables entered in the analysis (nominal, ordinal, interval or ratio). For the variables can be used nominal test binomial or univariate $\chi^2$ test. In the case of the variables is used ordinale test Kolmogorov-Smirnov , and for the variables measured at level range or report Z test shall be used or the test t.

As a result of simple observations carried out in the sports clubs, we have stated the preliminary conclusion that the interest for the performance of a strategic management is reduced. Starting from this assumption, we have formulated the following hypothesis research: "*In the sports clubs, is not established a vision and a mission*" ($H_1$). The next step should be formulated null hypothesis ($H_0$): "*observed differences between frequencies variable categories are not statistically significant*. In order to check $H_0$, we have identified necessary variable in the database, we have determined the level of measurement of the window, and we've chosen according to statistical test. Subject to variable analysis is "The answer that reflects to the greatest extent the situation in the club in which run" (Q1). This is a nominal multiple variable with three options of the response, of which respondent may choose a single variant. Thus, relevant statistical test in this case, it is univariate $\chi^2$ test.

Table 1 contains the value calculated by $\chi^2$ the number of degrees of freedom and the level value of significance p in the case of $H_0$.

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[13] Due to space reason, the questionnaire is not provided in the paper but is available upon request from the authors.

**Table 1:** The results for testing hypothesis $H_1$

| The indicators | His calculated value of $\chi^2$ | Number of degrees of freedom | The value for the degree of significance p |
|---|---|---|---|
| The value of indicators | 14,062 | 2 | 0 7001 |

Source: authors' calculation

According to the data in the above table, the value calculated is $\chi^2$ of 14,062, the number of degrees of freedom is equal to 2, and the level of significance p has a value of 0.001. After comparing the significance level value with the value of 0.05, it results that $H_0$ is rejected. Thus, frequencies observed differences between categories variable are significant statistically. This result is guaranteed with a probability of 95 %. To formulate a conclusion of the research hypothesis, it should be a careful analysis of absolute frequencies observed in table 2 where are included absolute frequencies observed theoretical frequencies and theoretical residual values.

**Table 2:** The results statistical processing in the case of $H_1$

| Response Variants | Absolute frequencies observed | Theoretical absolute frequencies | Residual Values |
|---|---|---|---|
| There is established a vision and a mission | 32 | 21.7 | 10.3 |
| There is defined a mission of club and it is transmitted to all members | 25 | 21.7 | 3.3 |
| There is no established the vision and no club mission | 8 | 21.7 | -13,7 |
| **Total** | **65** | | |

Source: authors' calculation

In the above table it can be seen that the highest absolute frequency observed is recorded by answer option "There is established a vision and a mission" (32 people). This result obtained lead to the rejection of the research hypothesis. In conclusion, we can say that in the sports clubs there is established a vision and a mission (a strategic intention was defined in a broader sense).

After these same observations made in the sports clubs, we have formulated the following research hypothesis: $H_2$:" *the time horizon for which shall be defined targets is one year maximum days* ". $H_0$ is: "*observed differences between frequencies variable categories are not statistically significant*". The variable included in the analysis is "the period of time for which shall state their objectives in the club" (Q2). To verify this hypothesis, it was necessary to recode the variable. Initially this variable was having six categories (code 1 - these shall be established for periods of 3-5 years; code 2 - extremely frequent changes in ambient air  is not to permit the establishment of objectives for long periods of time, 3-5 years; code 3 - the time horizon for which targets are set is by a maximum of 1 year; code 4 - these shall be established on up to 1 year as well as to every sports competition; code 5 - these shall be established for both periods of 3-5 years as well as for shorter periods of time and code 6 - none of the situations above ). Categories " extremely frequent changes in ambient air is not to permit the establishment of objectives for long periods of time, 3-5 years ", " the time horizon for which targets are set is up to 1 year " and " These shall be established on up to 1 year, as well as to every sports competition " have been grouped together in a single category ("the time horizon for which targets are set is a maximum 1 year"). So, after having been carried out recodificarea resulted in four categories: code 1 - these shall be established for periods of 3-5 years; code 2 - the time horizon for which

targets are set is by a maximum of 1 year; code 3 - these shall be established for both periods of 3-5 years as well as for shorter periods of time and code 4 - none of the situations above. This variable is a nominal multihotomical, statistical tool and $\chi^2$ univariate test is selected. In table 3 are included the value calculated by $\chi^2$ the number of degrees of freedom and the value for the degree of significance.

**Table 3:** The result for testing hypothesis $H_2$

| The indicators | His calculated value of $\chi^2$ | Number of degrees of freedom | The value for the degree of significance p |
|---|---|---|---|
| The value of indicators | 32,292 | 3 | 0.000 |

Source: authors' calculation

By analysing data from the above table, we can see that his calculated value of $\chi^2$ 32,292 is the number of degrees of freedom is equal to 3, and the level of significance p has a value of 0.000. Therefore, we compared the value for the degree of significance p to a value of 0.05. $H_0$ is rejected, a result is guaranteed with a probability of 95 %. Different frequencies observed between categories variable are significant statistically. For the purposes of formulating conclusion referring to the hypothesis of the research, we have analyzed absolute frequencies observed in table 4. In this table are included absolute frequencies observed absolute frequencies and theoretical residual values.

**Table 4:** The results statistical processing in the case hypothesis $H_2$

| Response Variants | Absolute frequencies observed | Theoretical absolute frequencies | Residual Values |
|---|---|---|---|
| These shall be established for periods of 3-5 years | 15 | 16.3 | -1.3 |
| The time horizon for which targets are set is a maximum 1 year | 34 | 16.3 | 17.8 |
| These shall be established for both periods of 3-5 years, as well as for shorter periods of time | 14 | 16.3 | -2.3 |
| None of the above situations | 2 | 16.3 | -14.3 |

Source: authors' calculation

In table 4 it could be observed that the highest absolute frequency observed is recorded by answer option "the time horizon for which targets are set is up to 1 year" (34 people). Observed differences between categories frequencies variable being significant from the point of view, the hypothesis of statistical research shall be accepted. In this way, we can say that the time horizon for which shall be defined targets is one year maximum days.

The third research hypothesis is $H_3$:" *general objectives of the club refers to both sporting performance, as well as the financial ones*". Starting from the hypothesis of research we have the following hypothesis $H_0$:"*observed differences between frequencies variable categories are not statistically significant*. Variable analysis is subject to the general objectives of the club" (Q3). This is a nominal multihotomical variable with four options of the response, of which respondent may choose only one. Thus, relevant statistical tool in this case, it is univariate $\chi^2$ test. Table 5 contains the value calculated by $\chi^2$ the number of degrees of freedom and the value for the degree of significance.

**Table 5:** The result for testing hypothesis $H_3$

| The indicators | His calculated value of $\chi^2$ | Number of degrees of freedom | The value for the degree of significance p |
|---|---|---|---|
| The value of indicators | 47,431 | 3 | 0.000 |

Source: authors' calculation

In the above table, we can see that the calculated value is $\chi^2$ 47,431, the number of degrees of freedom is equal to 3, and the level of significance p has a value of 0.000. Therefore, I compared the value for the degree of significance p to a value of 0.05. $H_0$ is rejected, this result is guaranteed with a probability of 95 %. Different frequencies observed between categories variable are significant statistically. In table 6 below are included absolute frequencies observed absolute frequencies and theoretical residual values. In this table, you can notice that the largest absolute frequency observed is recorded by answer option "general objectives of the club relate both to sport performance and financial" (35 people). For the other answer option have obtained the following absolute frequencies observed: 24 respondents stated that the objectives of the club's general concerns only the sport performance, a respondent considers the objectives of the club's general concerns only the financial performance and 5 respondents said they would not objectives are set at the level of club. Observed differences between categories frequencies variable be significant statistically, the research hypothesis is true. In conclusion, we can say that the objectives of the club's general refers to both sporting performance, and financial performance.

**Table 6:** The results statistical processing in the case of $H_3$

| Response Variants | Absolute frequencies observed | Theoretical absolute frequencies | Residual Values |
|---|---|---|---|
| General objectives of the club only relates to sport performance | 24 | 16.3 | 7.8 |
| General objectives of the club only relates to financial performance | 1 | 16.3 | -15,3 |
| General objectives of the club relate both to sport performance, as well as financial | 35 | 16.3 | With 22.54 |
| Do not objectives are set at the level of Club | 5 | 16.3 | -11,3 |

Source: authors' calculation

The fourth hypothesis research reference assumes that the soccer clubs are strongly centralized, i.e. main decisions shall be taken by employers or managers of peak. Thus, we believe that in sports clubs is not practiced collective management. This is not necessarily must be labelled as a negative one because not all organizations and in all situations participation of employees its merits decisions is beneficial. So, I have formulated hypothesis $H_4$:"*decisions to be taken in the club are frequently generated by employers will or shareholders*"*.* On the basis of this hypothesis we formulated research $H_0$:"*observed differences between frequencies variable categories are not statistically significant*. Variable analysis is subject to the way in which decisions are taken frequently in the club" (Q8). One is the variable nominal multihotomical with five answer options, of which respondent may choose a single case. In this case, the instrument is suitable statistical univariate $\chi^2$ test. Table 7 below contains the result of the test this hypothesis.

**Table 7:** The result for testing hypothesis H₄

| The indicators | His calculated value of $\chi^2$ | Number of degrees of freedom | The value for the degree of significance p |
|---|---|---|---|
| The value of indicators | 20,750 | 3 | 0.000 |

Source: authors' calculation

According to the data from the table, his calculated value of $\chi^2$ 20,750 is the number of degrees of freedom is equal to 3, and the level of significance p has a value of 0.000. After it has been compared the value for the degree of significance with standard value of 0.05, we state the conclusion that H₀ is rejected. This result is guaranteed with a probability of 95 %. Thus, frequencies observed differences between categories variable are significant statistically. To formulate a conclusion of the research hypothesis H₄, it should be a careful analysis of absolute frequencies presented in table 8. In this table are included absolute frequencies observed absolute frequencies and theoretical residual values.

**Table 8:** The results statistical processing in the case hypothesis H₄

| Response Variants | Absolute frequencies observed | Theoretical absolute frequencies | Residual Values |
|---|---|---|---|
| Decisions to be taken in the club are frequently formulated after they have been thoroughly analyzed and evaluated decision-making more options | 25 | 16.0 | 9.0 |
| Decisions to be taken in the club are frequently generated by managers on the basis of experience | 9 | 16.0 | -7,0 |
| Decisions to be taken in the club's are frequently generated by employers will or shareholders | 25 | 16.0 | 9.0 |
| Decisions to be taken in the club are frequently based on analyzes and studies concerning the internal context and the environment | 5 | 16.0 | -11,0 |

Source: authors' calculation

In the table 8 above we notice that there are two options for response ("decisions to be taken in the club are frequently formulated after they have been thoroughly analyzed and evaluated several variants decision-making" and "decisions to be taken in the club are frequently generated by employers will or shareholders") which have recorded the same frequency absolute appearance (25 persons). Observed differences between categories frequencies variable be significant statistically, we can affirm that the decisions to be taken in the sports clubs are frequently generated by employers will or shareholders but, in equal measure, and made after they have been thoroughly analyzed and evaluated several variants decision-making.

By the fifth hypothesis research we attemtped to determine type of way motivation predominantly in sports clubs. To this end we have formulated hypothesis: H₅:"*The most effective way of pharmacy athletes is represented by individual targets clear and the granting of rewards linked to the level of the relevant* " (positive motivation)*. In this case, H₀ is: "*observed differences between frequencies variable categories are not statistically significant*". The variable which has been analyzed is "the most effective way of pharmacy

athletes" (Q9). One is the variable nominal multihotomical with three options of the response, of which respondent may choose a single variant. The appropriate statistical test is $\chi^2$ univariat. In table 9 below are included the value calculated by $\chi^2$ the number of degrees of freedom and the value for the degree of significance.

**Table 9:** The result for testing hypothesis $H_5$

| The indicators | His calculated value of $\chi^2$ | Number of degrees of freedom | The value for the degree of significance p |
|---|---|---|---|
| The value of indicators | 26,571 | 2 | 0.000 |

Source: authors' calculation

By analyzing the data, we can see that his calculated value of $\chi^2$ 26,571 is the number of degrees of freedom is equal to 2, and the level of significance p has a value of 0.000. By comparing the value for the degree of significance with standard value of 0.05, we lead to the conclusion that $H_0$ is rejected (result guaranteed with a probability of 95 %). Observed differences between categories frequencies variable are significant statistically. Table 10 below reports absolute frequencies observed absolute frequencies and theoretical residual values.

**Table 10:** The results statistical processing in the case of hypothesis $H_5$

| Response Variants | Absolute frequencies observed | Theoretical absolute frequencies | Residual Values |
|---|---|---|---|
| Individual targets clear and the granting of rewards linked to the level of the relevant | 39 | 21.0 | 18.0 |
| S tabilirea clear individual targets and the application of penalties or disciplinary materials linked with their not being realizable level | 6 | 21.0 | -15,0 |
| Granting both of rewards, and the application of sanctions linked to the level of individual objectives established | 18 | 21.0 | -3.0 |

Source: authors' calculation

In the above table it should be noticed that even the largest absolute frequency observed is recorded by answer option "targets clear individual and the granting of rewards linked to the level of the relevant" (39 people). For the other options of the response were obtained the following absolute frequencies observed: 18 respondents stated that the most effective way of pharmacy athletes shall be represented by the granting of rewards, and the application of sanctions linked to the level of individual objectives laid down (motivation joint venture) , and 6 respondents have mentioned that individual targets and the implementation of clear materials or disciplinary sanctions was linked to the level can no longer honor their motivation negative) is the most effective way of pharmacy at athletes. Observed differences between categories frequencies variable being significant from the point of view, the hypothesis of statistical research is validated. In conclusion, we can say that the most effective way of pharmacy athletes is represented by individual targets clear and the granting of rewards linked to the level of the relevant (the reasons for the positive).

## 4. Conclusions

The tool used for a better knowledge of the degree of inward processing management teams of children and under 21 clubs football clubs' was the questionnaire, the investigation as indicated for a period of 3 months, during which time they have been questioned a number of 25 managers and coaches of football. They exercise their activity in football clubs in the counties of Timis and Arad, the level of training for children and juniors.

Primary result loose after the interpretation of responses shows that there is a significant interest for the improvement of management across teams of children and under 21 clubs, emphasis on players' participation and rewarding performance.

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# MANAGING OPERATIONS IMPROVEMENT IN ROMANIAN PUBLIC SERVICES

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**Abstract:** *This paper aims to develop a pleading for the transfer of best practices to improving the operational activity in the Romanian public institutions. The practice of implementation demonstrates that the perception of many executives in the Romanian private enterprises regarding the set of tools to improve processes and assimilation of lean philosophy is not a very favorable and encouraging one. It can be said that only some large enterprises had successfully introduced in their daily practice and organization the improvement principles, the operational optimization and the elimination of waste sources. In the SMEs, and especially in the services the experiences are isolated, but they have demonstrated the usefulness (the frequency of saving goals indicate, indeed, the need for proliferation of continuous improvement principles). Regarding the public organizations, the implementation of the new management system of designing and operating the current practices is pretty unknown, accepted at declarative level, but becomes, when is planned and implemented rather a burden on managers who should take on this challenge. Both in public management and private management, today the focus is on people and relationships (processes and projects), starting of course with the work organization. The good practices successfully proved in the private management in the recent decades are transferred today to public institutions; and the Romanian public organizations tend to adapt, also in terms of processes optimization. The study aims to analyze the functioning of the hypothetical management system of processes improvements, respectively the applying of lean tools and principles within the public Romanian institution. They are treated some dysfunctions observed within the process of understanding the utility aspects and throughout the assuming of operational improvement goals within these organizations. The qualitative observations, the critical interpretations and the opinions expressed are strictly the views of the author and may differ from those of representatives of any public institutions. The entire investigative approach converges to a cynical conclusion: the adaptation and the implementation of process improvements principles in the public entities could be in short terms an objective determined by external incentives and not a consciously assumed solution. Finally, we expose some of the ideas for deepening and expanding our practical findings and conclusions.*

**Keywords:** lean philosophy and lean thinking, dissipations, public institution performances, processes improvement management, lean manufacturing

**JEL classification:** D73; H83; L32; O31.

## 1. Initial views

The activity of Romanian public institutions is always blamed; the unjustified budget expenditures, institutional inefficiency and corruption are just few of the most common charges. However, the services provided by the public institutions have a significant share in the Romanian economy as a whole. The impact on the daily life of citizens is high, despite the low labor productivity of the public sector employees (compared to the private sector). Currently, budgetary employees represents approx. 20% of the employed workforce in Romania, being involved in branches as public administration, defense, education, health and social, cultural performances activities etc. The labor productivity of these employees is lower comparatively with the private sector; the fact is generated by

the approximately equal average wages and by the economic results reported significantly lower in the public services. (The Labour Productivity Barometer, BNS, 2011).

Many important voices (politicians, academic personalities) agree that we are now in the post-modern era in which 'quality of life' is the most important target of the populations. Thereupon, the health, education, transport or financial and even public services have come to form the integrated basis of the life of citizens – who are the clients of these organisations – in this new post-industrial era (Suárez-Barraza et al, 2012, p. 360).

We conduct this investigation on management practices inside the problematic field of public sector. Each manager encounters many shortcomings and felt the need for researching improved ways of organising and managing the diverse processes involved in his institution's activities.

## 2. Managers preocupations on operational improvements

Given the social's and media's pressures to reduce costs, increase flexibility, improve quality and reduce lead times, we can say that the public organisations now look to the manufacturing sector in order to learn and implement their techniques and methods so as to become more 'lean' and thus focus their service activities from a 'lean' perspective (Kinnie et al., 1996.).

Demonstrating its utility in the manufacturing, lean culture is gaining credibility and is taken into account in the recent years also in the service sector. For example, the banks and other financial institutions, food industry and other services trying to increase their productivity and to reduce losses by applying the management of processes improvement. In banking, for example, they are applied methods to reduce the time and effort to loans analyze and approval (including the time measurement). Depending on the specific process of service providing, the managers and operational staff identify ways to eliminate the waste sources and to remodel / restructure the sequences of this process in order to obtain the efficiency.

From our point of view, this trend of contemporary management can not be neglected in the public services. A general management principle says that always there are many better ways to achieve the same goals, whatever we are doing. We simply must keep the mind and the eyes open. Standardization of operations is already applied in the public organizations of developed Western countries.

Too often, the employees and managers of public institutions forget how important are their customers (citizens, civil society), neglecting the idea to produce more and consuming less, not interested in creativity and innovation of their own work, they avoid to focus on quality and very few are concerned on the development of subordinates. Table no 1 highlights the systemic challenges and prospects for the application of the improvement principles.

Development of visual management in manufactures increased the level of motivation, precisely because the employees respond well to visual stimuli. Panels, displays, electronic indicator tables, command and control boards, flipcharts - all this objects incites the employee to be more careful, to work more efficiently and exploit these tools in communicating with other employees.

On the other hand, an office of a public institution is characterized by a continuous disturbance, lack of labor's order and discipline, scattered documents and organizational ambiguity (it is enough to visit many of such offices to confirm the described characteristics of the public organizations). Most of the employees of these organizations do not know and obviously does not apply the 5S principles. The basic reason for many disheveled workplaces is that many managers think 5S is too simple to count as a workplace tool that increase productivity and profitability. The situation is different in the case of ISPC - that is the self-control - instrument to which the employees manifest repulsion, when they understand that will increase the pressure on their shoulders.

**Table 1. Features of managing optimization and Lean tools**

| Improvement principles | Previous similar experiences | Predispositions | Utility |
|---|---|---|---|
| **5S** | large differences between the organization of work and offices in the companies vs. public agencies | employees are aware that they need to "*sort, arrange, shine, standardize and sustain*" their office work. | this workplace organiza-tion method is a necessity for such activities with many procedures |
| **In station process control** | on how authoritarian is the control, as it is superficial. Control is based on formalism and not on trusting the people | with the self-control, they are increased the responsibility, the acceptance of delegated tasks and the reporting procedures. So, the people avoid ISPC. | the self-control is recognized like the best manner of controlling. In the organizations where this tool is poorly-developed, the changing results could promptly appear. |
| **Error proofing** | error proofing system has allready adopted in the public entities | because they simplifies the work of employees, the poka-yoke systems are easily accepted | systems increasing the level of certainty and safety,reduce risk and facilitate the work of managers and employees |
| **Visual management** | few efforts for transforming and do more transparent the entities whose activity is easily seen, understood & evaluated by their employees and third parties | great, because do not involves people' efforts | considerable: the institution becomes more transparent and credible, most prolific. |
| **Policy deployment** | there is a huge vision gap between top-managers and the operational base. solutions unidentified | although there exist even latent conflicts between managers and operational staff, both have predispositions to work and to understand each other | work standardization and coordination of all efforts in the same direction |
| **Lean behaviour** | depending on the background of each employee. Such institutional targets haven't been set | all the behaviors are positive and the social acceptance level should be maximum | effects difficult to quantify giving the reverberations throughout the entire life of the employees and on personal relationships |
| **Kaizen** | as objective, the continuous improvement is always stated through the top priorities. Only that is not included in the action plans. | social acceptance | demonstrated in the private companies who applied kaizen philosophy |

*Source: author's observations*

Lean behaviour or simply "Lean" is a practice that considers the resources expenditure for a purpose other than creating value for the end customer is a waste and thus a target for elimination. The system must be analysed from the point of view of the customer who consumes a public service, and the "value" is defined as any action or process that a customer would be willing to pay. In essence, "Lean" is geared to value delivery with minimum work. Kaizen means continuous improvement principles, relentless initiatives of the maximum extent of the solutions identification and to strive for improvements, principles assimilated into the collective mindset and organizational culture of companies. Policy deployment is a practical of strategies, policies and procedures implementation, in a uniform way to all levels of enterprises, the deceleration of the best practices in all the organizational areas, the leaven of the positive ideas and the inoculation into managers and operators think of these practices.

Patterns of management practices in developed and developing countries have been documented by Bloom and Van Reenen (2010). In 2012, Bloom, Schweiger  and Van Reenen analyze the labor productivity in corelation with management practices in 12 countries, including Romania. This authors consider that the "countries can improve average management practices in two ways: (i) by promoting factors that increase average

management quality in each organization (e.g. through better business education), and (ii) through improved reallocation across the institution" (Bloom et al., 2012, p. 610).

## 3. Perception of civil society

**Table 2. Trust of Romanian citizens**

| No | Institution | Percent of high trust |
|----|-------------|----------------------|
| 1. | Fire  services | 90% |
| 2. | Army | 81% |
| 3. | Anti-Corruption Directorate | 66% |
| 4. | Church | 66% |
| 5. | European Union | 63% |
| 6. | Romanians who left the country | 60% |
| 7. | Inteligence Services | 58% |
| 8. | Romanian Academy | 57% |
| 9. | National Bank | 55% |
| 10. | Justice institutions | 54% |
| 11. | Police | 52% |
| 12. | Romanian Schools | 51% |
| 13. | Presidency | 51% |
| 14. | Mass media | 49% |
| 15. | Facebook | 42% |
| 16. | Municipalities | 40% |
| 17. | Public Helth care system | 32% |
| 18. | Prime minister | 28% |
| 19. | NGO's | 26% |
| 20. | Political parties | 10% |
| 21. | Parliament | 9% |

*Source: http://www.ires.com.ro/uploads/articole/ires_raport_bilan%C8%9Bul-politic-al-anului-2014.pdf accesed on 10.04.2015.*

A 2014 study indicated a low level of confidence of Romanians in many of the public institutions (a 40% trust for the municipalities, 54% for the Justice, 52% for the Police stations și 51% for the public education). The Romanians trust is (surprising maybe) directed to other entities or means: 66% trust the Church, 42% of Romanian have a great confidence in Facebook and 60% trust the Romanians who left the country.

This aspect reflects the social perception on the efficiency of public institutions. The lack of confidence is due, from our point of view, to the following factors:

- The experiences of people who did not receive the best services from the majority of the public entities;
- media and communication channels reflecting of the major problems faced by the public institutions;
- The lack of reliable leaders at the top of these institutions;
- The real poor performances of most of the entities.

We cannot estimate the possible impact related with the pessimism of the Romanians, their prejudices and the pressure that affect every citizen due to the financial crisis.

## 4. Causes and remedies

The impediments which reduce the possibility to operate on improved lean principles, to make it more effective and organized by means of removing the sources of waste can be

narrowed to three categories of causes: managerial, organizational and social.

Regarding the managerial determinants category, a strong reason is related to the way in which the managers of public institutions are appointed. Therefore, most of the times, a public enterprise has at its charge a person who has a working order, usually under a time limit; even the number of working orders is, in many cases, limited to one or two. In addition, these managers usually come from the outside of that public entity. Consequently, these managers yield priority to activities related to the developmental strategy of the organization, to create a vision, values and objectives at a high level, covering the organization on the whole. It's obvious that these managers, who come from the outside, have a greater reluctance when it comes to getting involved in the activity of a subordinate and they would rather not interfere with the operational activity; not even at the approach level of the mid-level managers do they have time to develop enough authority to afford to interfere with radical organizational and change measures of the entire managerial system, necessary aspects in order to achieve institutional radical change with a view to achieve excellent organization.

From the same spectrum of managerial causes, it has to be underlined the lack of appetite for the challenges of visible organizational change compared to the risks involved by these change. Romanian managers are rather excessively cautious, reserved and even indifferent with respect to the temporary nature of their assignment. These leaders can't face the barriers against change imposed by their subordinates and even the impediment of their own conservatism.

On the other hand, incomplete national public and private management concerning the professionals of radical changes, success stories about organizational recoveries and systemic projection of institutions are rare. Therefore, they are difficult to recreate, they don't inspire other Romanian managers and, thus, they remain scattered. The dissemination of changing management models is, unfortunately, difficult to expose briefly. More than that, not only the managers' experience is scarce, but also their training involves scarcity regarding courses or curriculum subjects such as organizational flexibility, change management or the continuous process improvement. The economical, social and political instability in Romania emphasizes managers' behavioural tendencies by fuelling their own uncertainties.

Organizational determinants we could identify are the following: the inflexibility of the institutions, the traditional bureaucratization/over-complicated administration of the organization and excessive centralization. Many organizations have a complicated structure, with lots of departments, intricate employment staff scheme and little flexibility, therefore not liable to organizational change (in these disruptive times we live, agility can lay down the law). Bureaucratic organization still exists, functioning and organizational regulations are those inherited from times when command and control were predominant. Despite complex structures within many institutions, the entire decisional process constitutes the privilege of the top managers: the distance between the application links is too big and causes a considerable discrepancy between the leaders' vision and the performance of those who put into practice the directions sent from the source leading centre.

The most important social causes are scarce education, pessimism and people's distrust in new methods of work. It adds, of course, change resistance, communication impediments and even people's selfishness. Genetic vulnerabilities, these determinants are the most difficult ones to overcome because they are related to people's intrinsic nature, almost impossible to shape.

In our opinion, it is necessary, therefore, a reassembling of managerial values: lowering phenomena such as procrastination, lack of initiative, opportunism, social negligence, responsibility avoidance at the same time with the increase of techniques such as participative management, team building activities, confidence building, empowerment

and the usage of alternative methods of motivation.

When installing new managers in public institutions, these announce their objectives and organizational radical change plan, apparently optimistic. Unfortunately, most of the times, these are accomplished at a low level. Discrepancies between the announced objectives and their results show, from our point of view, a desire more for stability (toxic when there's an imperious need for change) rather than a real desire for optimization.

## 5. Conclusions and proposals

Our conclusion, confirmed even if we investigate things carefully when we turn to offices, agencies, desks of public institutions, is that the activity of most of these organizations is deployed in opposition with their purpose - to offer public service to people. In fact, due to their repellent working method, limited efficiency, high bureaucracy and heavy procedures, their activities are considered more like prejudicies (un-services) to the customer.

Regarding the frequently mentioned standardization – that can be defined as assimilating, attaining and extending the best practices in a continuous maneer. We believe that the idea of this principle is misunderstood by managers: work standardization efforts have been made. The results were not too spectacular. This is because the real subject of standardization that should be pursued is the work optimization.

Given the delays in establishing a more rigorous organization, we recommend the practice whose utility has been demonstrated in the private sector: the analysis of any malfunctions at the lower and mid-management levels (department managers and team leaders). Today, in most of the public institutions, the staff refuses to involve in the process of optimizing the work organization considering perhaps (this is an organizational tradition) that the responsibility of drawing the organizational objectives and the procedures conception are the exclusive duty of senior managers.

As ordinary citizens and beneficiaries of the services provided by public organizations, we cannot conclude without point out some common dysfunctionalities: the work program with the public should be expanded; employees of organizations are or seem to be deeply demotivated; urgent need for transparency in the public services; the need for increasing flexibility and for optimizing the communication: managers - employees / employees - employees / employees and managers - beneficiaries of public services.

## 6. Acknowledgements

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# THE STUDY REGARDING DIFFERENT APPROACHES OF THE QUALITY ASSURANCE SYSTEMS IN EDUCATION

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*Abstract:*

*One of the key indicators of any society is represented by the assurance of some domestic policies with a high quality level. At the same time, an important role is given to the education system of each state; hence, at the level of each provider of education services, there is a continuous preoccupation in regards to improving the quality of the entire educational system. Therefore, some legislative and institutional basis where established, which were meant to carry up this process, such as to respond to the dynamics of the societies, even through the implementation of a management system of the quality assurance, starting with the need of respecting the principles of a quality culture, including the level of internal processes of the providing entities of education services. The paper points out the importance of the quality assurance system, at the school level, beginning with the theoretical dimensions.*

*Key words: Quality in education, quality management, quality culture, changing factors, quality assurance system.*

*JEL Classification:*
*I29, I28, I20.*

## Section 1: Introduction

The paper sets out an analysis and a presentation of the theoretical dimensions of the quality and the quality assurance systems. It tends to carry out theoretical delimitations of the multi-dimensional concept of the quality and of the quality assurance system of the schools, together with its factors such as the essential features of the models of the quality assurance system at the national and international level. The paper has four sections: The Introduction, The Reference Elements, and The Perspectives of the Quality Assurance in the Schools and Its Factors, The Conclusions. The paper is aimed to draw the attention of the importance of implementing the management of quality assurance in schools.

The quality of the products or the services is given by their core properties, which highlights the level to which a need is satisfied. The quality can be analyzed from the perspective of: the utility degree, the demands' compliance, the set of specific properties according to International Standards - ISO 9001: 2008, the measure of the utility of the products and services with the same destination. Regardless of the social-economic fields, when analyzing, it is taken into account those characteristics which award the quality to any product or service and allow the differentiation among the similar categories with the same destination.

Given these circumstances, the education is a key sector, which gives the possibility to co-exist a broad set of approaches in regards to the quality assurance system of the education and the education process. Numerous

researches show that the significant role in the management of quality is entitled to the providing institutions. These researches start with different versions of defining the quality and end up showing the same impact of the institutional framework on the quality of all processes. The author William Edwards Demming states "the consumer is the most important link of the production line. The quality needs to be focused on satisfying the consumer's needs – in the present and in the future." (Demming E., 1998, p.15)

### Section 2: The Reference elements

A wide set of factors hall-mark the quality in the education field. The schools blend the theoretical and practical keys to ensure the obtaining of the anticipated performances and results. According to the author Şerban Iosifescu the analysis of the quality in education needs to be done in reference to: "*the values* promoted in the society and at the level of the school; *the education policies and the strategies* given at the national, regional and local level; *the given situation* defined by the contextual factors, the culture and the traditions; the evolution of the quality concept". (Iosifescu E., 2001, p.12)

The necessity of the existence of the national quality assurance system is being supported by institutional, administrative and managerial arguments, which frame it as a system which ensures and promotes the tools and the instruments for improving the quality in the education, with a direct effect on the pupils' results. At the highest stake, the implementation of such a system determines an increase of the performance quality of the actors from the school community, up to the level of the direct beneficiaries – the pupils.

The functions of the national quality assurance system point the following (Claudiu I., 2012, www.sar.org.ro):

- The evaluation of the education services should be done, while emphasizing their finality and it follows the model inputs – process - outputs, in order to mark out the obtained results, on the long run.
- The identification of the school contribution to the progress and the performances of the pupils, which mean establishing the extent to which an added-value contribution identified in the pupils' results was created through the paideutics demarche, detached from the education influence and the family contribution.
- The implementation of the schools benchmarking, together with summarizing and publishing the schools specific data and background, in a very transparent formula.
- The promotion of the parents-community partnership, in order to make the school more efficient and to improve the quality of the provided services with benefits for the direct and indirect beneficiaries.
- The intervention in favor of the education adapted to the school profile and population.
- The promotion of the social inclusion and the identification of the adequate intervention tools for this endeavor.

While implementing a quality assurance system, many obstacles can interfere. They have their origins in the institutional context and relate to different natures, such as the theoretical, the cultural or the material one, while turning into

factors which influence the implementation of the system to a lower or higher level. Beginning with their natures the factors can be presented and exemplified as follows:

- The theoretical factors – the lack of opportunities and offers in regards to the training, the quality management skills acquisition for the human resources from the educational sector; the difference in the perception of the system evaluators, who identify the quality with finding and pointing out errors or problems and imposing sanctions without taking into a account the need to have a pro-active behavior of all the actors involved, from those who evaluate, to those who finance and to the ministry and its regional representatives; at the policy level the lack of the objectives assignation for each educational level, of the correlation between the strategies and the curriculums and of the proper informing process of the involved actors, in regards to the education policy aims;

- The cultural factors – the lack of motivation (awards, distinctions, financial or material rewards) of the human resources involved in the quality assurance system, who tend to sense this responsibility as an extra heavy task to those already stated in their job descriptions; the fragile existence of the quality culture, because the quality management is not seen as a consistent priority and the organization resistance is high to changes; the shy implication of the local and central institutions in regards to providing the optimum conditions for implementing the quality assurance system and the inability to bring in the center of attention the beneficiaries of the education services;

- The material factors - the limited resources available for the process of the quality assurance in the education, the impossibility to attract and access auxiliary financing which could supplement the financing designed for the implementation of the quality assurance system in the education sector; the impossibility to leverage the tools and instruments offered by the management of the quality, in some specific situations.

As the society and its needs are in a perpetual change, from the perspective of the change as a process, the most important lesson for the school is to achieve the implementation of the quality assurance system, given the natural and fair conditions for the change and the consistency dealt with by the school.

From this perspective the dimensions of an efficient management foresees: "the strategies, the projects and the plans for different time frames, the efficient leadership in relation to the members of the school community, (…) the clients' satisfaction, who benefit from the results of the education, the employee satisfaction, the results obtained by the school organization, the school impact on the community and the society" (Rădulescu E., 2002, p.94).

The quality assurance process among others requires an efficient management and a change in the mentality of the actors involved, which is the main premise of a solid quality culture. O real quality culture can be implemented and consolidated, when the practices of the evaluation from the quality field are perceived in the right way and the evaluation is not considered to be a sanction tool, but a very powerful instrument for the development of the school

organizations. The compliance and the conformation to the law are not the sufficient conditions for the implementation of the quality assurance system. Through the internalization of the idea to view the quality as a need, the organization ensures a supportive attitude for the actors of the school community, in regards to the strategies, the legal framework and the specific methodology. The quality policies can be strong enforcements and motivators for human resources involved in the implementation, for the direct and indirect beneficiaries and for the stakeholders.

### Section 3: Some Quality Assurance Perspectives for the education

In the report "School and Quality" (1989) The Organization for Economic Co-operation and Development (OECD) underlines that "there is no simple prescription of the ingredients necessary to achieve high quality in education; many factors interact – students and their backgrounds, staff and their skills, schools and their structure and ethos, curricula and social expectations' (OECD, 1989, p.27).

The quality of the school performance can be analyzed from multiple perspectives:

- The quality of the processes, which take place in the school. In order to align these processes to the specific quality standards, the preoccupation for quality improving should be reflected down to the level of the data management tools and of the evaluation and classification instruments, used by the organization in the processes of managing the available resources.
- The quality of the education services and their adequacy level to the demands of the beneficiaries;
- The quality of the organization, together with everything that defines it: the organizational culture, management style, the strategies, the structure and resources.

A quality assurance system designed for the educational sector to be efficient proves its efficiency through its effects and impacts on the provided education services, the obtained results and the school community as a whole, while surpassing its aim of being a simple quality handle in the hands of the specific employees involved in the quality assurance process.

As an example of good practice, *Finland* defined its quality assurance system through its legislative framework, designed strategically by the Ministry of Education and Culture by abolishing the school and textbook inspections, while introducing new principles like to govern based on support funding and information, and to attract and stimulate the volunteering in the education process (Finish National Board of Education, 2015). As the decentralization was one of the main objectives, the schools have their autonomy for the curriculum projection and the process of organizing the education services. At the macro level, there is an important collaboration between the Ministry of Education and Culture and the Finish National Council for Education in the area of elaborating the policies for the development of the education, the content of the education, the didactic methodology for the primary and secondary school level, together with the adult life learning level.

In regards to the general competencies aimed to be acquired by the pupils, the national objectives for the educational field are being attributed to the Government, while the Ministry of Education and Culture has the role to configure the strategic development strategies for the national education. "The national quality assurance system in vocational education and training (VET) comprises of The National Council for Vocational Education and Training, the quality management for the VET providers, the external evaluation of the VET, using the some mechanism accepted by the social partners. Each school can choose its own quality management and self-evaluation process. In Finland the education process is decentralized and the school inspection bodies do not exist" (Iosifescu, 2013, p.46). The evaluation endeavor of the schools is determined by applying the fundamental strategy based on the principles such as: transparency, trust, innovation, excellence, active and open attitude towards quality.

In *France*, the institutional roles are well established for the educational sector and attributed to the Ministry of Education. Its competencies are to elaborate the education policies, to create the specific frameworks for some learning programs, to configure the educational and VET strategies. After 1980, the French centralized system allows the local authorities to get involved in the administration of the schools, which represents an important step forward.  The VET and the career development of the teachers is managed by the Superior Council for Evaluation, while the school evaluation institutions are responsible for monitoring and controlling the quality demarche of the education. Some important initiatives taken for improvement while generating a positive impact in the educational sector are: the introduction of the quality standards on a large scale, the appointment of some specialized organizations with an important role in providing statistics and data analysis, together with organizing the evaluation endeavors for the educational and quality policies.

The quality assurance process is a preoccupation at the national and regional level. The Quality Charta was elaborated, which foresees the quality of the VET services, the support for the apprentices and trainees to access jobs in accordance with the competencies acquired. The conclusion about the French quality policy is that it promotes the results-oriented culture, together with the conformation to the quality standards.

In *Austria*, the schools having a limited autonomy can implement a local curriculum adapted to the specific needs of the community and carry out a partial decentralized financial management. We can talk about a comprehensive quality management in the Austrian schools, while the key role in the quality assurance system is played by the General Directorate for education and VET. This institution elaborated the Qualitäts Initiative BerufsBildung (QIBB) - The VET Quality Initiative – which ensures the implementation of the General European Framework for quality assurance in education and VET.

"The promoted quality management system has its scope of protecting and developing systematically the quality in the education and in the administrative services. The system is implemented at the level of the pedagogical activities (for example the initiation, the support and the facility of the education processes, which are relevant from the social point of view) and at the level of administrative activities (for example the creation, the assurance and the development of the

specific conditions and the framework needed for the teaching-learning). The process of development follows a continuous circle with the four stages: the planning, the implementation, the monitoring and the evaluation, and at the end the evaluation and the reporting." (Iosifescu S., 2013, p. 43)

An important action needs to be highlighted – the continuous preoccupation to train and develop profesionally the managers, as it has a tremendous impact on the quality assurance process, beginning with the initial training and up the VET training. Hence a new profile is configured and it has the right competencies for the quality assurance process.

As the French model, the Austrian one is results orientated. Yearly, each school prepares and publishes a report on the quality of the provided education services.

It is very interesting to observe that besides the national standards which ensure the framework for the external evaluation, each school organizes its internal evaluation, while having the freedom to choose its domains to be evaluated. The results are used to elaborate a plan which will state the strategic objectives to be followed. Thus the school will have the right to be supported in the creation of the development strategies by the superior forum of management, which will conduct a managerial and performance analysis of the school.

The implication of all the actors involved in the quality assurance process is pointed out, which translates into the internalization of the quality culture while the implementation of the quality assurance together with the evaluation do not receive the title of bureaucracy components. A common practice in the internal evaluation is *the colleague evaluation*, through which the external evaluators will support the development of the school and the organizational quality, using their suggestions. This type of evaluation contributes to the experience and professional exchange among the human resources involved.

In *Romania*, the national quality assurance system for the educational sector is framed by the National Education Law together with some specific laws for the quality assurance and management processes. The institution responsible for developing the national strategies, policies and trends for the educational sector is the Ministry of Education.  The actors involved in quality assurance process are the Ministry of Education ensuring the legislative support, the Romanian Agency for Quality Assurance on the Pre-university  Education, responsible for elaborating the quality standards and the external evaluation of the schools, which materializes in giving/revoking their authorization or accreditation, when fulfilling/not fulfilling the quality standards. The Agency plays a strategic role in iniatating, (re)designing and submitting to the Ministry of Education for promulgation the specific methodologies, evaluation indicators and quality standards.  The dissemination of good practices and the publishing of annual reports and statistics, system analysis, manuals and brochures on the quality assurance in education, are important tasks performed by the Agency with a high impact on the quality assurance process and the quality and education policy.

At the school level the quality assurance process is being handled by the Commission for the Quality Evaluation and Assurance. Its main task is to manage the internal evaluation of the school, in accordance with the quality standards designed by the Agency. On the annual basis, after finalizing the evaluation the Commission publishes the results in a report and frames the improvement plans

for the areas where it is needed.  In the evaluation process the Commission uses specific tools, instruments and procedures personalized according to the background and the community of the school.


### Section 4: Conclusions

The quality assurance system can fulfill its objectives only if it disposes the necessary instruments, tools and legal framework. We learned that the European experiences in terms of quality in the education services field are diverse from many points of view, even though they have the same basis - the legal framework, which sets up the national quality assurance systems.

Given the national, regional and local background, we consider that the diversity of the systems is defined by the differences which occur in: the set of instruments used and personalized by the school (in some systems enforced by the law), the level of centralization or decentralization of the educational system, the extent to which the local community is engaged in the everyday life of the school, the type of evaluation used in the process of the quality assurance ( internal, external, per-review), the levels to which the quality culture is being promoted and internalized, the usage of the quality evaluation models which are pupil-centered, to enforce the actions to improve the quality while impacting the results.

From the exemplified experiences of the countries, we learned that the human resources plays the most important role in the quality assurance system and they have a special treatment in terms of training and development in the quality culture for building and consolidating the school as an organization based on quality. From the four countries, we believe Finland is more steps forward as the other countries, as they found and promoted a very important pricinple in the educational field, which is the volunteering. Why choosing and involvingvolunteers in the education? The answer is very simple, because whe an individual is able to perform and carry out and activity without being payed, that means his/her dedication to the cause is highest. The person will give everything and make the biggest effort to get the best results and this kind of human resources should be engaged in the education, for the achieving the highest level of quality in regards to the beneficiaries needs and the pupils' acquisition of competencies. Also the French system has a very important component - the instution which manages the carrer, the traning and the development of the human resources from the educational field.

Finish authorities understood that quality in education means funding and financial resources, therefore the quality assurance system has its basis on attracting financial resources to enhance the potential and to improve the quality of the education services to the level of excellence.

Only investing into the education and health of the nation, a country can prepare its people for a better tomorrow, to ensure that its labor market follows the right trend and its potentially talented people are transformed into future qualified employees and entrepreneurs who will be prepared to carry on the future of a nation.

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# A QUALITATIVE EVALUATION ON SOP HRD 2007-2013 IN ROMANIA – FOCUS-GROUP STUDY

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**Abstract:** *This paper seeks to underline the main problems faced in implementing and using European Union (EU) funds in Romania within the Sectoral Operational Programme Human Resources Development (SOP HRD) during the first programing period 2007-2013. The problems and barriers revealed were identified during a focus-group for the second interim evaluation of SOPHRD, organized by the Management Authority of this program in Nord-Vest region, in November 2014. The focus-group represents a small part of the entire process of evaluating the programme for the development of human resources during its implementation, with the purpose of finding beneficiaries opinions about the efficiency, effectiveness and relevance of interventions financed through SOP HRD. Beliefs, personal recommendations from the participants are presented in order to improve the use of European funds for development of human resources (in particular) and the use of structural instruments (in general). These results and solutions can be efficiently used during the next financial period 2014-2020 to create the framework for every priority axis and key areas of intervention, during the implementation of new projects and within the entire process that these funds require in order to successfully use the structural instruments to catch up with developed countries. Moreover, some of the problems identified can be found in other operational programmes and therefore, this research can be useful for every one that wants to use this kind of financing or has a project of this kind in implementation, without taking into account the European funding source. Besides the qualitative approach given by focus-group research method, this paper is going to present a general approach over SOP HRD in Romania during 2007-2013, from a quantitative perspective (number of projects submitted, approved, contracted, payment rate, absorption rate). Moreover solutions linked to knowledge management practices will be proposed to overcome identified problems in using structural and cohesion funds. We choose to focus our attention on knowledge management solutions due to the fact that we can say that we are now living in a knowledge age. This research is important by connecting knowledge management/knowledge sharing practices with the management of European funds.*

**Key words:** European funds; knowledge sharing; projects; human resources

**JEL Classification:** D83; M00; O22

## 1. Introduction

Structural and cohesion funds are offered to member states by European Union in order to reduce the disparities that exist between regions, for a period of 7 years (e.g. 2007-2013, 2014-2020).

Each Member State of EU elaborated a document that sets out the way these structural instruments are going to be used, so called the National Strategic Reference Framework

(NSRF). For Romania, this document reveals how it "intends to build the sustainable development objectives and equality of opportunity to fight social exclusion into the strategies. The NSRF explains the implementation arrangements for the Structural Instruments." (Government of Romania, 2007) The implementation of the NSRF 2007-2013 was made through seven operational programmes during 2007-2013. In order to reduce the development gap that exists compared to other member states, Romania established five thematic priorities, as followed:

- development of basic infrastructure in line with European standards
- increasing the long-term competitiveness of the Romanian economy
- development and more efficient use of Romania's human capital
- building an effective administrative capacity
- promoting balanced territorial development.

With this research we are trying to explore the implementation of the projects financed through structural and cohesion funds, by evaluating from another perspective this topic. We are going to analyze from the beneficiary's point of view if the objectives sets for the SOPHRD were relevant for the identified needs, if the whole process that this funds involve is efficient, what problems were encountered and based on their perception to propose innovative solutions to improve the program. The results of this article can be useful for the next programming period, 2014-2020, to ensure a better program design, implementation, utilization and absorption of these funds, based on the existed experience.

An evaluation of these funds/programs is important and necessary, because it gives information that can lead to improvement, information linked to the way the program was created, implemented, the degree in which the objectives were reached and mostly because through evaluation we can discover new perspectives.

Today's society focuses on the importance of knowledge in every action we take, whether it is about work or personal lives. This is due to the fact that knowledge is a resource that is unlikely to drain. Moreover, it becomes more and more valuable as it is more often used. Therefore, knowledge is capable to offer advantages in every field, if it is well managed. Besides the importance of knowledge in today's society, we should find ways to deal with it in terms of creating and sharing. We can notice that research towards using knowledge management when working with European projects is undertaken. In 2014 the book entitled "Knowledge Management – decisive factor in speeding up the absorption of EU funds" written by Octavian Serban was published. It highlights the importance of using knowledge management practices when dealing with EU funds to ensure a higher level of absorption: "Given that from total knowledge at the individual level, 80-90% is tacit knowledge, by using knowledge management tools and techniques a large part of this iceberg could come out at the surface" (Octavian Serban, 2014). Therefore, this paper starts from the assumption that sharing knowledge can lead to improving the entire process that European funds require, from writing a project, getting through evaluation with success, contracting, implementing the project phase till the projects ends. So, after underlying the barriers that beneficiaries faced within a SOPHRD funded project, recommendations linked to knowledge management practices are going to be proposed.

## 2. A Quick View over SOP HRD 2007-2013 in Romania

At national level, Romania received about 19.2 bn EUR to use in order to achieve the objectives established. Seven operational programmes were set and the financial allocation for each of them can be seen in Figure 1. As stated by the European Commission, "the European Social Fund (ESF) is the main financial instrument at EU level to invest in human capital." (European Commission, 2013). In Romania this instrument covers two operational programmes: Human Resource Development and Administrative Capacity Development, which amounts 19.2 % of the total allocation for the seventh programmes. From the total amount of funds through ESF, almost 95% are directed to the development of human resources, which underlines its importance.
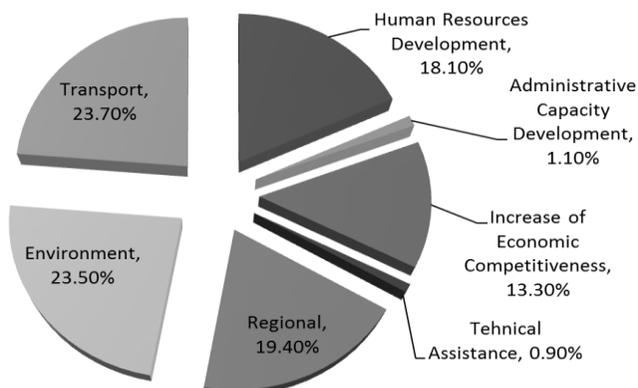


**Figure 1:** NSRF allocation by Operational Programmes
Source: NSRF 2007-2013, Romania

Table below reveals the situation of EU funds in Romania at 31 October 2014 regarding the financial allocation during 2007-2013.
We can see that we have a current absorption of 43.58% for all seven operational programmes, but we can identify differences between them. SOP HRD recorded the lowest rate of absorption, only 28.75%, way below the total absorption rate. Evaluating SOPHRD is a must to realize what went wrong within this program that lead in the end to this level of absorption. We can notice that we encountered problems in the first stages of accessing this financial aid, through the differences that exist between number of projects submitted, approved and contracted. As we can see in Tabel 1, at the end of October 2014 the situation within SOP HRD can be presented as followed: 15.412 projects submitted, 4.280 approved and only 3.655 projects contracted.  A lot of researchers focused their attention over this operational programme, trying to improve its implementation.

**Table 1:** Progress register by Operational Programmes

| Operational Programme | Financial allocation 2007-2013 (bn eur) | Submitted projects | Approved projects | Contracted projects | Internal payment to beneficiaries | Current absorption | Intermediate payment from European Commission |
|---|---|---|---|---|---|---|---|
| | | Number | Number | Number | % | % | % |
| Regional | 3.966 | 9.967 | 4.995 | 4.393 | 55,70 | 55,13 | 52,40 |
| Environment | 4.413 | 699 | 517 | 465 | 42,72 | 38,70 | 34,07 |
| Transport | 4.426 | 236 | 124 | 106 | 33,94 | 46,37 | 36,50 |
| Increase of Economic Competitiveness | 2.554 | 16.179 | 7.820 | 5.423 | 51,78 | 47,36 | 36,40 |
| Human Resources Development | 3.476 | 15.412 | 4.280 | 3.655 | 55,07 | 28,75 | 28,75 |
| Administrative Capacity Development | 208 | 1.371 | 456 | 456 | 68,07 | 70,09 | 68,99 |
| Technical Assistance | 170 | 189 | 166 | 158 | 40,74 | 42,94 | 42,94 |
| TOTAL | 19.21 | 44.053 | 18.358 | 14.656 | 47,07 | 43,58 | 38,22 |

Source: Absorption rate in October 2014, downloaded from www.fonduri-ue.ro at 22.11.2014

We can see that we have a current absorption of 43.58% for all seven operational programmes, but we can identify differences between them. SOP HRD recorded the lowest rate of absorption, only 28.75%, way below the total absorption rate. Evaluating SOPHRD is a must to realize what went wrong within this program that lead in the end to this level of absorption. We can notice that we encountered problems in the first stages of accessing this financial aid, through the differences that exist between number of projects submitted, approved and contracted. As we can see in Table 1, at the end of October 2014 the situation within SOP HRD can be presented as followed: 15.412 projects submitted, 4.280 approved and only 3.655 projects contracted.

The first interim evaluation took place in 2010 and concluded that SOPHRD is influenced by some internal and external aspects, among which we mention the following: the weak communication between the interested parts, lack of experience, delays in processing the existing solicitations, an excessive control, high level of bureaucracy, economic crisis, political instability at national level, "suspicion culture" and others. (Management Authority of SOP HRD, 2011). At national level, research was made in this field and in the end some deficiencies/problems in implementing SOPHRD were underlined: the identification and submission phase seems to be difficult because of the changes that occurs in the program specifications, the evaluation phase takes too much, a lack of transparency was identified, lack of experience, excessive bureaucracy, the impossibility of covering the co-financing required (Pautu et al., 2013). The foundation of these problems can be linked to the lack of knowledge in the practices of project management (Urluiescu, 2013), the Managing Authority "lack of experience in implementing these programmes and the inability of forecasting and planning of programmes according to the method of project management" (Pautu et al., 2013). Most of these problems in implementing projects financed through European funds can be classified as external, therefore an effective

management is required within the authorities that deal with this funding possibilities, some forecasting must be made ever since the project planning stage. Internally, to overcome the inability to co-finance the project, the beneficiaries must identify some opportunities of financing from other sources. (Muresan, 2012)

Project management practices have a high importance when talking about the use of structural and cohesion funds due to the fact that these funds are received through specific projects, that one's need to undertake in order to receive funding. After the whole process of evaluating and contracting is done, the beneficiaries are facing the challenge of implementing the projects. European projects "have special characteristics that differentiate them from other projects" (Nistor et al., 2012)

## 3. Methodology

The purpose of this study is to identify the barriers that beneficiaries of EU funds (within SOP HRD) faced in the period 2007-2013 and to propose solutions that can overcome this problems in the future, focusing to the importance of knowledge management practices.

This study uses a qualitative research method, called focus-group, in order to evaluate SOPHRD in Romania, to identify the beliefs, opinions of the participants in the EU funds accession for the development of human resources. This research is based on a focus-group organized by the Management Authority of SOP HRD in Nord-west region, held at Cluj-Napoca in November 2014, where I had the opportunity to participate.

The participants at focus-group were selected based on their experience and knowledge related to structural and cohesion funds. They were involved in implementing a project financed through SOP HRD in the period of reference, their contribution being seen as very valuable for the purpose of this gathering: the second interim evaluation on SOP HRD. Some of them were involved in more than one project, some held a position in a project that ended and others are involved in projects that are in the implementation stage, which highlights the heterogeneity of the group. At focus-group took part 17 participants. In the table below we present the structure of the sample, by revealing the participant's position within the projects and the name/type of the beneficiaries.

**Table 2:** Focus-group participants

| No | Position within SOPHRD project | Beneficiary |
|---|---|---|
| 1 | Expert | Expert training Ltd., Cluj-Napoca |
| 2 | Assistant Manager | Babes-Bolyai University, Cluj Napoca |
| 3 | Project manager | Babes-Bolyai University, Cluj Napoca |
| 4 | Expert | Foundation FIPCM Spiru Haret, Maramures |
| 5 | Expert | Freedom Railways Syndicate, Cluj Napoca |
| 6 | Expert | Iuliu Haţieganu University of Medicine and Pharmacy, Cluj Napoca |
| 7 | Financial officer | Iuliu Haţieganu University of Medicine and Pharmacy , Cluj Napoca |
| 8 | Project manager | Teacher Training (CCD), Cluj Napoca |
| 9 | Technic expert | Resource Center for Roma Communities Foundation, NGO, Cluj Napoca |
| 10 | Project Manager | Computer center (part of the Brinel group), Cluj Napoca |
| 11 | Financial officer | Foundation FIPCM Spiru Haret, Maramures |
| 12 | Financial officer | School Inspectorate, Cluj Napoca |
| 13 | Project manager | School Inspectorate, Cluj Napoca |
| 14 | Assistant manager | Babes-Bolyai University, Cluj Napoca |
| 15 | Expert | Babes-Bolyai University, Cluj Napoca |
| 16 | Project manager | Romanian National Opera, Cluj Napoca |

| 17 | Assistant manager | School Inspectorate, Cluj Napoca |

Source: Authors' contribution

From the table above we can see that this focus group gathered a mixed group of participants, in terms of position held and the type of beneficiary in a project financed through SOP HRD. We are talking about people that had an important role in the process of writing, implementation of European project. This is why we consider that the results of this focus-group are relevant for this study and can reveal problems and barriers in working with EU funds that are valid to all projects financed through SOP HRD in this programing period.

## 4. Evaluating SOP HRD 2007-2013 from a Qualitative Perspective

The focus-group involved the use of questions grouped by certain topics of interest regarding SOPHRD funds during the period 2007-2013. The following topics were covered: general themes, the process of selection, contracting, implementing the projects, results sustainability. Linked to these subjects, the discussion was directed toward finding the factors that caused problems in the use of these funds.

All the participants agreed that SOPHRD responds to the needs of potential beneficiaries or target group at national and regional level. The need of development in the direction stipulated by SOPHRD was identified, the importance of these funds being undeniable. But, unfortunately, it seems that we have drawbacks when it comes to managing these funds, creating a functional framework for their use. But an improvement was noticed by the participants in the second part of the evaluated period, mostly related to writing the implementation guides. This situation might be caused due to our country lack of experience in using European funds.

Throughout SOPHRD a lot of delays were register. Beneficiaries were faced with a long period of time between writing a project, getting approval and signing the agreement. Focus-group participants pointed out that this led to losing budget, partners and target group. Moreover, the need that project addressed to can change in time, the team members or partners might not be available when the project can be put in practice. The main reason identified for this situation is the lack of communication between the authorities and beneficiaries and the amount of work that evaluation officers have to deal with. There is not enough human resource to cope with so many applications during the stipulated time. The beneficiaries are discouraged, they have to rewrite parts of the initial project and this is why some approved projects don't reach the contracting stage.

When it comes to project implementation, the main factors that lead to delays were mentioned by the participants. The authorities (management authority of SOPHRD, intermediate bodies) have problems in respecting the deadlines set for document evaluation, verification, especially when it comes to dealing with requests for refunds. At national level, a beneficiary must submit a refund request at least once at three mounts. Because the authorities can't handle all the requests, more than one unverified request is submitted in the same project. This leads to lack of financial support for implementing the project according to the established plan. Moreover, during implementation changes appear in interpreting the approved instructions, the project team has to make efforts to understand new rules imposed, to make changes, to work harder. Besides this, some new rules require a retroactive application, which involves new challenges for project team. All in all, we can say that the rules are changing during the game.

Others problems register in projects financed through SOPHRD were highlighted during this focus-group, such as: there is no sustainability after project, no correlations between project results, electronic interface of SOPHRD does not work properly, the duties and responsibilities are increasing, while the payment for human resources decreases, the

authorities have an attitude that does not favor the collaboration, communication or the creation of a proper work environment, the guides, instructions are complicated, conducting monitoring/evaluating visits only after the project is done, an excessive bureaucracy that hinder proper progress of project activities, lack of communication between the interested parts.

During the focus-group, solutions were proposed:

- No important changes should be made after projects are submitted (linked to eligible activities, target group, budget)
- Reducing the periods for notifications and additional acts approval
- Monthly reunion between a beneficiary and the managing authority/intermediate bodies
- The existence of a project officer (monitoring officer) for the entire period of project implementation
- Submission of a refund request only after the last one was approved
- Reducing the need for physical evidence (every activity must be justify by a lot of supporting documents)
- Writing projects to use the results already obtained within previous projects.


## 5. Discussions and Conclusions

Nowadays European funds represent an important financial aid for its member state, especially for the countries that have a lower level of development, like Romania. Since 2007 we have the right to use structural and cohesion funds that are offered to EU member states for a period of 7 years.

Using a qualitative research method, focus-group, we were able to outline how SOP HRD worked during 2007-2013 in Romania. Opinions, beliefs, personal recommendations from the participants were presented in order to improve the use of European funds for development of human resources (in particular) and the use of structural instruments (in general).

We choose to focus our attention on knowledge management solutions due to the fact that we can say that we are now living in a knowledge age, underlined also through Lisbon 2000 Strategy and Europe 2020, by setting as priority the creation of a knowledge-based economy (http://www.mae.ro/node/19272). "If two decades ago, material resources held the supremacy, we are now facing a reversal of the scales of values, knowledge-based economy being seen as the economy of future."(Florescu, 2012)

Sharing knowledge is an important part of this entire process that KM involves, because it requires an exchange of knowledge "not only between different firms, but even more critically, within the firm" (Grant, 1996). A difficult part in this process is to find the person that has the knowledge you need and to be able to offer an efficient way for transferring it. (Davenport et al., 1998)

In the field of European funding, we must highlight the need of transferring knowledge not only in the same project, inside the team, but also within different projects and different beneficiaries. "Knowledge transfer within EU funded projects is essential to achieve sustainable development, increase productivity, innovation and competitiveness, creating new jobs and providing social progress support". (Ilies et al., 2012)

First of all, every person/authority/institutional body which get in contact with structural and cohesion funds and with the entire process that these instruments require, has to be aware of the importance of knowledge owned. Moreover, this knowledge must be seen as an asset that can develop only through its transfer to others. In this way, new knowledge is created. In this context, "it is essential to have knowledge in this field for those who want to receive EU funding, especially since this kind of projects is based on rigorous, specific concepts and terminology." (Nistor et al., 2013). Sharing knowledge can lead to improving

the entire process that European funds require, from writing a project, getting through evaluation with success, getting the funding, implementing the project, ending the project. We must not keep the knowledge we achieved for ourselves, we must share it to ensure that others can use European funds efficiently. The outcome will have impact at national level, gaining the wanted social and economic cohesion.

Lack of communication seems to be an important barrier in absorbing European funds for development of human resources. Sharing knowledge is closely linked to communication, socialization. Knowing this, we must emphasis on creating a proper environment for exchanging information, news, opinions, beliefs, experiences, knowledge linked to EU funded projects. In Romania, we can find websites, pages on social networks that focus on presenting information related to structural and cohesion funds, guides, legislative rules, reports, providing latest news, somehow keeping the interested parts in touch with the funds progress and opportunities available (e.g. http://www.fonduri-ue.ro, http://www.fonduri-structurale.ro, www.finantare.ro). These websites are offering sections for questions and responses, blogs. Even so, the beneficiaries are complaining especially for the lack of communication when it comes to project implementation. Direct meetings between the beneficiaries and management authorities of these funds, conferences held with EU funds beneficiaries, actions that favor face to face communications are a must for improving the management of structural instruments. Furthermore a dedicated website or forum can be useful for communicating between involved bodies, but we sure need a friendly-user interface, to be easy to find what we need without losing too much time, searching more websites that can provide what we are searching for. Functions as live chat, ability to contact a specific person, a well functioned search engine within the website can lead to a better understanding with each other. There should be a single website, at national level, well known to everybody to ensure this communication function. In addition, information, data linked to outcomes already achieved within other projects should be made available for everybody. In this way, future projects will be able to use them and to ensure their sustainability. The majority of projects financed under SOPHRD have their own website to promote the project, results, activities, target group, but you must know the website or at least the project to be able to identify and to find out information related to it.

Writing and implementing a project financed through structural and cohesion fund, SOPHRD in particular, require a lot of time invested, involvement for the entire period, team work, skills of communication, all in all a lot of intellectual, physical and financial effort. Thus lead to reluctance from potential beneficiaries to submit a request for obtaining this kind of financial aid, this can have a negative effect over the next financial period.

Training courses, available for everyone, should be held, the authorities must give consultancy, advices, a help-desk available by phone, to be able to respond at requests as fast as possible can be seen as possible solutions to overcome identified problems. We need to hire human resources with experience and expertise linked to this topic. Plus, management authority and intermediate bodies must make a forecast of upcoming activities, to ensure that they have sufficient staff to deal with possible requests. Also, they should have a back-up, for example a consultancy firm that can help them if needed. In this way problems regarded the delays in processing applications can be removed.

These results and solutions can be efficiently used during the next financial period 2014-2020 to create the framework for every priority axis and key areas of intervention, during the implementation of new projects and within the entire process that these funds require in order to successfully use the structural instruments to catch up with developed countries. Moreover, some of the problems identified can be found in other operational programmes and therefore, this research can be useful for every one that wants to use this kind of financing or has a project of this kind in implementation, without taking into account the European funding source.

This research has its limitations, given in the first place by the instrument used, that brings together a small number of beneficiaries and from a specific region, Nord-West in our case. Secondly, the findings cover the entire financial period, 2007-2013, which does not give us the possibility to evaluate the progress register during these seven years. Even so, relevant results were found due to the fact that we had participants that can reveal from their experience throughout the entire period, some of them still having ongoing applications or their projects ended years ago. Moreover, we emphasized out study on Sectoral Operational Programme Human Resources Development (SOP HRD), that register the lower absorption rate. Comparative studies between operational programmes can be relevant in order to identify good examples that can be transposed to improve the national use of these structural instruments. Nevertheless, this research is important by connecting knowledge management/knowledge sharing practices with the management of European funds.

## 6. Acknowledgement

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# RECOVERY STRATEGIES FOR SERVICE FAILURES

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Abstract:  Internationally, services represent the most important sector of the economy both in terms of economic performance and labor utilization. Becoming essential  part of today society, they are considered the basis of a healthy economy, fact that has increased the importance of services and the research in the field.T hrough this work we intend to address a number of issues that require clarification and are relevant to this sector. Increased competition and customers higher demands lead to difficulties in service delivery, so managers of service organizations must work hard towards developing appropiate strategies that can lead to improved customers satisfaction and to increased efficiency. Because it is inevitably for service providers to face situations in which service failure occurs and their customers are not satisfied, understanding the nature of service failures and the ways in which an organization can recover after a failure are considered key factors for achieving customer satisfaction. Since the data suggests that over 50% of customers who are facing problems are not satisfied with the way they were resolved, we consider appropriate to approach this topic. We intend to draw attention to service providers to the importance of proper management of service failure. They can find ways to recover from these failures and even to turn them into some very pleasant situations that can contribute to customer loyalty. This paper begins by highlighting the various features specific to services which contribute to the increased chances of failure, it continues by presenting the concepts of service failure and service recovery and then it presents some links that exist between service recovery and other aspects of providing services that are demonstrated in the literature. We hope that this paper will significantly contribute to the knowledge and development of the sector under analysis and will highlight some practices that will lead to improved customer satisfaction and organizational performance.

**Key words:** Recovery strategies, service failures, customers perception

**JEL classification**: M100

## Introduction

*„Companies may not be able to prevent all problems but they can learn to recover from them" (Hart et al., 1990).*
Internationally, services represent the most important sector of the economy both in terms of economic performance and labor utilization. Becoming essential  part of today society, they are considered the basis of a healthy economy, fact that has increased the importance of services and the research in the field. Through this work we intend to address a number of issues that require clarification and relevant to the sector.  Increased competition and customers higher demands lead to difficulties in service delivery, so managers of service organizations must work hard towards developing appropiate strategies that can lead to improved customers satisfaction and to increased efficiency. Because it is inevitably for service providers to face situations in which service failure occurs and their customers are not satisfied, understanding the nature of service failures and the ways in which an organization can recover after a failure are considered key factors for achieving customer satisfaction. Since the data suggests that over 50% of

customers who are facing problems are not satisfied with the way they were resolved, we consider appropriate to approach this topic. We intend to draw attention to service providers to the importance of proper management of service failure. They can find ways to recover from these failures and even to turn them into some very pleasant situations that contribute to customer loyalty. This paper begins by highlighting the various features specific to services which contribute to the increased chances of failure, it continues by presenting the concepts of service failure and service recovery and then it presents some links that exist between service recovery and other aspects of providing services that are demonstrated in the literature.

Services industry involves a high degree of interaction between employees and customers, which contributes to an increase number of opportunities for various errors to occur. The experince of purchasing a service is greatly influenced by the actions of frontline staff whose experience and commitment may be limited or differ from one time to another of the day or of the week. Inseparability of production and consumption is another factor contributing to increased opportunities for an error to occur because corrective measures generally cannot be taken without the client knowing. The problem is compounded by the fact that there is an increased competition in most service industries and so, the client has several options to choose from. So, in a market with intense competition and numerous chances of failure, we consider recovery strategies of great importance for the future of organizations in this field.

Service quality is a topic of great interest for researchers, so that numerous studies have been conducted to identify factors that influence the quality of service and the effect on customer perceptions (Parasuraman et al., 1988; Zeithaml, 1988). The importance of customer perception it is emphasized by the fact that studies have shown that attracting new costumers is much more expensive than keeping the old costumers. Customer dissatisfaction adversely affect loyalty and the reputation of the company. A major cause of dissatisfaction is solving problems in an unsatisfactory manner. Approximately 50% of customers who are facing problems are not satisfied with the recovery strategy applied (Levesque & McDougall, 2000).


**SERVICE FAILURE**

Berry & Parasuraman (1992) argue that organizations should consider failure as an opportunity to create satisfied customers and not as a problem and that a proper attitude leading to correct these situations will positively influence the long-term performance. In a study made by Johnston (1995) on services companies, it was found that most pleasantly surprising situations were the result of error correction actions.

Service failure relates to events that can lead to unsatisfactory experiences from the point of view of the customer (Bitner et al., 1990). Chung & Hoffman (1998) mention three categories of failures in the case of services:

- Service system failure (eg unavailable services, unfriendly customer treatment policy etc.)
- Customer requests failure (eg employees are not able to meet individual customer needs)
- Failure on slow and inappropriate actions of employees (eg rudeness, wrong delivery, incorrect billing, etc.)

Lewis & McCann (2004) mention the following consequences of service failure dissatisfaction:

- low costumer confidence
- transmission of negative information to other potential customers

- loss of customers
- loss of revenues
- increased costs
- decrease in employee morale and performance.


**SERVICE RECOVERY**

Service recovery consists in the actions taken to deal with the possibility of failure (Zeithaml and Bitner, 2000), actions meant to solve problems, to change negative attitudes of customers and to keep them (Miller et al., 2000: 38). These situations occur when quality of service is poor, but the client does not make any complaint (Smith et al., 1999: 359).


In the quality model he proposed, Grönroos (1988) emphasize the beneficial effect of service recovery by saying that it affects customers behavior and that they can anticipate that the service provider shall immediately take the necessary measures to remedy unpleasant situation and find a new acceptable solution. So, if management gives importance of correcting these service failures, customers will have a better perception of the organization.

Service failure and recovery can be understood as a trade in which the costumer suffers a loss due to the failure and the company is trying to offer him a gain to compensate his loss (Smith et al., 1999, Levesque & McDougall, 2000). The evaluation of failure and how the problem was solved depends on the type and amount of resources lost and won during the exchange.

Recovery strategies have many advantages, Lewis & McCann (2004) listing the following:
- improve customer perception of service quality and organization
- lead to a positive communication from customers
- contribute to improved customer satisfaction
- customer loyalty and the impact on profits are positively affected

The way customers evaluate corrective actions of the organization is based generally on the principle of justice (Lewis & McCann, 2004 Tax et al., 1998, Smith et al., 1999) and includes three dimensions:
- distributive justice: perceived fairness of outcomes (eg compensation, repair or replacement)
- interactional justice: perceived fairness related to how the client is treated (eg, apologising)
- procedural justice: the perceived fairness of the actions used to correct failure (eg, response speed, accessibility and flexibility of procedures, organizations policies )

In 1999, Boshoff proposes an instrument (RECOVSAT) designed to measure customer satisfaction according to specific elements of recovery after service failure. This tool includes six dimensions:
- Communication: refers to the manner in which employees address to customers who have a problem or a complaint
- Empowerment: refers to the resources that employees have access to and the decisions they are allowed to make.

- Feedback: refers to the fact that once the issue is resolved, the company provides information about the problem and what is being done to resolve it.
- Atonement: refers to the compensation that company is giving to the customer to make up for the problem created.
- Tangible elements: refers to the appearence of the employee, the equipment used and the environment in which these situations are handled.

Action taken by services organizations in response to certain unpleasant situations, contain a number of psychological factors and concrete efforts of which the literature reminds (Lewis & McCann, 2004).
- apology
- corective action
- empathy
-  compensation
- confirmation
- providing explanations
- providing exceptional treatments
- managerial intervention.

These actions can be used separately or combined. Even if apologising is better than not to do this, using only this method is relatively inefficient because customers expect to win something instead. This method can be used successfully only when problems occurred are minor.


## LINKING SERVICE RECOVERY WITH OTHER ASPECTS

Levesque and McDougall (2000) exemplifies various studies conducted to investigate the relative effects of apologising, compensation (25 % - 50% discount) and assistance (re-execution of the service). They found that apologising was the least effective strategy and customer loyalty was greatly enhanced when compensation and assistance have been added. In situations where the service was less important for the client, compensation was most effective, followed by assistance, while when the service was very important for customer, assistance was more effective than compensation.

In a study conducted by DeWitt & Brady (2003) it is demonstrated that developing relationships with customers improves the probability of recovery after a service failure, as customers are more forgiving with employees who have established a friendly relationship. Thus, adopting strategies that promote these relations can be an effective way to retain customers and to reduce their negative communication.

Another relationship that has been demonstrated (Kanousi, 2005) is the one between culture and customers expectations regarding the way organization handles service failures. The study showed that individualism is associated with higher expectations regarding empowerment and lower expectations regarding explanations. Masculinity is associated with high expectations on tangible elements and the need for explanations, and long-term orientation is related to the high expectations on tangible elements. Regarding the other two cultural dimensions, no correlation could be done.

Starting from the fact that different types of errors in the services sector are the source of customers negative emotions,Varela-Neira et al. (2010) indicate that age has a negative impact on customer emotions that arise after a dissatisfaction related to the service purchased.

Another analysis conducted by McColl-Kennedy et al. (2003) points out that women and men don't react in the same way to different aspects of the recovery pocess. Although both

women and men have expectations regarding the interest shown by employees to the problems, the study showed that the probability that women return was higher when there was a male provider than when it was a female . Another important aspect that was analyzed in this study refers to the fact that women prefer to be heard and to be involved in the correction of errors and men do not consider their participation as an important factor.

Thwaites & Williams (2006) and Robinson & Neeley (2011) stress the importance of empowerment and of  training employees for handling the situations in which customers are not satisfied. Having a good understanding of appropiate decision-makink approaches, employees can effectively use the necessary actions to correct service failures.

## Conclusions

Service firms have to face an increasing competition and higher demands from customers. Although efforts are made, mistakes and failures are unavoidable. Admitting that failures occure and establishing certain recovery strategies after these failures can bring considerable advantages. The most important is customer confidence in the organization and his belief that no matter what happens, the service provider shall immediately take the necessary measures to remedy that situation and to find a new  satisfactory solution.

To get the best response to these situations of service failure we consider appropriate to take into account all aspects involved in the service process that can influence the success of the recovery strategy.

## Future research

We intend to analyze these concepts in relation to a specific area, such as treatment and entertainment centers which is an area of great interest for our work. The relation between these concepts and other apects can also be tested for our chosen field. We consider appropiate for a better understanding to address these issues from the perspective of the customer and also of the manager who is in charge to handle this situation of service failure.

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# A NEW WASTE CLASSIFYING MODEL: HOW WASTE CLASSIFICATION CAN BECOME MORE OBJECTIVE?

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**Abstract:** *The waste management specialist must be able to identify and analyze waste generation sources and to propose proper solutions to prevent the waste generation and encourage the waste minimisation. In certain situations like implementing an integrated waste management sustem and configure the waste collection methods and capacities, practitioners can face the challenge to classify the generated waste. This will tend to be the more demanding as the literature does not provide a coherent system of criteria required for an objective waste classification process. The waste incineration will determine no doubt a different waste classification than waste composting or mechanical and biological treatment. In this case the main question is what are the proper classification criteria witch can be used to realise an objective waste classification? The article provide a short critical literature review of the existing waste classification criteria and suggests the conclusion that the literature can not provide unitary waste classification system which is unanimously accepted and assumed by ideologists and practitioners. There are various classification criteria and more interesting perspectives in the literature regarding the waste classification, but the most common criteria based on which specialists classify waste into several classes, categories and types are the generation source, physical and chemical features, aggregation state, origin or derivation, hazardous degree etc. The traditional classification criteria divided waste into various categories, subcategories and types; such an approach is a conjectural one because is inevitable that according to the context in which the waste classification is required the used criteria to differ significantly; hence the need to uniformizating the waste classification systems. For the first part of the article it has been used indirect observation research method by analyzing the literature and the various documents available in the virtual space, on the websites of certain international organizations involved in the wide and complex issue of waste management. The second part of the paper contains a proposal classification model with four main criteria in order to make waste classification a more objective process. The new classification model has the main role of transforming the traditional patterns of waste classification into an objective waste classification system and a second role of eliminating the strong contextuality of the actual waste classification models.*

**Keywords:** waste management, waste classification, waste classification models, waste classification criteria.

**JEL classification:** Q53.

## 1. Introduction

Waste classification has a special meaning for the design, planning, implementation and operation of an adequate waste management system. In spite of the underlined importance, the literature handles waste classification in a quite evasive manner; there are several approaches and isolated points of view related to the waste classification models and criteria, but most of them have a strong contextual nature.

It can certainly state that due to the physical and chemical composition heterogeneity of waste, due to the bio-chemical features, diversity of component elements and various level of recycling potential indicated by the materials found in the waste mass, the literature can not provide unitary waste classification system which is unanimously accepted and assumed by ideologists and practitioners. The attempt to identify a few criteria based on which to achieve the typological classification of waste is doomed to fail, especially due to the powerful contextual character of the action, due to its nature. We insist on the fact that regarded in general, waste must and can be classified according to a set of criteria.

The waste management specialist must be able to identify and analyze waste generation sources and to propose actual solutions to prevent and / or fight the generation of such waste. In certain situations, practitioners can face the challenge to classify the generated waste, which will be all the more demanding as the specialty literature does not provide a coherent system of criteria required for an objective waste classification system. The attempt to identify unitary criteria based on which to achieve the typological classification of waste shows a powerful contextual nature, determined by the conditions and specifics considered by the practitioners in the various situations they are faced with.

## 2. A critical literature review of the existing waste classification models

Official documents of various international organisations provide different waste classification models. In the European space, for example, wastes are classified according to the European Waste Catalogue. It contains more than 700 items grouped into waste types and subcategories within 16 categories. The catalogue does not provide a unitary perspective on waste classification, its role being to provide general support for considering an object / material / substance as waste or non-waste. We consider that this is the reason for which within the 16 waste classes, random classification of waste can be found according to several viewpoints: according to the threat degree of the included substances, according to the materials in the components thereof, according to the type of damaged products or goods found in the waste mass etc. Thus, in our opinion, the inventory of more than 700 waste types and categories, the encoding within a catalogue and the attempt to regulate an objective classification of waste in the European space is meant to equalize the identification procedures and methodologies regarding what is and what is not classified as waste and less to classify what is regarded as being part of the waste scope. On the other hand, in our opinion, there is a risk for any material / substance of the European Waste Catalogue to not be regarded as waste, in certain time and space conditions.

The Organization of Economic Cooperation and Development (O.E.C.D.) perspective related to the waste classification is similar to the one of the European Union. In the same manner, waste are classified in 16 classes presented in the already famous Table 1 (annex to the OECD Decision C(88)90, representing in fact 16 reasons due to which various goods, materials or substances become waste. As in the case of the European Waste Catalogue, we note that Table 1 actually provides a list allowing the consideration of a material as waste or non-waste and, as a result, it can be more likely used to define the concept of waste, than to classify it. But, unlike the European Union, O.E.C.D. has a more pragmatic perspective, based on the objectivity and systematization of various waste classes or categories.

The most interesting approach of the waste classification is without any doubt the one of the United Nations Environment Programme (U.N.E.P). The official documents of U.N.E.P. include a unitary classification of waste using four general criteria: origin, composition, toxicity and management (U.N.E.P., 2004). The 'origin' criterion considers the economic - social activities classified on the main economy sectors, from micro to macro level; according to this criterion, the generated waste cover a wide range of activities, from

domestic waste and garden waste within households to pesticide waste in agriculture, military equipment waste generated by the army, medical waste generated in hospitals and health institutes or nuclear waste generated by the power generation plants, etc. The 'composition' criteria considers the materials usually found in the waste mass structure and the waste is classified as plastic waste, glass waste, ashes and dust, textiles, metal waste, packaging waste, paper waste, food waste, wood waste etc. From the 'toxicity' viewpoint of the hazardous degree to the environment and human health, waste is classified into infectious waste, inert waste, poisonous waste, flammable waste, corrosive waste, radioactive waste, special waste etc. The criterion considering 'the manner in which the waste is managed', actually regards the succession of stages the waste goes through, from the moment it is generated until they are disposed of and which form the so-called 'life cycle of waste'; according to this criterion there are collected waste, transported waste, sorted waste, stored waste, recycled waste, composted waste, incinerated waste and landfilled waste.

The resourcefulness of the perspective provided by U.N.E.P. on the waste classification comes from the fact that new sub-criteria and waste sub-categories result from overlapping the main four typological classification criteria. For example, by associating the 'origin' and 'toxicity' criteria, it stands out that there can exist hazardous household waste, that is the waste generated on the level of households and which are relatively toxic for the environment, such as used batteries and accumulators, cathodic tubes which are TV components or refrigerating agent included in the refrigerating devices. That is why, in our opinion, the U.N.E.P. classification of waste is extremely effective from the viewpoint of waste type diversity, which can be identified by the independent approach of four essential waste classification criteria.

The waste classification provided by the Basel Convention puts a special emphasis on the threat degree of waste, which can be explained through the nature and subject of the convention - specific regulations for dangerous substances included in the waste management. According to the document, waste are classify into dangerous waste (waste from organic solvents, wood processing waste, medical waste, radioactive waste etc.), dangerous substances into waste streams (arsenic waste, cadmium waste, cyanide waste, phenols waste etc.) and waste requiring specific regulations (household waste, waste generated from the incineration process or individual composting within households etc.). We note that the classification system from the Basel Convention grants the main threat role to the waste and substances included in the mass thereof, according to this criterion and the waste and urban waste in general can be regarded as non-dangerous, but requiring specific regulations. We consider that such a classification underlines the fact that the dangerous nature of the waste must consider an increase attention to the toxicity degree of the substances found in the chemical composition of the waste. The conclusion is that the waste is first of all dangerous due to the toxicity of the substances included in them and then due to the large volume in which are generated and the critical manner in which they are managed.

The Environmental Protection Agency of the United States of America (U.S. E.P.A.) uses two major criteria for the waste classification; both are related to the elements witch can be found in waste streams: used materials and products (U.S. E.P.A., 2011). According to the type of waste materials, waste are classified into paper and cardboard waste, glass waste, metal waste, plastic waste, leather waste, textile waste, wood waste and others. From the used products point of view can exist waste generated by goods for long-term use (deteriorated electrical appliances, old furniture, used tires, etc.), waste generated from consumer goods (papers and magazines, bags, apparel and footwear etc.), waste generated by packaging (bottles, aluminum cans, cardboard boxes) and other waste (waste from courtyards and gardens, waste from food leftovers, anorganic waste etc.). We note that the classification system provided by the American agency is strongly oriented

towards the physical components of waste, which can indeed be regarded as either materials or goods or products. In our opinion, in spite of obvious limitations, such a waste classification approach surprises the diversity of the types of materials and products which can be recycled and capitalized. Thus, the waste classification perspective according to the contained materials and products provides the possibility to raise awareness on the enormous economic potential of waste, by waste materials recovery and damaged products and goods re-use or recycling.

An extremely interesting approach is found in the Environmental Association of Universities and Colleges point of view, a professional association including more than 280 universities and colleges from United Kingdom. The specialists here draw the attention on the fact that certain waste categories are not clearly defined and regulated, while other types of waste, such as dangerous waste, although clearly defined and strictly regulated from the legal point of view, are often interpreted in a wider sense. The association members consider that a correct classification of waste must take into consideration the inclusion or not in the waste management system. They basically suggest that one of the main criteria that must be used to classify waste is weather or not they are taken over and assimilated by the formal waste collection systems. According to this criterion, waste is controllable and non-controllable, but the control does not regard here the legal regulation, but the possibility to manage certain waste quantities outside the formal waste management system. Thus, we can consider that, in fact, the difference between the generated and collected waste is translated into uncontrollable waste, which are not assimilated and managed within the officially established and regulated formal collection system. Such a waste classification criteria draw the attention on the fact that there are waste quantities left outside the waste management system. This reflects the reduced capacity of waste collection systems or the insufficient accessibility of waste producers to the waste collection services.

The most frequent criteria used for the waste classification is the waste generation sources, the waste materials or the hazardous degree posed by the waste. Most classification models found in the official reports and statistics are based on the waste components, mainly used in the physical (reuse and recycling), biological (composting) and chemical processing of waste. That is why we consider that the typological waste classification into various categories, subcategories and types is a conjectural process. It seems inevitable that according to the context in which the waste classification is required, the used criteria differ significantly.

There are various classification criteria and more interesting perspectives in the literature regarding the waste classification. The most common criteria based on which specialists classify waste into several classes, categories and types are the generation source, physical - chemical features, aggregation state, origin or derivation, hazardous degree etc. Also, waste classification is approached considering the types of materials found in the waste structure, the size/dimension of component elements or from the valorification potential point of view. It is certain that the waste classification need comes from the diversity of components and materials generally making-up waste and it is proven by the multitude of models presented in the specialty literature.

Wastes are present in various states of aggregation: solid, liquid or gaseous, and in William's opinion (2005) can be generated within various processes, from agriculture activities up to the technological industry processes, commercial activities or household activities. William establishes the generation source as a typological classification criterion, just like Pichtel (2005) and Lemann (2008), the difference being that in case of the latter, the waste categories classified according to the origin criterion are much more detailed and varied. Pichtel (2005) considers that there can be municipal waste, dangerous waste, industrial waste, waste generated from medical activities, universal waste, construction and demolition waste, radioactive waste, waste generated by mining activities and

agriculture waste; about the same approach has Franchetti (2009) regarding the waste classification criteria.

Specialists such as Siegel, Robertson and Anderson (1990) or Uriarte (2008) classify waste according to the materials included in the components thereof, while Grisolia, Napoleoni and Tancredi (1995) use certain physical and chemical waste properties, such as stability, ductility and biodegradability as criteria for the typological classification of waste. In his Ph.D. thesis, Kolsch (1996) classifies waste according to the size of materials witch waste contains, while a group of researchers (Thomas et al, 1999) use criteria referencing to the bi- or three-dimensionality of waste components to classify waste. Among the numerous perspectives found in the literature, such as Dixon's and Langer's (2006), the most extensive one from the viewpoint of classifying waste according to their physical properties can be regarded as the most extensive one. The two authors classify waste according to several criteria, among which specific weight, size, shape etc.

One of the most interesting waste classification methods belongs to the specialists Landva and Clark (1990). In their opinion, waste is classified into two major categories: organic and anorganic, each of them divided into degradable and non-degradable. According to the classification system drafted by the two authors organic waste is classified into degradable and non-degradable, from viewpoint of resistance to external factors of polymers in the waste composition. Thus, degradable organic waste include polymers whose form and structure modifies in a relatively short time, under the environmental factors action, such as waste generated by leftovers, waste from parks and gardens, animal waste and any other materials contaminated by them. The organic non-degradable waste includes waste containing long-term stable polymers, such as paper, wood, textiles, leather, plastic, paint, oils, chemical products waste, etc., whose form and structure does not radically change under the action of external factors. The other category, the one of anorganic waste is also divided into degradable and non-degradable waste, but from the viewpoint of the physical - chemical properties and not from the perspective of bio-chemical properties. The specialists included metals in the category of degradable anorganic waste, which are more or less corrosive, while glass, ceramics, mineral oils, ashes, debris etc. were regarded as non-degradable anorganic waste. We consider that such a waste classification model is limited, in spite of the large inclusion area it reflects on the first view. The model proposed by Landva and Clark underlines bio-physical-chemical properties, such as the biodegradability and compressibility of waste components, but does not emphasize the energy potential represented by waste. Such a waste classification can be successfully used in the context of waste composting processes.


## 3. A new criteria system for waste classifying: how to transform the waste classification model in an objective one?

We regard as pertinent a waste classification model according to four essential criteria: the level which waste is generated on, the potential risk and hazardousness the waste poses for the environment and human health, the origin and waste generation source and the stability of waste components and materials.

An overview of the material flow used in economic activities indicates that waste is generated both on the production as well as on the consumption level. Thus, according to the level which wastes are generated on, waste can be either municipal or industrial. Municipal waste is represented by the waste generated due and in the context of services and goods consumption, while industrial waste is generated as a result of technological processes required for the manufacture and supply of goods and services to the consumers. Considered in the context of such a waste classification criterion, waste management must facilitate not only the fight against, but also the prevention of waste generation. Even though apparently the industrial waste management has a strong

preventive character and the municipal waste management has an important combative nature, this must not be translated into a limitation / restriction of waste management prevention measures during the entire resource / materials management flow into the economy. We consider that the importance of preventing and minimizing waste is absolute, no matter the waste category brought up or the extend of the impact thereof, and we argue this opinion through the fact that waste has a negative impact on the environment, not just due to their toxicity, but due to the enormous quantity which they are generated in.

The waste toxicity degree must be included in the waste classification criteria, because through their nature and structure, certain types of waste are more toxic / dangerous than others. The potential risk to the environment and health increases directly proportional to the level of toxicity of the components included in the generated and collected waste. Thus, from hazardous waste potential point of view it can exist hazardous waste, inert waste and semi-hazardous waste. Hazardous waste is represented by those types of waste with a strong negative impact on environmental factors, causing accentuated pollution. This category includes flammable, corrosive, reactive or toxic waste, representing a real contamination potential for the proximity. The opposite pole is represented by inert waste, which due to the physical and chemical features and properties does not pose a risk for the environment and human health, since they do not suffer transformation of shapes or structure, under the incidence of external factors. The typical examples of inert waste are glass, broken bottles, ceramic waste etc. Waste posing an average threat potential for the environment are regarded as semi-hazardous waste. This category can includes the waste which in theory poses a reduced risk of toxicity, which may increase as an effect of non-compliant management. The category of semi-hazardous waste includes waste which is not part of the hazardous waste category or inert waste category, such as waste with combustion potential or biodegradable waste.

The origin or waste generation source is another very important criterion according to which waste can be classified, and its relevance is justified by the fact that the waste properties and features are decisively influenced by the place and moment when waste were generated. According to the origin, waste can be classified in household waste, street waste, commercial waste, institutional waste, production waste and special waste. Any material, substances, objects, damaged goods etc. generated on household level as a result of individual or household activities are considered to be household waste. The same logic is followed for street, commercial and institutional waste. The production waste includes any type of waste generated as a result of related technological processes or as an effect of natural resources extraction and processing. Special waste refers to waste which due to their specific nature require special collection, recycling and treatment installations and which is usually collected from the generation source, through separate collection; the special waste category includes waste electric and electronic equipment, bulky waste, construction and demolition waste, waste generated within the health system etc.

Due to the fact that under the influence of external factors, waste can change its shape and structure, it can be considered that waste can be classify acording to the stability of components into biodegradable waste, waste with combustion potential and structurally stable waste. Biodegradable waste is not stable due to the temperature factor influence, which at a certain point triggers the organic fermentation process. Leftovers and organic waste of animal or vegetal nature are biodegradable waste suitable for composting. Waste with a combustion potential do not change form and shape by itself, but may suffer such transformations as an effect of external factors; even in this situation combustible waste is much more stable than biodegradable waste. Structurally stable wastes hardly change its shape and structure, even under the influence of external factors, since they are either biodegradable or subject to incineration process. The category of stable waste includes glass waste, metal waste, soil, sand, dust, ashes etc. If the first two waste categories can

not be directed towards specific facilities for the purpose of adequate treatment and recovery, the recycling possibilities for stable waste are limited.

## 4. Conclusion
The proposed waste classification criteria have the role of making the waste classification process more objective and set up as solution for eliminating the contextuality of waste classification. We consider that the four proposed criteria is a good start for providing an unitary and general classification model of all existing types of waste and underline the premises for understanding the essential importance of the waste classification in the context of designing and implementing an integrated waste management system. We also insist on the fact that in addition to the four generally proposed criteria, other criteria may exist, which are perfectly adjustable and usable in that context. The waste incineration will definitely determine a different waste classification than waste composting or mechanical and biological treatment, but the fact that there are a few objective criteria considered to be universally valid and applicable in any context related to the waste management issues is essential.

## 5. Acknowledgements

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# ROMANIAN YOUNG ENTREPRENEURS FEATURES: AN EMPIRICAL SURVEY

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**ABSTRACT:** *There are many studies linking entrepreneurship and economic development. For specialists and public decision makers, developing entrepreneurship seems to be an easy policy action, even though actions and results are rather debatable. Unfortunately the relevant literature is not so generous concerning youth entrepreneurship. Youth is one of the most vulnerable groups in society, especially in the current economic and demographic situation in European Union and worldwide. At the same time, youth is the period when most people engage in their first job, are gaining financial independence and are assuming new responsibilities and roles shaping their identity. With respect to this, starting their own business is a natural choice for many young people. When considering entrepreneurial potential of young Romanians, there is almost not any data available. This paper aims to disseminate the results of a survey focused on young entrepreneurs, designed to fill the gap in the literature about Romanian young entrepreneurs' features. The empirical study was divided in five parts: A. Personality of young entrepreneurs, highlighting the main features of behaviour and personality of young entrepreneurs. B. Professional background, focusing on young entrepreneurs' background and how it influences their interest and performance improvement. C. Risk and crisis acceptance, highlighting the ability of young entrepreneurs to deal with critical situations. D. Business and business environment, focusing on internal and environmental aspects of the business. E. Social - cultural attitude, highlighting the attitude of society (incentives and disincentives) to entrepreneurial initiatives of young people. This are excerpts of results from the first part, regarding personality of Romanian young entrepreneurs, concerning issues like level of independence, capacity for innovation, self-confidence, decision making process, level of persistence flexibility of young entrepreneurs, opportunities, energetic capability, social goals, entrepreneurial incentives or entrepreneurial determinants. In the end, we highlight the main characteristic of young entrepreneurs, as they occurred according to survey.*

**Keywords**: youth, entrepreneurship, Romanian young entrepreneurs

**JEL classification:** M10, L26, M13

## 1. Introduction

Entrepreneurship is a source of innovation and change, and therefore stimulates increased productivity and economic competitiveness (Ceptureanu, 2009). It is closely related to knowledge and flexibility, two factors that have gained a new significance as a source of competitiveness in an increasingly globalized economy. With changes in technology and increased global competition the hypothesis that by encouraging entrepreneurial spirit means encouraging the competitiveness of a country, it seems more valid today than ever (Ceptureanu, 2012). A contemporary perspective on entrepreneurship offers Vesper (Ceptureanu, 2012), which states that "the general area of entrepreneurship is defined in a superficial way as the creation of new businesses by individuals and small groups of individuals". The concept of entrepreneur means a person who carries out an activity that takes place for a long time and peaked in the last decades of the nineteenth century and

the first decades of the twentieth century in all countries developed world that have not suffered influence of communism. The entrepreneur is therefore one that establish**es** a business, who has entrepreneurial initiative, one that creates a private company, firm, small or medium sized organization, in order to achieve personal goals. Becoming the owner of a profitable business is certainly guarantee a high income, an enviable social status and esteem of others, but for many professionals, these are the first motivations of entrepreneurs (Ceptureanu, 2012).

Entrepreneurship occurs at significantly higher rates than at any time in the last 100 years (Gartner & Shane, 1995). From the research perspective, there are numerous studies investigating business start-up from both sides, supply and demand. The supply-side school concentrates on the characteristics of entrepreneurs. The demand -side school focuses on the environmental basis of organization formation. Many researchers try to identify personal characteristics distinguishing entrepreneurs and non-entrepreneurs (Bolton & Thompson, 2004; Shane, 2003; McClelland, 1961). As entrepreneurship has a significant contribution to the economy through creating jobs and income, it should be fostered and developed.

It is now widely accepted that there are many reasons to foster entrepreneurship among young people. While we do not agree that entrepreneurship is a 'mass' or wide-ranging solution which can solve economy and social problems, many specialists such as Curtain (Curtain, 2000) consider it has significant benefits.

Romania has 5.628.758 young individuals in 18-35 years old interval, according to the last national census. Unfortunately, not many decide to become an entrepreneur.

According to National Trade Register Office, for 2013-2014 period the situation of young entrepreneurs, by county and considering number of associates/shareholders for legal persons and proprietors/member for self-employed, sole proprietorships and sole partnerships, is the following:

## 2. Methodology

To get valid information regarding Romanian young entrepreneurs, we have designed a questionnaire following a common practice methodology: research design; the investigation; measurement variables; analysis, processing and interpretation of data; drawing conclusions.

a) Questionnaire. The questionnaire was structured to allow getting relevant information about young entrepreneurs and their profile. It met with the general rules of questionnaire theory regarding: presentation, sequencing of questions, the difficulty etc. The questions were divided into five thematic modules:

*A. Personality of young entrepreneurs*, with a total of 12 questions, highlighting the main features of behaviour and personality of young entrepreneurs.

*B. Professional background*, with a total of nine questions, focusing on young entrepreneurs' background and how it influences their interest and performance improvement.

| County | 2014 | | | 2013 | | | 2014 | | | 2013 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of active legal persons | Distribution of associates/shareholders according to age | | Number of active legal persons | Distribution of associates/shareholders according to age | | No. of active self-employed, sole proprietorships and sole partnerships | Distribution of proprietors/members according to age | | No. of active self-employed, sole proprietorships and sole partnerships | Distribution of proprietors/members according to age | |
| | | Less than 29 years old | 30-39 years old | | Less than 29 years old | 30-39 years old | | Less than 29 years old | 30-39 years old | | Less than 29 years old | 30-39 years old |
| Alba | 10.763 | 2.064 | 5.228 | 10.661 | 2.257 | 5.379 | 11.952 | 2.493 | 3.398 | 11.565 | 2.630 | 3.537 |
| Arad | 15.030 | 2.330 | 6.268 | 14.626 | 2.446 | 6.362 | 10.463 | 1.767 | 2.916 | 9.171 | 1.739 | 2.893 |
| Argeş | 21.132 | 3.322 | 8.714 | 19.666 | 3.431 | 8.677 | 11.047 | 1.760 | 3.256 | 9.985 | 1.796 | 3.234 |
| Bacău | 15.383 | 2.599 | 6.306 | 14.983 | 2.785 | 6.353 | 10.652 | 1.780 | 3.133 | 9.009 | 1.856 | 3.134 |
| Bihor | 25.104 | 4.150 | 10.811 | 24.480 | 4.299 | 11.274 | 14.749 | 3.111 | 4.652 | 13.516 | 3.044 | 4.555 |
| Bistriţa-Năsăud | 7.953 | 1.479 | 3.333 | 7.654 | 1.498 | 3.376 | 9.297 | 1.739 | 2.596 | 8.412 | 1.807 | 2.734 |
| Botoşani | 6.354 | 936 | 2.431 | 6.197 | 1.015 | 2.559 | 7.480 | 1.208 | 2.153 | 6.955 | 1.280 | 2.290 |
| Braşov | 24.826 | 3.413 | 10.955 | 23.952 | 3.570 | 10.946 | 9.885 | 1.512 | 3.066 | 8.916 | 1.494 | 2.862 |
| Brăila | 8.892 | 1.267 | 3.235 | 8.860 | 1.344 | 3.457 | 5.867 | 810 | 1.638 | 5.130 | 792 | 1.630 |
| Bucureşti | 181.861 | 30.086 | 86.240 | 174.328 | 31.359 | 86.268 | 31.705 | 4.690 | 10.858 | 27.871 | 4.447 | 9.911 |
| Buzău | 12.150 | 1.702 | 4.300 | 11.886 | 1.846 | 4.369 | 6.748 | 1.062 | 1.827 | 6.130 | 1.026 | 1.794 |
| Caraş-Severin | 7.277 | 1.316 | 2.945 | 7.279 | 1.394 | 3.090 | 5.380 | 911 | 1.515 | 4.843 | 948 | 1.527 |
| Călăraşi | 6.340 | 1.056 | 2.298 | 6.163 | 1.086 | 2.316 | 4.374 | 765 | 1.210 | 3.743 | 739 | 1.137 |
| Cluj | 38.779 | 7.208 | 18.021 | 36.315 | 6.903 | 17.458 | 17.880 | 3.173 | 5.549 | 16.281 | 3.045 | 5.186 |
| Constanţa | 30.740 | 5.734 | 13.602 | 29.759 | 5.974 | 13.476 | 11.119 | 1.741 | 3.019 | 10.038 | 1.749 | 3.020 |
| Covasna | 4.824 | 566 | 1.938 | 4.809 | 615 | 2.075 | 4.462 | 697 | 1.435 | 3.869 | 679 | 1.407 |
| Dâmboviţa | 10.244 | 1.755 | 4.413 | 9.990 | 1.815 | 4.480 | 10.265 | 2.018 | 3.185 | 8.671 | 2.056 | 3.167 |
| Dolj | 19.531 | 3.578 | 8.271 | 18.806 | 3.680 | 8.103 | 11.547 | 2.189 | 3.603 | 10.257 | 2.313 | 3.587 |
| Galaţi | 14.745 | 2.496 | 6.069 | 14.354 | 2.563 | 6.129 | 7.839 | 1.355 | 2.351 | 6.610 | 1.404 | 2.339 |
| Giurgiu | 6.628 | 1.386 | 2.379 | 6.370 | 1.388 | 2.353 | 2.924 | 549 | 759 | 2.671 | 532 | 781 |
| Gorj | 7.768 | 1.402 | 3.010 | 7.615 | 1.462 | 3.067 | 6.722 | 1.501 | 2.166 | 6.460 | 1.589 | 2.237 |
| Harghita | 8.959 | 1.040 | 4.071 | 9.027 | 1.140 | 4.388 | 9.323 | 1.510 | 3.266 | 7.958 | 1.563 | 3.373 |
| Hunedoara | 13.214 | 2.265 | 4.865 | 12.847 | 2.368 | 4.996 | 8.575 | 1.292 | 2.230 | 7.804 | 1.353 | 2.183 |
| Ialomiţa | 5.148 | 913 | 1.796 | 5.033 | 960 | 1.819 | 3.909 | 629 | 1.069 | 3.433 | 628 | 1.082 |
| Iaşi | 22.968 | 4.561 | 10.835 | 21.929 | 4.824 | 10.851 | 15.966 | 3.359 | 5.149 | 13.690 | 3.443 | 5.158 |
| Ilfov | 26.457 | 5.175 | 13.091 | 24.324 | 5.033 | 12.509 | 5.597 | 929 | 2.111 | 4.638 | 865 | 1.817 |
| Maramureş | 14.024 | 2.374 | 6.018 | 13.511 | 2.404 | 5.998 | 12.745 | 2.569 | 3.791 | 11.045 | 2.573 | 3.709 |
| Mehedinţi | 5.201 | 800 | 1.884 | 4.992 | 884 | 1.889 | 7.146 | 1.279 | 2.159 | 7.024 | 1.424 | 2.244 |
| Mureş | 16.314 | 2.452 | 6.947 | 15.622 | 2.513 | 6.966 | 10.279 | 1.564 | 2.962 | 8.996 | 1.518 | 2.848 |
| Neamţ | 11.253 | 1.699 | 4.304 | 10.921 | 1.737 | 4.318 | 8.343 | 1.269 | 2.228 | 7.302 | 1.318 | 2.204 |
| Olt | 9.306 | 1.553 | 3.691 | 8.885 | 1.603 | 3.588 | 7.616 | 1.318 | 2.365 | 6.903 | 1.396 | 2.404 |
| Prahova | 23.574 | 3.674 | 9.626 | 23.087 | 3.896 | 9.890 | 13.174 | 2.193 | 3.749 | 11.648 | 2.166 | 3.547 |
| Satu Mare | 9.515 | 1.626 | 3.995 | 9.188 | 1.674 | 4.086 | 7.576 | 1.291 | 2.316 | 6.805 | 1.337 | 2.414 |
| Sălaj | 5.779 | 1.047 | 2.378 | 5.619 | 1.076 | 2.426 | 6.405 | 1.481 | 1.969 | 5.562 | 1.442 | 1.904 |
| Sibiu | 14.384 | 1.934 | 6.034 | 13.089 | 1.980 | 6.128 | 8.805 | 1.379 | 2.803 | 7.686 | 1.411 | 2.647 |
| Suceava | 13.743 | 2.455 | 5.715 | 13.235 | 2.471 | 5.670 | 10.650 | 2.136 | 3.201 | 8.819 | 2.193 | 3.239 |
| Teleorman | 8.077 | 1.379 | 3.147 | 7.916 | 1.482 | 3.170 | 6.417 | 1.087 | 1.843 | 5.350 | 1.125 | 1.916 |
| Timiş | 34.688 | 5.556 | 15.671 | 33.368 | 5.723 | 15.655 | 11.759 | 1.916 | 3.660 | 10.361 | 1.869 | 3.413 |
| Tulcea | 6.074 | 978 | 2.260 | 5.924 | 1.018 | 2.316 | 4.795 | 894 | 1.421 | 4.465 | 919 | 1.467 |
| Vaslui | 5.895 | 956 | 2.186 | 5.746 | 1.002 | 2.131 | 6.933 | 1.210 | 2.003 | 5.925 | 1.217 | 1.997 |
| Vâlcea | 9.093 | 1.532 | 3.703 | 8.868 | 1.533 | 3.754 | 7.585 | 1.280 | 2.156 | 6.922 | 1.296 | 2.230 |
| Vrancea | 7.709 | 1.098 | 2.772 | 7.374 | 1.098 | 2.784 | 6.149 | 1.020 | 1.662 | 5.720 | 1.054 | 1.601 |

*C. Risk and crisis acceptance*, with a number of 6 questions, highlighting the ability of young entrepreneurs to deal with critical situations.

*D. Business and business environment*, with a total of 16 questions, focusing on internal and environmental aspects of the business.

*E. Social - cultural attitude*, which includes five questions, highlighting the attitude of society (incentives and disincentives) to entrepreneurial initiatives of young people.

b) The sample. The analysis was made on a sample of 84 SMEs - micro, small and medium - ran by young entrepreneurs, both women and men, belonging to age groups 18-35 years. The subjects were randomly chosen, according to three criteria: 1) have to be young entrepreneurs (18-25 years old); 2) has to own a young business (no more than 3 years since establishment); 3) has to be willing to participate in the survey.

According to age, 2% of the interviewed entrepreneurs has 18-20 years old, 24% were aged 21-25 years while 26% has 26-30 years. The highest percentage, namely 48%, belongs to 31-35 years old entrepreneurs.
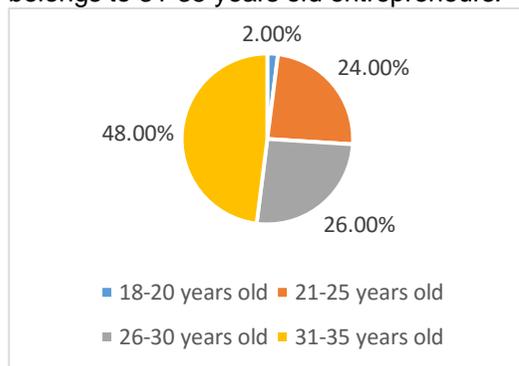


**Figure 1:** Sample according to age
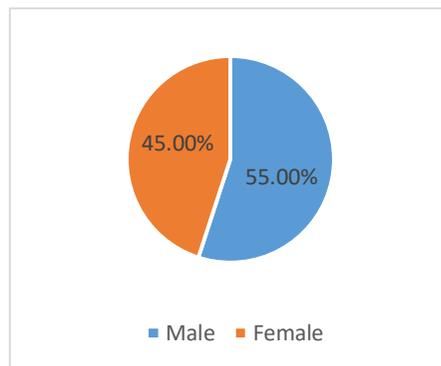


**Figure 2:** Sample according to gender

According to gender, 45% of surveyed entrepreneurs are women and 55% men. Although not hold a majority share, women still occupy a large proportion, which means that, in recent years, they are increasingly involved in business.

Considering young SME size, micro companies represent 62% of all SMEs surveyed, small businesses account for 36% and medium sized companies only 2%. This classification was made according to the number of employees declared in the questionnaire, namely: 1-9 employees for micro, 10-49 employees for small and 50-249 employees for large companies.
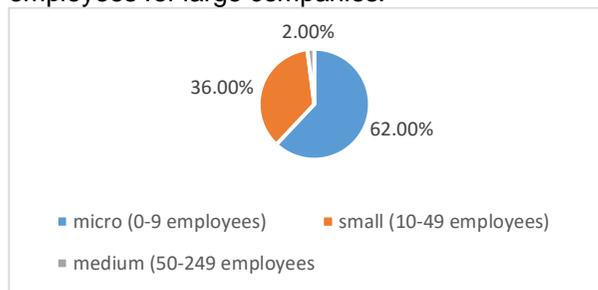


**Figure 3:** Sample according to size of young SMEs
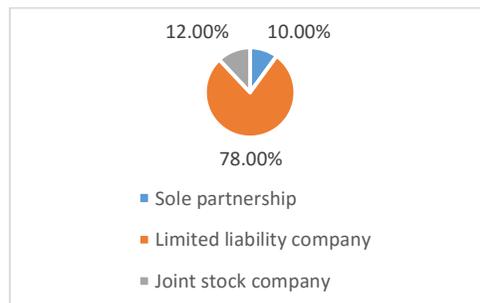


**Figure 4:** Sample according to legal form of young SMEs

Regarding legal form, 78% of companies surveyed are limited liability companies, 12% are joint stock companies and 10% are self-employed, sole proprietorships or sole partnerships. It can be said that the limited liability legal form is preferred by young entrepreneurs, is also the most comfortable for them, because it is more flexible than other

types of companies and more appropriate for a single owner or a small number of members. Considering activity, the structure of the investigated companies is: 25% of companies are operating in services, 29,76% in retail, 10,71% in tourism, 16,67% are operating in industry, 9,52% are active in agriculture, the rest in construction and transportation. We have considered the main activity, and many of the companies surveyed include more fields.
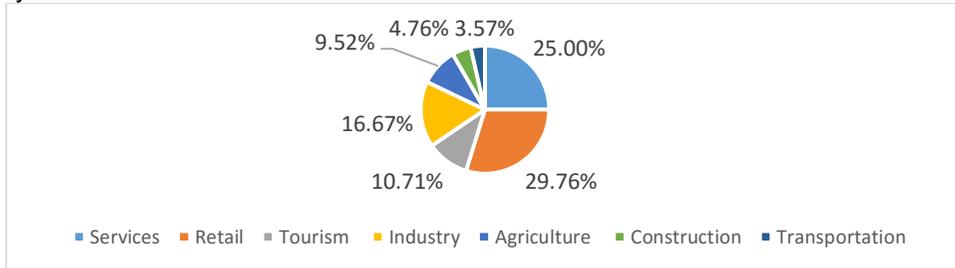


**Figure 5:** Sample according to main activity of young SMEs

## 3. Results

### A. Personality of young entrepreneurs

The first part of the research targeted the personality of young entrepreneurs.

Regarding their level of independence, 54% of respondents stated that they always do not like to depend on others, 31% of them generally do not like to depend on others, 10% do not mind too much if they depend on other people, while 5% stated they prefer to depend on others. It is encouraging and normal that the majority of young entrepreneurs prefer to be independent, as this is reflected in their own business. Independence makes entrepreneurs more responsible and motivated to succeed. This must be coupled with the relative low experience of young entrepreneurs. On the one hand it is efficient to be independent in running your own business, while in the other hand as a young entrepreneur have to compensate lack of experience by trusting other people.
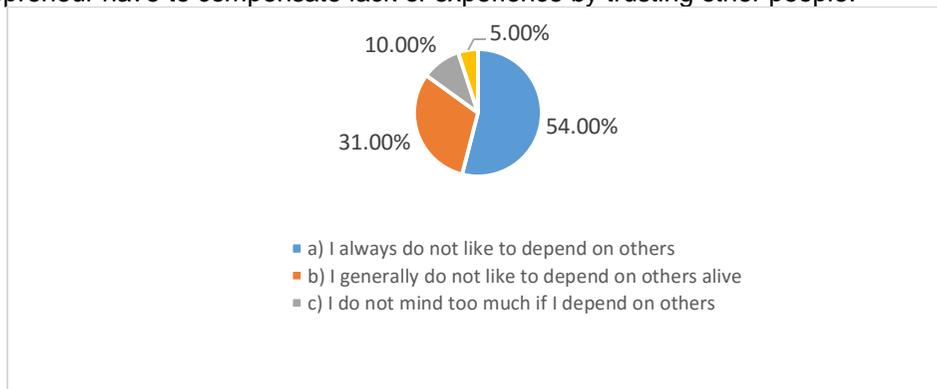


**Figure 6:** Level of independence

Regarding the innovative capacity of young entrepreneurs, 60% of them stated that they follow consistently to introduce new ideas, 24% generally accept new ideas, 14% do not bother to introduce new ideas only if they have to and only 2% prefer things to remain as they are. Typically, it is absolutely normal that young people are more creative, and more attracted to new things, and these features are intended to be present in the business. According to the survey, the percentage of young entrepreneurs who introduce new ideas is large enough to be confident that innovation is a constant of their business. Of course,

we must corroborate their answer to this question with the sample characteristics, where most of young SMEs investigated were from services or commerce, where innovation is less costly and has greater impact.
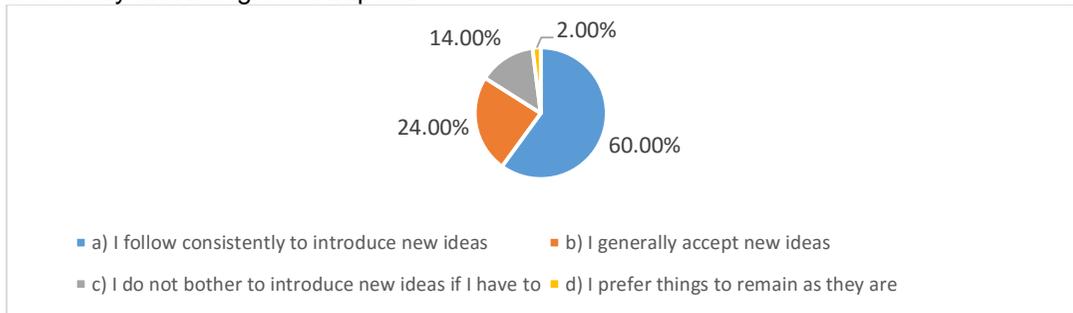


**Figure 7:** Capacity for innovation

In connection with self-confidence possessed by young entrepreneurs, we have learned that 43% of respondents always have strong self-confidence, 36% of them are generally self-confident, 19% of young entrepreneurs sometimes seek the advice of others and only 2% of them always seek the advice of others when they take action. We consider this to be a positive thing, a fairly large proportion (79%) of young entrepreneurs feeling confident in their own forces. They do not depend on others, are not influenced by external factors. Self-confidence is an important issue for any entrepreneurs, being a characteristic cited by many specialists as one hallmark of an entrepreneur.
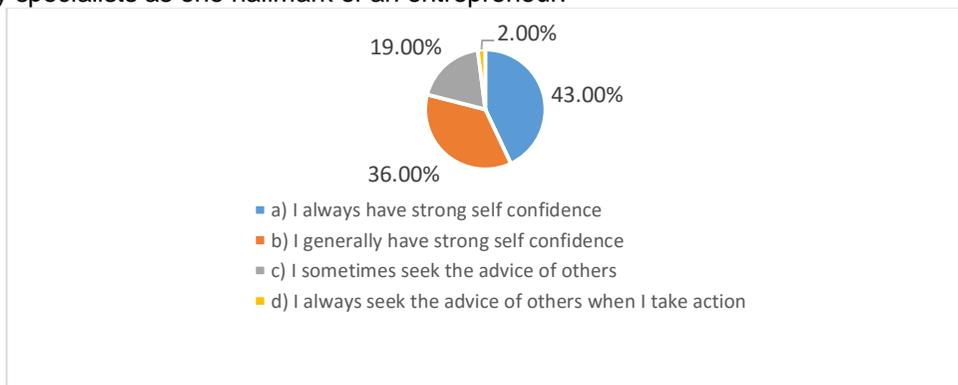


**Figure 8:** Self confidence

Regarding the speed of decision making, only 12% of respondents answered that young entrepreneurs make decision very easy, without spending much time, 24% take relatively easy decisions and more than half of the respondents (55%) think very carefully before taking a decision. 7% of them make decisions relatively hard, spending a lot to think about consequences while 2% are usually undecided and recognize that it is difficult to make decisions. Quite a lot of interviewed young entrepreneurs evaluate their options well before making decisions, which means either that they are not sufficiently committed and confident, or they are not willing to take some risks. It is also possible to consider their relative lack of expertise and experience, the uncertain business environment and the current economic situation.
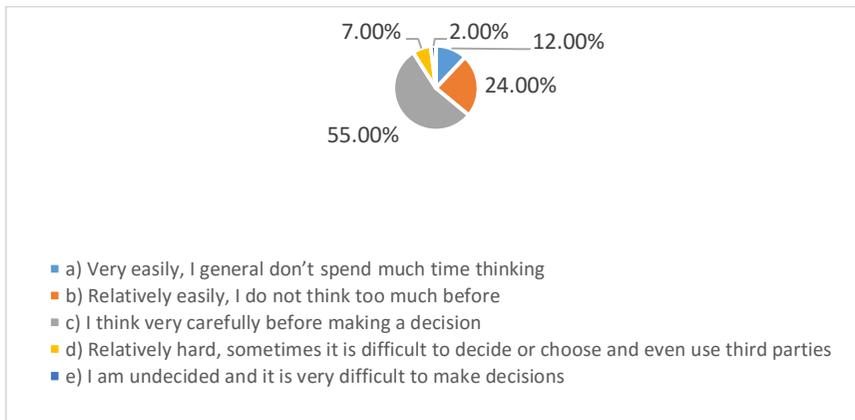
**Figure 9:** Decision making process

Regarding young entrepreneurs' degree of persistence, 36% of interviewed entrepreneurs expressed their ambition in asserting that when they intend to do something, nothing can stop them, 42% usually finish what they started, while 17% of them are going to start many things at once and find difficult to bring them all to an end. 5% of entrepreneurs give up if things if it does not go as planned. It should be noted that in business you have to be persistent to achieve your goals or get significant results, and for young entrepreneurs interviewed, almost a quarter of them – an important percentage - are not characterized by persistence.
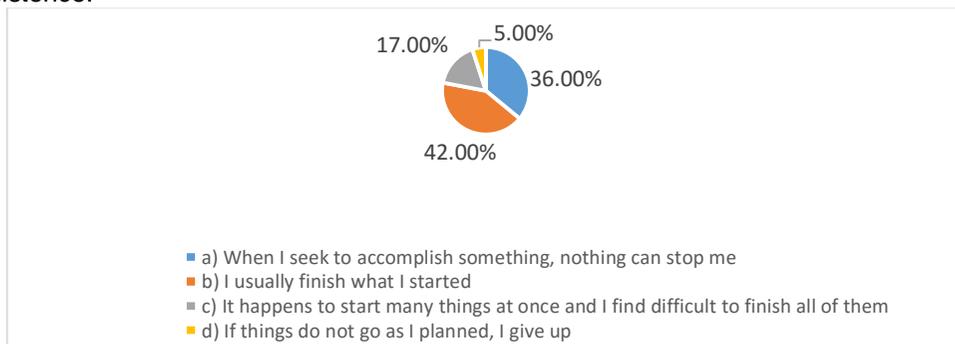


**Figure 10:** Level of persistence

Regarding the young entrepreneurs ease in identifying opportunities, only 26% of respondents have a great sense of identify new opportunities, 50% generally identify them when they arise, while 19% of them admit that they do not have flair in referral opportunities, and 5% have no sense at all. The percentage of those who observe very easy new opportunities is quite small, which means that other times they do not have a sense of attention to detail and the opportunities or do not have sufficient experience in the business and are not familiarize to capitalize on them.
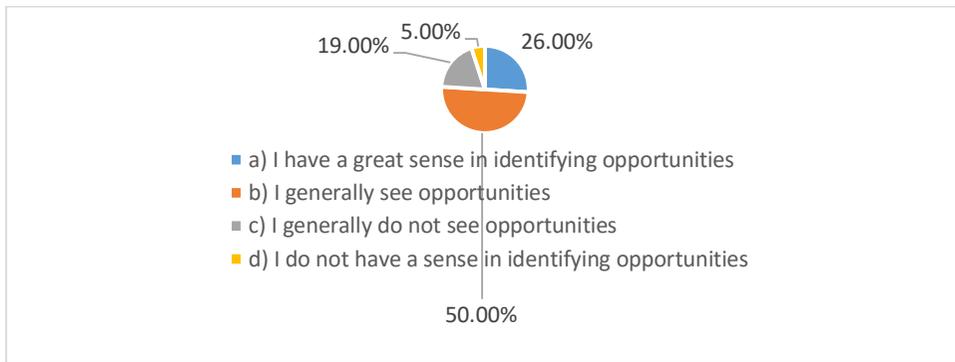
**Figure 11:** Opportunities

In relation to their energetic potential, 24% of young entrepreneurs say they do not ever feel tired, 45% feel well most of the time, and 31% generally feel pretty good at work. It is good that mainly young entrepreneurs surveyed felt no fatigue caused by running their business, but of course this depends on the time each of them spends at work and the degree of involvement in the company.
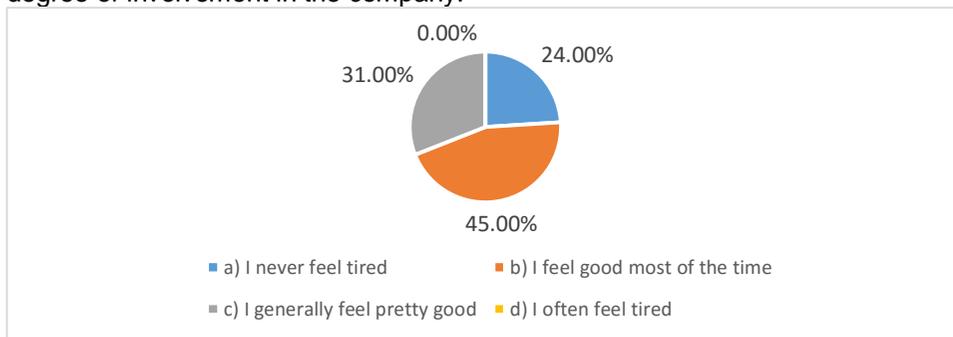


**Figure 12:** Energetic capability

Regarding their entrepreneurial incentives, young entrepreneurs said they are primarily motivated by a substantial gain, followed by expressing their own personalities and solving family problems important. Among the last places are the materialization of an idea, improvement of skills and positive impact on the environment or social contributions. On this question, respondents could choose more choices and therefore the sum is not 100 percent. We consider that positioning substantial income and solving family problems as the two most important incentives to become entrepreneur has to do with desire to achieve financial independence and live in their own income, but also with a poorer financial background of the young entrepreneurs.
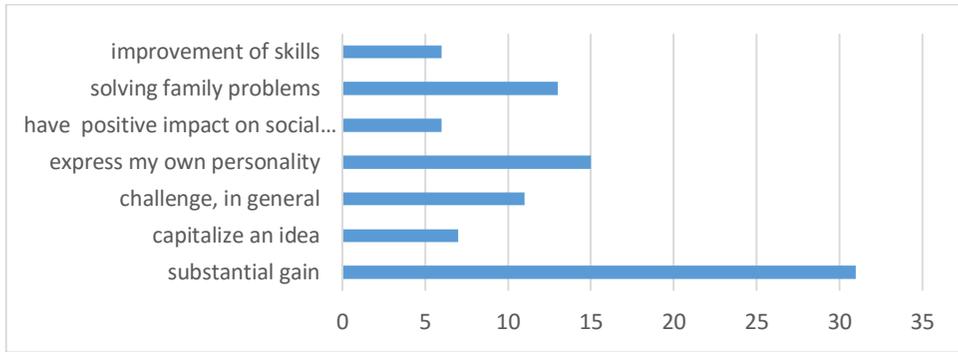
**Figure 13:** Entrepreneurial incentives

Regarding the factors that have led the young entrepreneurs to start their own business the first ranked is additional income, the desire to be your own boss and material independence, followed at a medium level of capitalizing on experience, linking job / business and passion / hobby, fulfilling ideas / visions and new challenges. On the last places ranks proximity, and unemployment. On this question, respondents could choose more choice and therefore could not achieve the exact percentage, but a classification. As in the previous question, related to desires that animates most in starting a business, and here we find, among determinants, first, additional income, which leads us to consider that money are one of the most important value of young entrepreneurs.
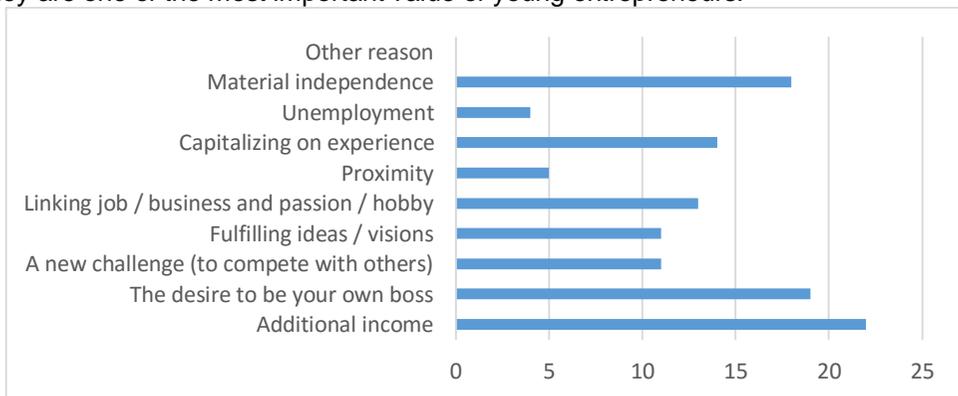


**Figure 14:** Entrepreneurial determinants

## 4. Conclusions

The survey allowed us to identify some key features of Romanian young entrepreneurs:

- Likes to not depend on others
- Follow consistently to introduce new ideas
- Has a strong self confidence
- Usually ends what started
- While not always need advice, accept them sometimes
- Generally notices new opportunities
- Seek independence as a social objective
- His main incentive is to obtain a substantial gain
- The factor that led to start his own business is the extra income
- Consider he is everything in the company, and the company cannot develop without him

- Consider the most important opportunities increased domestic sales, the assimilation of new products and the use of new technologies
- For him, competition is a real challenge
- In the last year, the business has operated at the same parameters
- Consider the main difficulties in business activity: low domestic demand; hiring, training and retaining staff; increasing salary costs, excessive taxation and poor quality of infrastructure
- He focused innovation within the company to develop new products, and new approaches to management and marketing

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- Consider the most important elements to an employee: experience, expertise in the field, general expertise and sense of responsibility
- Dedicate between 1-5 days for employee training
- Participated in at least 2 courses of training and specialization
- Participated in at least 2 fairs
- He is less or little scared of the current economic crisis
- Likes to risk, and to get results as
- Accept uncertainty as something natural in business
- He is not demotivated by failure
- Is able to improvise when situation calls for it
- Is able to focus in stressful situations and act rationally
- Partially willing to assume the risks in starting any business
- Is able to take his own initiative, responsibility and act accordingly without anyone to ask for

- Concerning IT&C, use most phone and computers
- Use the Internet most often in the company for electronic payment transactions
- Has plans for future small investment
- Consider that his business will have an upward trend in the future
- In terms of economic circumstances have had other possibilities for financial support, but preferred to start a business
- Consider social and cultural environment deterrent to youth entrepreneurship
- Parents and family are those who have a key influence on starting a business
- The biggest fear in starting a business were the financial risks, access to finance and corruption
- The area where the real difficulties encountered most was on business support and infrastructure
- Education and educational institutions have positively influenced his career
- Educational support or business establishment phase consists of specialized courses and consultancy
- Is using counselling in accounting, marketing and management

## Acknowledgements

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# "HEALING" THE ROMANIAN HEALTH CARE SYSTEM THROUGH THE TOTAL QUALITY MANAGEMENT METHOD

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**Abstract:** *A country without a solid sanitary system is a loss both for patients and for employees who work in medical institutions. On the one hand, Romania is privileged to have well trained doctors as well as competent medical staff, who are always willing to help a patient in need; on the other side, Romania has also a poor health care system, that damages not only the clinics and hospitals, but also the desire of both patients and doctors to be treated and work in Romania.*
*However, a change is imposed: assuring an efficient and well organized sanitary system, which will lead to more satisfied employees and in the end, to increased patient's satisfaction.*
*During times, an innovative method, a philosophy, was able to help and change industries in need, providing them with tools for perfecting their operating system, motivating the employees and concentrating on customer's needs.*
*Nowadays, this method is used with success and covers a large area of industries, including the sanitary industry. European hospitals have used this method in order to rearrange, from the quality's point of view, their departments and keep their customers and employees satisfied with the sanitary institution.*
*Total Quality Management is a method that has the ability to convert the health care system, and to cover all "gaps" formed for several years. Starting with correcting as much as possible all the issues found in the health care system, will lead to the top and most important objective: focusing on patient and assuring him a significant level of satisfaction.*
*The applicability of this method made is possible also for Romanian hospitals. Since our health care system is confronting daily with issues that affect the patients (some issues being even deadly), a change in the way the quality is perceived, is suitable for our hospitals and clinics.*

**Keywords:** hospitals; quality management; patient; internal quality; external quality.

**JEL classification:** I11; I15; I19.

## 1. INTRODUCTION

When referring to Romanian health care system, there are 2 kinds of reactions: on the one side, people revile the system, and on the other side, people prefer not to talk about it.
What is the main cause that determined these improper reactions and do we have a solution to reorganize people's thoughts?
Well, unfortunately, the Romanian health care system faces several deficiencies. From the long waiting time in front of the cabinets, to expensive medical procedures and old medical equipment, these all represent a huge gap in a European medical system.
In comparison with countries like France, Italy, Spain, Germany, Austria, etc., Romanian medical system is cheaper, but the conditions and "adventures" that a patient has to pass

to get better, could made people think twice and chose to treat themselves in another European medical system.

Therefore, there must be a way in which our medical system could improve, and satisfy alike the medical staff and the patients.

Romania has a lot of high rank physicians, who learned and practiced in foreign countries and even so, they chose to return in Romania, to apply their knowledge in order to help the Romanian patients.

For the moment, one thing is for sure: we do have good physicians and specialists, we do have plenty of suffering patients and we do have a consistent number of clinics and hospitals. Summarizing that, all we need is a management that could gather the subjects together, and helping each one of them. Otherwise, patients will continue to blame the doctors for every imperfection that occurs and the discontent state will continue without any change.

An option to "heal" our hospitals is the Total Quality Management (TQM) method. This article aims to present the benefits and advantages of implementing TQM in Romanian hospitals.

The success of every industry is determined by the way the clients perceive the quality of the product or service for which he paid a certain amount of money. The consumer perception is the one that will determine the customer's future will to consume services from a certain industry. Among several industries that use quality management in Romania, there is also the sanitary industry, a place where quality should occupy a significant level. In Romania's hospitals, the appreciation of quality is determined by the patient. Every hospital must sustain an activity concentrated on patients' needs, on satisfying these needs and even overcome them.

Along with the patients' benefits, come also the hospital's benefits, like increasing profit, increasing the share of satisfied clients, reducing costs, etc.


## 2. WHAT IS TOTAL QUALITY MANAGEMENT?

The quality control through statistical methods appears at the beginning of the XX century, initiated by Shewart and continued by Deming and Juran, consisting in eliminating components that do not match standards.

The quality assurance represents the process that has as an objective to eliminate mistakes and to prevent defects. The concept initiated by Philip Crosby, stated that the quality of a product must be guaranteed by a system that is capable of assuring quality, and shows how the production process must take place through elaborate procedures through so called ISO Standard 9000.

The first concept of assuring the quality, was initially put into practice in Japan, and was named "Total Quality Management", showing the supervision of quality inside an organization.

In any enterprise, no matter its dimensions, the quality of products and services has always been a valuable element, which assured a good functionality for the organization.

Gradually, this idea started to become a national interest concept.

Nowadays, Total quality management can be considered a set of managerial practices, a policy, met in an organization, meant to permanently assure the clients' demands. This method is focused, especially on processes like measure and control. If this system is correctly implemented, it can reduce the maintenance costs, can grow the enterprise's performance and can increase the number of satisfied clients.

For a proper operation of this method, there are 7 important principles that can be distinguished:

  1. The quality can and must be controlled ;

2. Processes, not people, are the problem ;
3. You always have to find solutions, before you treat the "symptoms" ;
4. Every employee must be responsible for quality ;
5. The process of quality improvement must be continually made ;
6. The quality must be measurable ;
7. Quality must be perceived as a long term investment.

Once these principles are accomplished, the implementation of this method could be easily made.

## 2.1. TOTAL QUALITY MANAGEMENT APPLIED IN HEALTH CARE SYSTEM

The method "Total Quality Management" applied in a hospital represents a philosophy that must involve every medical staff in a continual effort, in order to improve quality and achieve patient's satisfaction.

Basically, the concept of "quality" in health care system represents the ability of a hospital/clinic/medical institution to meet and exceed patient's expectations.

A Romanian hospital could deserve the term of "quality hospital" if it succeeds in meeting patient's expectations like:

- Modern equipment
- Quality medical service
- Well trained medical staff
- Good conditions (nice and clean hospital rooms)
- Respectful nurses
- No wasted time, etc.

The implementation of this system supposes a change in every employee's attitude, a completely changing mentality, starting with the top manager, until the last executant. Also, this implementation lasts a certain period of time, because of distrust of some people in the power of change.

In Romania's health care system, unfortunately, there are constant dissatisfactions that affect not only a hospital, but also the patients and the image of the entire society.

Generally, in the health care system, the concept of quality has 2 main components: content and delivery. The content quality refers to the medical outcome achieved, describing the technical component of medical system, while the delivery quality refers to an individual customer's interaction with a specific health care system.

## 2.1.1. OBJECTIVES OF THE TOTAL QUALITY MANAGEMENT PHILOSOPHY APPLIED IN ROMANIAN HEALTH CARE SYSTEM

1. Focus on customer (patient) →identify and meet as much as possible the patient's needs.

For example, the main needs that have to be accomplished are related to: elimination of the waste of time/movement/financial resources, assuring the right treatment and medicines, help the patient in order for him to get all the necessary information regarding his disease, assuring him comfort and clean conditions, etc.

2. Continuous improvement →continuous learning as well as problem solving

Example: 20 years ago, in Romania, the Faculty of Medicine was forming 2 different specialties: one of them named "family doctor" and the other "pediatric family doctor". Today, these 2 specialties remained unchanged. The first one, treats only general medicine for adults, while the second one, only general medicine for children.

The issue nowadays lies in the fact that even though the 2 specialties are one different domain, each of them treats both adults and children. For example, the family doctor treats

also adults and children, and the pediatric family doctor treats also adults. This happens in today's state clinics, even if those doctors do not owe a competence for both domain (adults and children).

Continuous improvement could help these two specialties become one, or coexist. For that, family doctors could be trained how to treat the children's prophylaxis, while the pediatric family doctors could be trained the adults' prophylaxis.

3. Quality at the source→it represents an important concept that signifies the fact that doctors and nurses should be focused on the activities of a process in order for them to identify where good or bad quality is created.

Example: Every year, thousands of resident physicians chose for their internship programs different state hospitals from Romania. Unfortunately, these interns do not get the attention they need from doctors; they are not thought the processes, they are not explained slowly and practically what different processes are about, they just walk from doctor to doctor and try to "steal the job". In other words, medical interns are treated more or less like servants. They are used for elementary jobs (like handling a tissue, or talk to a patient) instead of being thought the medical process. The result is as expected: at their final exam, the interns fail or obtain very low grades, and they are redistributed where places are still available. In the end, they become the new generation of Romanian doctors.

The solution is not as complicated as it seems: in order to achieve quality at the source, every intern should be assigned to a certain doctor. Depending on the intern's results at his final exam, financial funds could be distributed at that clinic. For example, if an intern assigned to a certain doctor, gets a result above the average line, the clinic (where the doctor who learned the intern works) should receive, as a reward, financial funds, to cover its gaps (to buy modern equipment, to buy necessary sanitary elements etc).

4. Employee empowerment →this item defines the fact that all medical staff, including nurses, specialists, physicians, etc. are allowed to have total control over their work, organizing themselves as better as they can.

Example: In Romanian hospitals, employee empowerment is respected and everyone knows (or at least, should know) its own task and responsibility. Still, some medical errors still occur.

In clinics, especially at cabinets where physicians work, nurses are allowed to vaccinate the child (let's take for example a normal vaccine, compulsory in the first months of birth) while the doctor explains to the parents the procedure of preparing the right food for the little one.

Sometimes, nurses do not hit the right vein, or do not hit the right spot, on the baby's arm, and the child remains with sign or even gets a bruise.

That is why, in the sanitary system, employee empowerment should not be possible without a previous training.

As mentioned before, continuous improvement is not only for physicians, but also for nurses, who need to upgrade their knowledge in order to realize a more complex and well organized work.

After analyzing the most important characteristics, we can observe that hospitals from Romania need to implement Total Quality Management for 3 main reasons:

- To reduce costs
- To improve efficiency
- To assure high quality patient care

## 2.2.2. INTERNAL AND EXTERNAL HEALTH CARE QUALITY SYSTEM

The Romanian health care system must accomplish an internal and an external quality system. Once our sanitary institutions will achieve these two levels, then we can glory ourselves that we have a sanitary system aligned to the European Union's rules.

The internal quality system relies on 3 major components:

- Structure →refers to inputs represented by patients, trainings, medical equipment, etc.

In order to assure a quality structure, the health care system must provide a superior level of satisfaction for patients. This satisfaction can arrive by offering them good conditions of staying during their treatment period, a safety environment, lack of wasted time, good medical care, etc.

What is more, the improvement must be seen also for medical staff. Physicians, specialists and nurses must have constant trainings, in order for them to keep up with the evolution of different sanitary diseases. In present, our hospitals do not provide sufficient trainings for their employees. Or, in the case where trainings are available, for example we can talk about family doctors, these trainings coincide with the work schedule. So, if they chose to go at a specific training, someone else has to replace them for the whole working day. Since the law demands that each family doctor realize a specific number of consultations per day (otherwise, they won't be paid for the missing consultations), doctors prefer to continue their work, and miss the training.

- Processes → refer to the whole sanitary activity of planning, monitoring and analyzing the medical system's performance.

In our medical system, the processes can either represent an advantage or a disadvantage for the patient. For example, clinical decision, medication delivery or communication, can be helpful for the patient or can easily switch into medical errors (some of them even fatal).

Let's take for example, the processes for patients living in the rural area. For them, medical treatments, medicines and even specialists arrive later than it should be. Unfortunately, the doctors refuse to work in the rural zone because the Government pays them only if they succeed in having 700 subscribed patients on their lists. Since some villages are very small, this number becomes achieved harder and harder.

This is a process that needs to be fixed immediately so that every patient, no matter the zone he is living in, rural or urban, can beneficiate from specialized medical assistance.

- Outcomes of care→ are represented by the results of processes. Depending on a specific process, if it is helpful or not for the patient, the outcome delivers information and plans future actions to ensure the patient's satisfaction.

Regarding the external quality system for Romanian hospitals, here we can analyze the accreditation that each hospital has received.

In 2008, the European Union imposed Romania that until 2010, all our hospitals must be quality certified and capable to treat suffering people at high quality standards. In a recent study, conducted by the Health Care Ministry, only 77 sanitary institutions have been accredited, of a total equal to 500.

Basically, the accreditation of a hospital means, besides civilized accommodation conditions, also clear rules for each medical scheme. For example, every medical action executed by a nurse or a doctor should be made with completely responsibility; what is more, patients should be well treated and in perfect safety conditions.

In a recent interview, doctor Vasile Cepoi, the president of the National Commission for Hospital Accreditation (NCHA), explained that a number of 67 hospitals from Romania have been accredited during October-November 2014, after the stagnation of the process for 1 year, due to bureaucracy. What is more, in 2015 it is planned that almost 300

hospitals should pass the accreditation control, in order to obtain the accreditation agreement.

Moreover, to help the hospitals which are not able to pass the "accreditation test", and so they risk an abolition, the authorities have decided, through a Government decision, that in every sanitary institution must exist a special team engaged in permanently assuring the quality management. Their role will be to facilitate the accreditation process.

By the end of 2015, the NCHA president hopes that more than 90% of Romania's hospitals will be quality certified, even though this action was demanded almost 7 years ago by the European Union.

In Romania, the accreditation system is based on 3 important practices: the quality management system, organizing the health care services and the improvement of the medical practices.

More precisely, the accreditation relies on the patient, on the way the patient is treated by the medical staff, and the changes are imposed by a European Directive which assures not only the quality of the health care system, but also the safety of the European patients on all member states.

In present, the accreditation is made at the hospital's demand, when the manager thinks that meets all the indicators imposed by NCHA, and the verification is accomplished by a team of certified evaluators, who come from different industries (doctors, jurists, economists, medical assistants, etc).

## 3. MAIN ADVANTAGES OF INTRODUCING TOTAL QUALITY MANAGEMENT TO ROMANIAN HEALTH CARE SYSTEM

- Higher productivity. With a well-planned system, hospitals would not waste as much resources as they already do. Every medical staff would know exactly the job he/she has to provide, in order to assure patient's satisfaction;

- Lack of defects and waste. One of the most intrigued kinds of wastes is the waste of time. Patients refuse to go to a specialist from a state hospital, because they have to wait sometimes more than 1 hour before entering the cabinet. With the help of TQM method, every hospital and clinic would organize an appointment system, so that patients would not be obliged to wait in the lobbies.

- Improve customer satisfaction. With the help of a well-organized medical system, people would stop accusing the doctors for everything that goes wrong, and would perceive him as it is: a man who tries his best to save other's lives.

- Increase customer loyalty. A patient who is satisfied on the one hand, with his doctor, and on the second hand, with the medical services, would certainly return for the second, third and fourth time in the same place, even if the price is higher (the best example is with private clinics. Here patients spend significant amount of money, but still they prefer the private system, instead of the public one).

- Increase medical staff's satisfaction. A more organized medical institution, assuring modern procedures, is welcomed by everyone. Hospitals' managers should start from the premise that no one likes chaos. Every employee would prefer to start learning about an efficient procedure (even if this procedure would take time), rather than following no procedure at all, and doing an unorganized job. Also, knowing that the hospital manager cares about them (by offering the alternative already mentioned), the employees' moral would increase significantly and the results would be seen in their day to day activity.

- Safety institutions. TQM comes not only with the above advantages, but also with the demand of improving processes. Therefore, applying the quality system in our health care institutions will demand also that every hospital and clinic to be quality certified and accredited.

All in all, as long as the Romanian health care system will try its best to assure the improvement of services (by introducing modern equipment and realizing a regular maintenance of these machines, by adopting standard operating procedures, etc), processes (by accrediting more and more sanitary institutions, by following the ISO guide, by trying as much as possible to detect defects early and also to correct them, etc) and people (assure trainings, organize regular meetings with employees, induct them a team spirit, motivating them etc), our hospitals will improve significantly.

Since we already have high class doctors, so the problem is half solved, all we need to do is to manage our hospitals in terms of efficiency and efficacy.


## 4. CONCLUSIONS

The main principle that we are conscious about is that our sanitary system needs urgent improvements. These improvements have to be made mainly in the system and after that, at people. As long as our health care system is urging for efficient processes, and if no one will be able to provide it with improvements, our doctors and nurses will have no other choice than to relocate in a foreign health care system that is able to assure them an institution that respects not only them but also the patients.

If we want to keep our physicians home, in Romania, to treat our patients instead of some other countries' patients, a quality management system needs to be established.

Therefore, as soon as the system will be "repaired", the results will be obvious.

Setting out a method like Total Quality Management represents a measure that can be adopted from the inside. Therefore, talking to medical staff, listening to their point of views concerning the points where quality is missing, could be a step forward. Also, setting a list of quality issues, on each department and then assuring a feedback, while trying to find solutions for these issues, is also a plus.

To begin with, our hospitals need to have a quality management team. This can be formed from the employees or even from outside persons, who are taught the quality management principles. Their intention would not be to criticize the system, but to offer solutions and learning the other employees how can improve their work processes in order to assure patients' satisfaction.

All in all, the quality of medical services becomes, in the same measure, a priority for the health care suppliers, managers, patients and also for the governmental organizations.

The suppliers are willing to demonstrate their competences in hospitals. The patients are interested to get the necessary care, along with the respect of their rights, as soon as possible, from the chosen supplier. The payers are interested in introducing standards, indicators and quality criteria in order to efficiently manage the costs.

Yet, the Government is the one that has to control the activity from the health care system, through a legislation meant to favor the introduction of the quality management in sanitary units, and also facilitating the supplier's work and defending the patient from the medical system's deficiencies.

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# NEW PERSPECTIVES REGARDING CHANGE AND INNOVATION INTO ROMANIAN SMES

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**Abstract:** *Innovation is one of the major factor to contribute to success and competitiveness on an SMES, as these enterprises are vital for a healthy and sustainable economy. Literature consider innovativeness as one of the most important agent through which such businesses contribute to economic development. This is an even more important issue for country such Romania, where SMEs are often faced with inadequate business infrastructure and lack of support for entrepreneurs. We also consider that last years have been characterized by an increasingly dynamic, complex and unpredictable environment for businesses. Intense competition in the global market is compelling SMEs to leverage their capabilities and competencies in order to differentiate themselves in the marketplace, and improve their performance. In this paper, we explore factors that drive innovation activities and change in SMEs in Romania, and compare it with findings from other studies. We also consider that implementing changes has positive impact on products/services innovation while applying into specific organizational structures, peculiar on SMEs. In this research four types of product innovation are studied: product, process, line extension and radical radical product innovation. We also consider factors regarding percentage of highly skilled employees (T managers, knowledge oriented white collars), implementation of changed strategy, new/improved managerial techniques , SMEs age, region of developement, company dimension and legal type of organization. To generate additional insight in innovation, we also explore problems and obstacle to innovation and change. Literature considers that it is necessary to continuous change and improve SMES in order to be more sustainable and provide innovative products and services to the market If SMEs account for over 90% of businesses all over the world, and there is a growing need to create sustainable SMEs, then developing and implementing change is highest in making progress towards sustainability. This study is based on a research conducted on over 800 entrepreneurs from Romanian economy. We try to demonstrate the usability of the presented findings in practice in order to contribute to the development of SMEs in Romania.*

**Keywords: entrepreneurship, change, innovation, SMEs, management.**

**JEL classification:** L26, M1, O30, O10

## 1. Introduction

Small and medium enterprises are considered to be the engine of economic growth and employment (Nicolescu Ovidiu, Nicolescu Ciprian 2008; Ceptureanu et al. 2010). One of the primary means through which SMEs are expected to accomplish this task is by developing innovations in order to create competitiveness both on national and international markets (Nicolescu et al. 2011; Ceptureanu et al. 2010). By innovation, we understand a new or significantly improved product (good or service) introduced to the market as well as new or significantly improved process introduced within the firm. We analyse both incremental and radical product innovations. Incremental innovation refers to

product line extensions or modifications of existing platforms and products, while by radical innovations we mean products that are new to the market as well as for the firm (Radas, Bozici, 2009). Because of the importance of the SME sector in creating economic growth, decision makers are very interested in finding ways to stimulate SMEs in realizing innovations. To this respect, many efforts have been made in that direction during the last few decades (Keizer et al., 2002). Therefore, the first step in devising the right incentives to support innovation in SMEs is an investigation into which factors impact the innovation efforts of SMEs and in which way (Keizer et al., 2002). In this paper, we shed some light on this question by investigating factors that significantly impact innovation in SMEs in Romania. Our data come from a research conducted in 2015 by me and Professor Sebastian Ceptureanu on a sample of 800 SMEs based on data provided by National Trade and Commerce Agency (ONRC). Following Keizer et al. (2002), we define a list of variables and then proceed to examine their significance for innovation in Romanian SMEs. We take relevant firm characteristics (as is usual in the literature), but in addition we include some new variables. We consider organizational and strategic changes because willingness and ability to transform is important for firms which need to improve in order to compete and survive (Ceptureanu et al. 2012). We also investigate the effect of market scope, i.e. firm's dominant market on innovation (dominant market can be domestic or international), as this is an important issue for SMEs. By exploring determinants of innovation, we gain knowledge about what propels an enterprise to innovate. This picture is not complete without the investigation of hampering factors that prevent firms from innovating, that's why we also examine obstacles to innovation.

## 2. Theoretical background

In recent years a number of studies were conducted with the goal to discover which factors contribute to innovation efforts by SMEs (Keizer et al., 2002). According to Keizer et al. (2002), the factors that have effect on innovation can be divided into internal and external, where internal variables refer to characteristics and policies of SMEs while external variables refer to opportunities that SME can seize from its environment. Among the internal factors shown to be the most important determinants of innovative activity are high incidence of qualified employees, strong leadership provided by a highly educated director or founder (Hoffman et al., 1998; Le Blanc et al., 1997), although some studies do not find that effect (Keizer et al., 2002). Among other internal factors, Oerlemans et al. (1998) report that existence of technology policy instruments in the company and planning for the future are internal factors linked to innovation efforts. Meer et al. (1996) claim that application of project management structures has bearing on the innovation activities. Strategy is another internal factor that is shown to have impact on innovation in SMEs. In particular, Birchall et al. (1996) mention explicit strategies to increase and stimulate internal creativity and risk taking behaviour. Yet another internal variable is investments in R&D (Birchall et al., 1996; Oerlemans et al., 1998). Among other internal factors that were found to be important determinants of success of innovative efforts are the nature of the commercialization and marketing effort, the degree of marketing involvement in product planning and firm competence in the area of technology strategy and technology management (Hoffman et al., 1998). Regarding external factors, Keizer et al. (2002) group them into three sets: collaboration with other companies, linkages with knowledge centres and utilizing financial resources or support regulations. Entrepreneurs consider collaboration with other firms as a very important part of their innovation efforts (Massa and Testa, 2008). In particular, Kaminski et al. (2008) show that collaboration with suppliers can contribute to innovativeness of SMEs. Collaboration with suppliers may also have the goal to overcome size constraints as reported in Lipparini and Sobrero (1994), while collaboration with both suppliers and customers may be performed for the purpose of

codesign (Davenport and Bibby, 1999). Collaboration with customers can be a source of improved technology (Le Blanc et al., 1997). Strategic alliances are also shown to be important influencers of innovative efforts when they are integral part of firm's development plan (Cooke and Willis, 1999). Linkages with knowledge centres include contributions by professional consultants, university researchers and technology centres (Oerlemans et al., 1998), as well as contribution by innovation centres and Chambers of Commerce. Regarding variables which relate to utilizing financial resources or support regulations, availability of R&D funding was shown to be an important influencer of innovative efforts in SMEs (Hoffman et al., 1998). Most of these studies explore just one or a few of the mentioned variables, except for Keizer et al. (2002) who consider a list of both internal and external variables. Although for most of the described variables, the suggestion is that they have a direct and a positive effect on innovative efforts (Keizer et al., 2002), there is no absolute consensus on that. For example, while Hoffman et al. (1998) report that internal factors have more bearing on innovation than external factors, Keizer et al. (2002) find a limited number of both external and internal variables that have a significant influence on innovation efforts where external factors prevail. Even for a particular factor, different studies may yield different results. For example, regarding the education level of employees and managers, Keizer et al. (2002) find in their study of mechanical and engineering sector SMEs that neither the education of the manager nor the percentage of employees with high education is significant in explaining innovative efforts, which is contrary to prior research (Hoffman et al., 1998). Contradictory results were also found regarding linkages with sources of knowledge, as reported by Hoffman et al. (1998). Similarly, different views exist on the role of financial funding (Hoffman et al., 1998) and the proportion of turnover spent on R&D (Oerlemans et al., 1998; Birchall et al., 1996). All these findings point to the fact that it is still unresolved which variables influence innovation efforts in SMEs and in which way. Generalizations are difficult due to the complexity of the system we are observing; namely as the behaviour of SMEs differs by industry sectors and geographically, it is hard to infer general rules that would hold across the board (Ceptureanu et al. 2012). One way to learn more about determinants of innovative efforts in SMEs is to conduct a variety of studies under diverse economic conditions and in different geographical areas.

### 3. Research methodology and results

The data presented in this study were collected as part of joint research between me and professor Ceptureanu from Bucharest University of Economic Studies and National Trade Agency of Romania (ONRC). The companies were chosen depending on two characteristics: main activity and number of employees. The data were collected by online survey. We define SME as a firm employing between 1 and 250 people exclusively IT industry because we consider this domain particular attractive for innovation (fast growth market, highly skilled workforce, focus on highly innovative services and products etc.). The response rate for the SMEs was 64, 4%. More precisely, after examining and cleaning the data, 800 firms out of 1241 were used in this analysis. Our goal is to find those factors that have significant impact on innovation in SMEs. Further information are listed in the table's below.In this research four types of product innovation are studied: product, process, line extension and radical radical product innovation. Both incremental and radical innovations have an important role. Managers design incremental innovations to satisfy a perceived market need with products that can be developed in a relatively short period of time (Ali, 1994). The introduction of incremental innovation is critical for the long time survival of firms (Banbury and Mitchell, 1995). On the other hand, radical innovation is a major innovation, the product totally new to the market as well as to the company. It could be based on new technology or on satisfying a latent market need by disrupting incumbent markets (Iyer et al., 2006). Next we focus on defining factors that impact innovation.

Following the work of Keizer et al. (2002), we classify our independent variables as external and internal.Following Meer et al. (1996), as external factors we consider collaboration with with universities or research institutes. We introduce an external factor that we add to this analysis, one which has not been investigated in this setting before, is market scope and by that we understand the most important market for the company (local, national or international). For small countries in particular, the market where the firm operates is important for the way business is conducted (Nicolescu Ciprian, Ceptureanu Eduard, 2009). For example, firms that are present only in small local markets can be more complacent and less motivated to innovate than the firms that are active on wider (international) markets. Firms that go international encounter stronger competitors and therefore have to innovate in order to gain and keep their position. Actually, survival on a more competitive market requires a steady stream of innovations. Additional push to innovate comes from the fact that more competitive markets often offer higher incentives for innovation (Sorescu et al., 2003). For a small developing country, the further from the head- quarters the company goes, the harder it becomes to compete because among other things the firm has to solve increasingly complex supply chain, logistic and marketing issues while contending with incumbent companies. In the model, we introduce two dummy variables; one indicates firm's presence on national market and the other indicates its presence on international markets.We also consider factors regarding percentage of highly skilled employees (T managers, knowledge oriented white collars) (Ceptureanu, 2011), implementation of changed strategy, new/improved managerial techniques (Verboncu et al. 2011), SMEs age, region of developement, company dimension, legal type of organization and obstacle of innovation.

**Table 1:** Factors of innovation (no. of respondents)

| Factors | Product innovation | Process innovation | Line extension | Radical product innovation |
|---|---|---|---|---|
| Collaboration with other organizations | 76 | 59 | 12 | 2 |
| Links with universities | 78 | 56 | 1 | 1 |
| Link with research institutes | 121 | 84 | 12 | 3 |
| New products/services on domestic markets | 532 | 123 | 14 | 1 |
| New products/services for international markets | 89 | 59 | 2 | 2 |
| % of highly skilled and educated employee in the company | 32% | 18% | 5% | 1% |
| Implementation of new or significantly changed strategies | 156 | 121 | 0 | 3 |
| Implementation of new, advanced managerial instruments | 207 | 69 | 0 | 0 |

(Source: own research)

**Table 2:** Differentiation of innovation object depending on the age of SMEs (%)

| No. | Nature of innovation activities | Companies age | | | |
|---|---|---|---|---|---|
| | | Less than 5 years | 5-10 years | 10-15 years | Over 15 years |
| 1. | New products | 41,54 | 36,99 | 42,23 | 42,05 |
| 2. | New technologies | 19,23 | 20,45 | 31,08 | 24,87 |
| 3. | Updated management and marketing systems | 23,85 | 26,21 | 21,12 | 16,41 |
| 4. | Updated information systems | 3,85 | 4,28 | 5,58 | 6,67 |
| 5. | Human resource training | 5,64 | 4,65 | 5,18 | 4,62 |
| 6. | No action | 27,18 | 28,44 | 22,71 | 25,13 |

(Source: own research)

**Table 3:** Differentiation of innovation object according to SMEs region (Romania) (%)

| No. | Nature of innovation activities | SMEs grouped by region | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | North East | South-East | South | South-West | North-West | Center | Bucharest-Ilfov |
| 1. | New products | 38,46 | 45,36 | 53,82% | 41,91 | 16,02 | 31,65 | 41,72 |
| 2. | New technologies | 19,23 | 27,84 | 25,08 | 35,97 | 8,84 | 17,09 | 19,95 |
| 3. | Updated management and marketing systems | 11,54 | 7,22 | 11,62% | 20,13 | 44,20 | 30,38 | 24,94 |
| 4. | Updated information systems | 9,62 | 8,25 | 3,06 | 5,28 | 6,63 | 1,90 | 4,99 |
| 5. | Human resource training | 7,69 | 5,15 | 4,59 | 7,26 | 8,84 | 2,53 | 2,72 |
| 6. | No action | 26,92 | 21,65 | 22,94 | 31,35 | 28,18% | 29,11 | 24,04 |

(Source: own research)

**Table 4**: Differentiation of innovation object according to company dimension (%)

| No. | Nature of innovation activities | Companies dimension | | |
|---|---|---|---|---|
| | | Micro enterprises | Small companies | Medium |
| 1. | New products | 38,28 | 45,56 | 55,07 |
| 2. | New technologies | 19,10 | 34,75 | 47,83 |
| 3. | Updated management and marketing systems | 23,21 | 20,85 | 13,04 |
| 4. | Updated information systems | 4,43 | 6,56 | 8,70 |
| 5. | Human resource training | 4,27 | 7,34 | 8,70 |
| 6. | No action | 28,77 | 19,31 | 10,14 |

(Source: own research)

**Table 5:** Differentiation of object of innovation in SMEs according to legal form of organization (%)

| No. | The nature of innovation activities | Legal form of organization | | |
|---|---|---|---|---|
| | | Public companies | Private companies | Other organization form |
| 1. | New products | 34,38 | 39,99 | 43,62 |
| 2. | New technologies | 46,88 | 23,34 | 14,09 |
| 3. | Updated management and marketing systems | 15,63 | 22,91 | 18,79 |
| 4. | Updated information systems | 18,75 | 4,83 | 3,36 |
| 5. | Human resource training | 9,38 | 5,12 | 2,68 |
| 6. | No action | 12,50 | 25,79 | 34,90 |

(Source: own research)

**Table 6:** Differentiation of innovation object depending on the performance of SMEs (%)

| No. | The nature of innovation activities | Enterprises performance in 2014 vs precedent years | | | | |
|---|---|---|---|---|---|---|
| | | Much better | Better | Identical | Weaker | Much weaker |
| 1. | New products | 58,82 | 40,00 | 38,78 | 45,21 | 25,00 |
| 2. | New technologies | 58,82 | 35,56 | 21,34 | 15,34 | 16,25 |
| 3. | Updated management and marketing systems | 11,76 | 22,22 | 24,63 | 20,00 | 15,00 |

| No. | | Value 1 | Value 2 | Value 3 | Value 4 | Value 5 |
|---|---|---|---|---|---|---|
| 4. | Updated information systems | 2,94 | 6,30% | 4,39 | 4,11 | 11,25 |
| 5. | Human resource training | 5,88 | 11,48% | 3,78 | 2,19 | 7,50 |
| 6. | No action | 5,88 | 17,41% | 27,32 | 29,59 | 41,25 |

(Source: own research)

**Table 7:** Percentage of total investment in innovation in SMEs according to age (%)

| No. | Percentage of total investment in innovation | Companies age | | | |
|---|---|---|---|---|---|
| | | Less than 5 years | 5-10 years | 10-15 years | Over 15 years |
| 1. | 0% | 42,05 | 39,22 | 37,05 | 37,95 |
| 2. | 1 - 5% | 20,26 | 25,65 | 29,08 | 25,13 |
| 3. | 6 - 10% | 24,10 | 22,86 | 17,53 | 24,10 |
| 4. | 11 - 20% | 6,92 | 5,95 | 8,76 | 5,90 |
| 5. | 21 - 50% | 3,08 | 4,28 | 3,98 | 4,62 |
| 6. | 51% - 75% | 3,08 | 1,67 | 2,79 | 1,54 |
| 7. | Over 76% | 0,51 | 0,37 | 0,80 | 0,77 |

(Source: own research)

**Table 8:** Percentage of total investment in innovation grouped by region (%)

| No. | Percentage of total investment in innovation | SMEs by region | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | North East | South-East | South | South-West | North-West | Center | Bucharest-Ilfov |
| 1. | 0% | 40,38 | 35,05 | 41,28 | 34,65 | 48,07 | 37,97 | 37,87 |
| 2. | 1 - 5% | 13,46 | 36,08 | 36,70 | 9,90 | 14,36 | 27,22 | 28,57 |
| 3. | 6 - 10% | 25,00 | 15,46 | 17,43 | 23,43 | 28,73 | 27,85 | 23,13 |
| 4. | 11 - 20% | 13,46 | 8,25 | 4,28 | 9,90 | 3,87 | 5,06 | 6,80 |
| 5. | 21 - 50% | 5,77 | 3,09 | 0,31 | 12,87 | 1,66 | 1,27 | 2,49 |
| 6. | 51% - 75% | 1,92 | 2,06 | - | 8,25 | 1,10 | 0,63 | 0,68 |
| 7. | Over 76% | - | - | - | 0,99 | 2,21 | - | 0,45 |

(Source: own research)

**Table 9:** Percentage of total investment in innovation by company size (%)

| No. | Percentage of total investment in innovation | Enterprise size | | |
|---|---|---|---|---|
| | | Micro enterprises | Small companies | Medium companies |
| 1. | 0% | 43,67 | 25,48 | 11,59 |
| 2. | 1 - 5% | 23,93 | 30,50 | 17,39 |
| 3. | 6 - 10% | 21,19 | 24,32 | 42,03 |
| 4. | 11 - 20% | 5,64 | 8,88 | 15,94 |
| 5. | 21 - 50% | 2,98 | 8,11 | 7,25 |
| 6. | 51% - 75% | 2,10 | 2,32 | 2,90 |
| 7. | Peste 76% | 0,48 | 0,39 | 2,90 |

(Source: own research)

**Table 10:** Percentage of total investment in innovation by legal form of organization (%)

| No. | Percentage of total investment in innovation | Legal form of organization | | |
|---|---|---|---|---|
| | | Public companies | Private companies | Other organization form |
| 1. | 0% | 31,25 | 37,46 | 57,72 |
| 2. | 1 - 5% | 21,88 | 26,01 | 13,42 |

| | | | | |
|---|---|---|---|---|
| 3. | 6 - 10% | 21,88 | 22,84 | 20,81 |
| 4. | 11 - 20% | 12,50 | 6,70 | 4,70 |
| 5. | 21 - 50% | 3,13 | 4,18 | 2,68 |
| 6. | 51% - 75% | 6,25 | 2,23 | 0,67 |
| 7. | Over 76% | 3,13 | 0,58 | - |

(Source: own research)

**Table 11:** Internal obstacles regarding innovation

| Internal obstacle | No. of respondents |
|---|---|
| Lack of qualified staff | 521 |
| Lack of information regarding technology | 59 |
| Lack of information regarding market | 98 |

(Source: own research)

**Table 12:** External obstacles regarding innovation

| External obstacles | No. of respondents |
|---|---|
| Finance and expenses | 438 |
| Regulation regarding demand | 111 |
| Environment obstacles | 73 |
| Logistics obstacles | 138 |

(Source: own research)

## 4. Conclusions

We find out that innovation efforts in SMEs focused mainly on new products (40.22%), new technologies (22.94%), managerial and marketing approaches us (22.37%), upgrading the computer system (4.97%), and human resources training (4.97%), while one in four companies is recorded absence innovative approaches (26.39%). The intensity of investment in product innovation, process and organizational includes the following elements: 39.26% of SMEs have not allocated resources for innovation, while 60.74% of companies dedicated to innovation at least 1% of total investment, 36.01% - more than 6%, 13.38% - 11%, 6.76% - more than 21%, 2.74% - over 51% and 0.57% of organizations have allocated innovation over 76% of total investments. From the perspective of the share in turnover revenue from new products and services introduced in the last year, we find the following: 42.57% of SMEs have received income from sale of products and new services, while 57 43% of companies have charged at least 1% of the total, 37.67% - more than 6%, 21.48% - over 11% - 10.64% - more than 21%, 3.57% - over 51% and 0.70% of organizations indicated that over 76% of turnover comes from new or renewed products and services. The main ways of innovation in SMEs are: adaptation and modification of the innovations originally developed by other organizations (43.86%), individual conduct R & D activities (26.90%), taking full the innovations originally developed by other organizations (24.78%) and cooperation with other organizations on the development of research and development (4.46%). Regarding internal obstacles to innovation we found out that lack of qualified staff is the main issue (65, 12% of responses), while 55% of respondents consider finance and expenses as main external barrier. This findings confirm some results from the literature (Birchall et al., 1996). For instance having links with academic and research institutions has very strong positive effect on radical product innovation, while the effect on other types of innovation is lacking. Kaufmann and Todtling (2000) report similar effect, which is consequence of the fact that radical innovations need creative ideas and advanced knowledge that usually resides in academia and research community. This is congruent with Massa and Testa (2008) finding that for academics only the radical innovation is considered as innovation, while entrepreneurs tend to define the term more broadly. In general, our results confirm those in the literature concerning external

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collaboration, in particular the finding from Keizer et al. (2002) about positive effect that links with knowledge centres have on innovation. Presence on national and international market has a strong positive effect on probability to innovate. This finding is in line with the fact that wider markets are more competitive, and survival on more competitive markets requires innovation. Radical innovation, being something completely new to the market, is a much less controllable event than incremental innovation due to much higher level of risk and unpredictability, which is offset by the product's possibility to open up new markets and generate very high profits (Ali, 1994). It is not just the consequences of innovation but also the antecedents that differ. In the study of small firms by Subrahmanya (2005), it is reported that radical innovation depends on internal factors, while incremental innovation depends more on external factors. Regarding internal factors, data show that the proportion of highly educated staff has a positive effect on radical product innovation, while it has no effect on other types of innovation. This is understandable since radical innovations require substantive creative effort, while introducing products that are similar to those already existing on the market does not require as much original input from firm's own staff (i.e. the work can be completed by less-skilled employees) (Ceptureanu et al. 2009). Salavou and Lioukas (2003) show that strategic choices by top management (for example adopting entrepreneurial orientation) have significant positive impact on radical innovation in SMEs. One way to explain this is that entrepreneurial orientation supports proactive new product development that favours novelty, in contrast to defensive strategies that favour imitation. Being risky and expensive, radical product innovation requires time and involvement of the best and the brightest people in the company. To devote all those resources to radical innovation is a deliberate decision that only top management can make.

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# STRATEGIC MANAGEMENT: FROM ANTIQUITY UNTIL TODAY

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> *"Those who cannot remember the past are condemned to repeat it."*
> *George Santayana, The Life of Reason*

**Abstract:** The strategic management is a relatively new discipline in its own right, whose foundations were laid since antiquity. Many concepts borrowed from various areas had an outstanding contribution in the formation and evolution of strategic management until nowadays. The dual pendulum metaphor reflects the existing tensions over time between internal and external factors of the organization and the relationships that exist between the two types of factors, the strategic management being outlined also by the simultaneous movement of the two pendulums.

**Keywords:** strategy, strategic management, dual pendulum, evolution, antiquity, concept, consolidation.

**JEL classification:** N 01

## 1. Introduction

Strategic management originates from antiquity, events which occurred then, being relevant for studying the implementation of modern strategies in economic organizations. Several such dating of strategic management in ancient times can be seen in Egypt, Greece, Roman and British Empire, as follows in the figure below:



**1491 BC:** Moses uses hierarchical delegation of authority during the exodus from Egypt. Dividing a large set of people into smaller groups creates a command structure that enables strategies to be implemented.

**500 BC:** Sun Tzu's *The Art of War* provides a classic handbook on military strategy with numerous business applications, such as the idea "to win without fighting is best." This type of approach was used by businesses, such as Gap Inc. when they decided to create their own stores rather than competing for shelf space for their clothing within traditional department stores.

**70 BC:** Roman poet Virgil tells the story of the Trojan horse, a classic strategic ploy where the Greek forces hid a select number of soldiers in a large wooden horse that the Trojan army took into their heavily guarded city gates. Once inside the city, Greek soldiers were able to open the gates and allow in reinforcements which eventually led to the end of the war.

**c. 530:** King Arthur rules Britain. Legend says he made his famed round table so that no one, including him, would be seen as above the others. His mission to find the Holy Grail serves as an exemplar for the importance of the central mission to guide organizational actions.

**Figure 1:** Strategy in ancient times

Strategic Management continues its improvement and evolution by adopting certain concepts from military strategy. The examples can be seen starting from the 15th-16th centuries and continuing with the Second World War to the present. The borrow of several examples of military concepts are detailed in the figure below:



1532: Machiavelli's book *The Prince* offers clever recipes for success to government leaders. Some of the book's suggestions are quite devious, and the word *Machiavellian* comes to refer to acts of deceit and manipulation.

1775: The American Revolutionary War between the United States and Great Britain begins. Weaker American forces win the war in part by relying on nontraditional tactics such as guerilla warfare and the strategic targeting of British officers. They also depend on help from the French navy, illustrating the potential value of strategic alliances.

1815: Napolean's defeat at Waterloo demonstrates how spreading resources too thin can result in defeat of even one of the most famed militaries of all time.

1865: The American Civil War ends. Historians consider the Confederacy to have had better generals, but the Union possessed greater resources. Sometimes good strategies simply cannot overcome a stronger adversary.

1944: Following a series of deceptions designed to confuse and fool German forces, the Allies launch the D-Day invasion in an effort to liberate Europe from Nazi control.

**Figure 2**: Classic military strategy

Although dating from ancient times, the concept of accepted and studied strategic management is a relatively youthful discipline which has developed very quickly, being taken and successfully implemented by most modern organizations. The origins of strategic management discipline are found mainly in the publications of Chandler (1962), Ansoff (1965) and Andrews (1971), that being basically the beginning of consolidation and progress toward maturity.

## 2. Factors that have influenced the progress of strategic management

There are some factors that have influenced the progress of strategic management. First, it was a marked increase in the range of topics addressed (Hoskissonet al., 1999). The study of "best practices" in 1960 analyzed many topics as internationalization, cooperation between firms, strategies and competition in the markets for products and factors and strategic leadership. Another factor is the significant growth in the range of research methods used, these becoming steadily more sophisticated (Hoskisson et al., 1999; Ketchen et al., 2008). Also, another indicator of the strategic management maturity is the growing consensus in some basic notions, like the definition of strategy or strategic management. Ronda-Pupo and Guerras-Martin (2012) shows how consensus around the concept of strategy has been building up and spreading over time in a slow manner. On the other hand, the academic community interested in strategy research has been developing.

Based on the above arguments, next will follow an analyze of the past and current trends in strategic management research. There will be put together the theoretical perspectives informing this research by using the image of a double pendulum swinging in unison (Guerras-Martín et al., 2014). This involves identifying and analyzing the tension between

the internal and external domains of strategic management research and also the tension between the macro and micro levels of analysis.

Strategic management is that fundamental issue that explains the success or failure of firms (Rumelt et al., 1994). This involves identifying the factors of success. Largely, on the other hand, many researchers have tended to focus their attention on a firm's internal factors, such as its strengths and weaknesses. On the other hand, the reasons for success have been sought in the environment opportunities and threats.

According to this, Guerras-Martín (2014) identifies in his paper two types of tensions throughout the development of the strategic management field: one between internal and external factors and one between macro and micro level considerations. This situation is similar to a dual pendulum, according to the metaphor used by Hoskisson et al. (1999), where the focal thrust is on internal or external factors or on macro or micro level issues. The two pendulums have been moving simultaneously over the course of the discipline's history, and their overall movements have defined the strategic management evolution. Figure no. 4 shows the arrangement of the main approaches and theories involved in strategic management according to these two classification criteria.
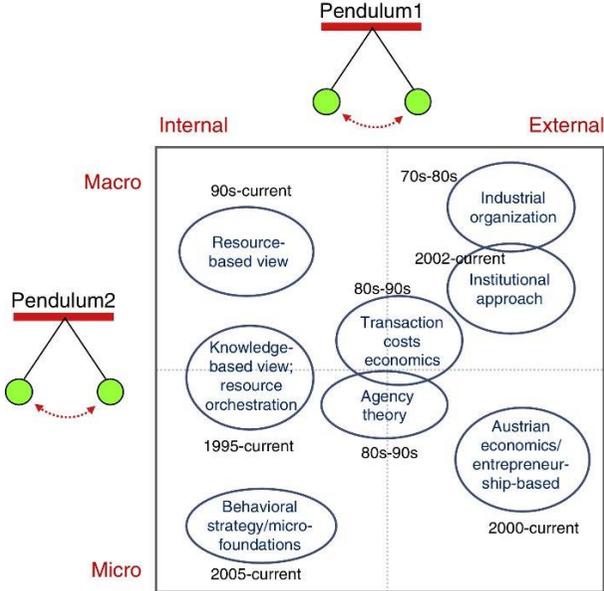


**Figure 3:** Evolution of strategic management research

The pendulum theory started in 1960, when the focus was on identifying the factors from the inside of successful firms that lead to performance. This was based on analyzing the strengths and weaknesses. Also, the external aspects were considered very important, so the SWOT analysis was considered a good option to study both internal and external aspects.

At the end of the 1970s and in the 1980s, the search for the success keys gravitated toward the external environment, with research on the industry structure becoming paramount (Porter, 1980). The economics of organizations, through the contributions made by agency theory (Jensen and Meckling, 1976) and transactions cost theory (Williamson, 1975, 1985), moved the pendulum toward more of a middle position that addressed to the internal and external aspects in the same way. Finally, the appearance and rise of the resource-based view (RBV), stimulated by the works of Wernerfelt (1984) and Barney (1991), once again swung the pendulum into the interior of firms, to some extent going

back to the beginning (Guerras-Martin, 2014). Although this metaphor of the pendulum is very illustrative of the development of strategic management, with its focus on some groups of factors that explain the success of firms, its strict application would be somewhat simplistic. It is a different thing to reduce a research analysis to internal or external factors, for reasons of methodology, from assuming that the reality consists solely of one or the other. Clearly, both aspects are very important. On the other hand, it is true that research in strategy has paid more attention in the last years to internal rather than external factors, the latter have not in any way disappeared from the research priority lines. Furrer et al. (2008) show how, over 26 years of research into strategy (1980-2005), the research stream linked to resources has been growing on a slow but steady basis.

Many researchers of strategy have for some time wondered whether the resource-based view or paradigm has been exhausted, and whether the pendulum will once again swing to the outside of firms or whether it will remain much longer on the internal side.

## 3. Conclusions

Strategic management during its evolution, has borrowed many concepts from different areas, which contributed to its formation and development.

Currently, strategic management, has become a discipline in its own right and a field where research concerning its improvement and evolution are continuing. It is also successfully implemented in most organizations, the results of its implementation being viable and relevant in achieving goals and implicitly in the success of organizations.

Dual pendulum metaphor was used to highlight the shift of focus from internal to external environment and than back to internal to show the evolution of strategic management. Both dimensions used in research are relevant today. The dual pendulum reflects the complexity of strategic management as an academic discipline, in which the research continues, without knowing its limits.

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# GLOBALIZATION AND THE COMPETITIVENESS OF THE EUROPEAN TEXTILE AND CLOTHING INDUSTRY

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**Abstract:** *The aim of the paper is to analyze the competitiveness of the European textile and clothing industry under the influence of globalization and recent economic crisis. The textile and clothing industry is an important part of the European manufacturing industry, playing a vital role in the economy and social welfare in many regions of Europe. The European textile and clothing industry has undergone significant changes in recent decades due to the technological advances, developments in production costs, the emergence major international competitors and the elimination import quotas after 2005. In response to the competitive challenges, this sector of activity has undertaken a lengthy process of restructuring and modernization. Globalization and technological progress have led to rethinking the strategy of the companies in the industry. In a competitive global market, European organizations producing textiles and garments have as main competitive advantage research and continuous innovation. Using methods of qualitative research, this paper analyses the evolution of the main financial indicators concerning this sector of activity in the period 2007 – 2013, including domestic consumption, turnover, number of employees, number of companies, imports and exports. The globalization of markets, international outsourcing and development of the Internet had a major impact on the structure and dynamics of the textile and clothing industry in Europe, and in particular on small and medium enterprises. Also, relocation, subcontracting and outsourcing of large brands in this domain have contributed significantly to the increase of imports from low-cost countries. A growing number of apparel retailers have emerged on the market, organizing supply chains globally. At the same time, producers have transferred part of their activities to low-cost countries in order to maintain market competitiveness. This was determined by the major differences in salaries across the global labour markets and high profits obtained from trade. Based on the results of the analysis undertaken, the paper suggests that in recent years, the competitiveness of the textile and clothing sector fell significantly, causing restructuring and downsizing.*

**Keywords:** textile and clothing industry, competitiveness, European garment sector, globalization

**JEL classification:** F60, M20, O19

## 1. Introduction

Textile and garment industry has become a global phenomenon, and, due to its complex connections with many other areas including manufacturing, advertising, production of raw materials, transport and retail, the enormous profits that lie ahead in the fashion industry determine companies to expand worldwide and constantly seek new markets. Technological progress and development of information and communication technologies have caused major changes in the world economy. Creating a large number of economic agreements and various economic communities has resulted in numerous heterogeneous markets integrated in a single market worldwide. The socio-cultural factors have acquired

a new dimension, a consumer society being outlined.

Current production of textiles and clothing is characterized by the existence of several actors of different sizes, in geographically dispersed locations. It also includes production stages and various activities to be carried out in a well known order, in a limited period of time (Fernandez-Stark, Frederick, Gereffi, 2011). Textile and clothing industry is characterized by high volatility, low predictability (Bruce, Daly, 2006), as well as generally low profit margins. Subcontracting is a frequent action in this industry. By lowering production costs, intermediates reduce time prices, as lower production time it is very important in this industry (Rossi, 2013; Masson, 2007). Industry experts consider that brands, which are also and retailers will get lower margins and will face increased costs (Kenneally, 2014). Therefore increasingly more retailers will exit the market or will be forced to reduce their operations (Stealing Share). Retailers and textile and apparel major brands seek greater flexibility in design, quality, and timeliness in delivery to maintain market competitiveness.

## 2. The Characteristics of the Textile and Clothing Industry

In the apparel sector, production can be dispersed in multiple locations inside or outside the country. In developed countries, it is associated with outsourcing production to developing countries. In the case of the latter, production is transferred to other localities and between countries in search of cheap labour or faster. Transnational corporations can move their capital across borders in order to reduce production costs, but small businesses and individual workers do not have this mobility, being forced to work in an increasingly uncertain market, characterized by an exacerbated competition.

Depending on the market to which it is addressed, it can be said that the textile and clothing sector is divided into two main categories, each with its specific characteristics:

- ➢ On **the market of quality products**, modern technology industry is characterized by a high degree of flexibility, and relatively well paid designers and workers. The competitive advantage of the firms in this market segment, excluding the cost effectiveness, is related to their ability to produce designs based on customer preferences, or influencing their choices. The basic functions of companies serving this market segment is largely found in developed countries and frequently in limited geographical areas or clusters in these countries (Girneata, Mascu, 2014).
- ➢ Firms oriented towards **mass production or standard products** are encountered particularly in developing countries. The labour force is usually semi-skilled or unskilled, poorly paid and mainly consists of women. These companies collaborate with retailers that have very high purchasing power. Also, retailers have developed their own brands and direct sourcing from suppliers, either foreign or local (Nordås, 2004).

European textile and clothing industry is diversified, being characterized by innovation and creativity. Production is divided into three categories depending on consumers which it addresses to: clothing and apparel, home textile and interior decoration and textile covering a wide range of technical uses, including transportation, construction, healthcare and furniture. In a competitive global market, European companies have as main competitive advantage research and continuous innovation. Because of their unique performance and durability, textiles replace increasingly traditional basic materials and technology in areas such as construction, transport and health, with significant potential for long-term growth (Euratex, 2011).

## 3. Changes Undergone in the European Textile and Clothing Industry

Textile and clothing industry has a strong tradition in Europe, with the highest production until 2010 (World Trade Organization, 2014). Reducing the number of employees in the industry began even before 2005, but it was accentuated by the 2008 financial crisis and the rising cost of transport and raw materials that caused the loss of jobs for about 50% of employees in the area over the last decade. The number of employees decreased by over 55% in Spain, France, Germany, the Czech Republic, the largest decrease was recorded in the UK: 67% (Adinolfi and Andersen, 2011). Nonetheless, the textile and clothing industry in Europe still over 1.6 million employees (Euratex, 2015). Companies with fewer than 50 employees represent more than 90% of the workforce in Europe, and the average number of employees in a company is 10 people (Adinolfi and Andersen, 2011).

The liberalization of the European market for textiles and apparel from 1 January 2005 allowed entrance on various markets, leading to increased exports and imports. Nevertheless, it was also a controversial action as this industry concentrates a significant number of employees, especially in regions where alternative work places would be difficult to find, making it a vulnerable category in relation to the permanent changes arisen. (Folcut et al, 2009). European textile and clothing industry has undergone significant changes in recent decades due to technological change, developments in production costs, the emergence of major international competitors and the elimination of import quotas after 2005. In response to competitive challenges, the textile and clothing in Europe has undertaken a lengthy process of restructuring and modernization. The globalization and technological progress of the industry have lead to rethinking the strategy.

Increasingly many apparel retailers have emerged on the market that organized supply chains globally. Producers, in parallel, have transferred part of their production to low-cost countries in order to maintain market competitiveness. This was determined by the major differences in salaries global labour markets and high profits obtained from trade activities. Most employees in the clothing industry are represented by relatively low-skilled young women, particularly in developing countries. Women represent on average 68% of the workforce in the clothing industry and 45% in the textile industry (ILO, 2014). Working conditions in the garment industry and some activities can be difficult for female workers (Fontana Silberman, 2013). Low salaries, reduced opportunities reduced collective bargaining and low equal remuneration creates increased vulnerability for workers in this field.

The main European producers of textiles and clothing are Italy, France, Britain, Germany, Spain, Greece, Portugal, Romania, Bulgaria and Poland. The production of the first five states mentioned account for about three quarters of EU production in the field. Regarding foreign trade, about 20% of EU production is sold outside the community, despite limited access to many markets outside the European Union (CIRCABC database).

## 4. Methodology

This study focuses on the competitiveness of the European textile and clothing industry in the context of globalization. This study has as main research objectives, the following:

1. To analyse the evolution of the European textile and clothing industry;
2. To examine the changes undergone by the sector anterior and posterior the 2008 economic crisis;
3. To describe the dynamics of the main financial indicators of the textile and clothing industry.

The research design predominantly uses qualitative methods. The author describes and synthesizes the evolution and competitiveness of the European textile and clothing industry during the period 2007 – 2013 using statistical data from Euratex reports and own calculation and interpretation of the data.

## 5. Relevant Findings

Textile and clothing industry is an important part of the European manufacturing industry, playing a vital role in the economy and social welfare in many regions of Europe (Girneata et al, 2015). According to data from Euratex, in this industry there are 172,755 companies, with a total of about 1.6 million employees. Most companies in the industry are small and medium enterprises, those with less than 50 employees representing over 90% of the workforce in the industry in Europe. In 2014, textile and clothing enterprises generated a turnover of 165.3 billion Euros (Euratex, 2015).

Table 1 shows the main financial indicators characterizing the situation of European Union textile and clothing industry during the seven years from 2007 to 2013, covering the period before the emergence the economic crisis so far. Both textiles and clothing were included in the same analysis, because they show similar characteristics and manifestations in times of turbulence. Data were taken from Euratex reports and calculations were made by the author. The figures for the textile section include also the synthetic fibbers sector.

**Table 1:** European Union Textile and Clothing Industry Indicators 2007 - 2013

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2013 / 2007 (%) | 2013 / 2012 (%) |
|---|---|---|---|---|---|---|---|---|---|
| Household consumption (bil. €): T&C | 492,7 | 481,7 | 451,1 | 470,1 | 481,6 | 482,9 | 483,9 | 98,21 | 100,21 |
| Turnover (bil. €) : - Total | 205,3 | 194,7 | 153,9 | 163,5 | 175,2 | 168,5 | 166,5 | 81,1 | 98,81 |
| Textile | 110,6 | 104,2 | 79,9 | 88,7 | 94,6 | 91,3 | 91,8 | 83,00 | 100,55 |
| Clothing | 94,7 | 90,6 | 74 | 74,8 | 80,6 | 77,3 | 74,7 | 78,88 | 96,64 |
| Investment (bil. €): - Total | 6,1 | 5,6 | 4,4 | 4,8 | 4,4 | 4,2 | 4,1 | 67,21 | 97,62 |
| Textile | 3,7 | 3,4 | 2,5 | 3 | 3 | 2,8 | 2,8 | 75,68 | 100 |
| Clothing | 2,4 | 2,2 | 1,8 | 1,8 | 1,4 | 1,4 | 1,3 | 54,17 | 92,86 |
| Employment (1000 pers.): - Total | 2.485 | 2.331 | 2.033 | 1.879 | 1.772 | 1.733 | 1.664 | 66,96 | 96,02 |
| Textile | 957 | 888 | 778 | 732 | 674 | 658 | 634 | 66,25 | 96,35 |
| Clothing | 1.528 | 1.443 | 1.255 | 1.146 | 1.098 | 1.075 | 1.030 | 67,41 | 95,81 |
| Companies (nr):- Total | 189.411 | 181.943 | 188.464 | 191.460 | 186.101 | 179.944 | 172.662 | 91,16 | 95,95 |
| Textile | 57.057 | 54.555 | 54.281 | 56.444 | 56.175 | 54.793 | 52.767 | 92,48 | 96,30 |
| Clothing | 132.354 | 127.388 | 134.183 | 135.015 | 129.926 | 125.151 | 119.895 | 90,59 | 95,8 |
| Extra-eu trade balance (bil. €): - Total | -43 | -44 | -45,2 | -51,3 | -56 | -48,9 | -49,9 | 116,05 | 102,04 |
| Textile | -2 | -2 | -1,9 | -3,9 | -5,6 | -3 | -3,8 | 190 | 126,67 |
| Clothing | -41 | -42 | -43,3 | -47,3 | -50,3 | -45,9 | -46,1 | 112,44 | 100,44 |

Source: Author's calculations based on statistics provided by the Euratex Reports

Of the total number of 172,755 companies in the industry, about 120,000 are clothing companies (Euratex, 2015), employing 1.02 million people and generating a turnover of 75.6 billion Euros. The companies producing garments are mostly located in Southern and Eastern Europe, and for those countries, light industry plays an important role in the national economy. About 99% of these companies are small and medium enterprises (SMEs), which means that these firms are characterized by flexible organizational structures, creativity and rapid response capacity to market needs. However, their small size is an impediment in accessing loans for modernization or research and development and also makes them vulnerable to turbulence in the economic environment, which explains the difficulties faced by the sector during the crisis (Girneata, Potcovaru, 2015).

European textile industry provides fabrics, knitting yarn, sewing clothing and other materials to garment producers. This totals approximately 53,000 companies that employed 614 000 people and generated a turnover of € 89.7 billion in 2014. The figures represent the calculations made by the author based on data provided by Euratex 2015 report, totalling textiles and synthetic fibbers. Textile sector has similarities with that of clothing industry, meaning that there are mostly SMEs on the market, which have undergone significant changes during the crisis, reducing the number of companies, but also the number of employees in these companies.

According to data presented in Table 1, the domestic consumption of textiles and garments in the European Union has recorded a steady increase since 2010, reaching 483.9 billion Euros in 2013. It also reveals that there is a deficit of around 1.8% of this indicator in 2013 compared to 2007, the year before the outbreak of the economic crisis.

Turnover fluctuated during 2007 - 2013, registering a value approximately 20% lower in 2013 compared to 2007, of only 166.5 billion Euros. It can be noticed a more pronounced decrease in the case of the clothing sector, which, in 2013 recorded a turnover of 20 billion Euros less than the value in 2007.

One possible cause of the reduction in the European textile and clothing industry turnover may consist in the reduced investments in the field. In 2013, these were at about 67% of the level recorded in 2007. According to the data presented, in the case of the garment sector there is a dramatic decrease in investments in 2013: only 1.3 billion Euros compared to 2.4 billion Euros in 2007.

As a consequence of the decrease in investments, the number of companies in the textile and clothing sector was reduced with about 17,000 in 2013 compared to 2007. In percentage, the decrease was approximately 7.5% for textiles and 9.5% for clothing. The number of employees in industry also decreased constantly throughout the analyzed period. During the seven years for which data were collected, the number of employees decreased by 821 000 people, which represents about 1/3 of the total number of employees in 2007.

The extra European Union trade balance indicators show that throughout the 2007 - 2013 period, imports from outside the EU countries exceeded the exports of textile and clothing products. There is an enormous deficit of trade balance in the case of the garment sector, of approximately 46.1 billion Euros, while in the case of textiles the deficit was 3.8 billion Euros in 2013. Still, this represents nearly double the value of the indicator in 2007.

## 6. Conclusion

Phenomena such as globalization, including liberalization, relocation, international outsourcing, and development of the Internet have had a major impact on the structure and dynamics of the textile and clothing industry in Europe, and in particular on small and medium enterprises. Also, relocation, subcontracting and outsourcing of large European textile and clothing brands have contributed significantly to increased imports from low-cost countries. The competitiveness of the textile and clothing sector fell rapidly determining the restructuring of the sector and reducing the number of employees.

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# STRATEGY FROM CONCEPTUALIZATION TO COMPETITIVE ADVANTAGE

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## ABSTRACT

*The purpose of this study is to show how important the process of defining strategy can be for a company in the economical context that we all face now days. This study shows that although the results after a company has defined its strategy can be seen in a longer or shorter period of time, the process is complex and needs managers that can foresee the future. And at the end of every strategy defining the final result should be competitive advantage, this competitive advantage that can bring a company in front of its main competitors, and if the company manages to stay in front of those competitors it can gain sustainable competitive advantage. In fact this should be the goal of every company: to try by all means, off course legal means, to do things better than other companies using the right strategy. Companies can use their capabilities and knowledge in these fields, a constant innovation process can help the society to undergo powerful changes. These changes can be firstly seen in the mentality, the behaviour and the process of knowledge. It is important for a company to understand its role in the modern society. Managers of important companies do their best to keep those respective companies at a level that can secure profit, but profit is not always the entire issue. It takes time in order for those innovations to reach the whole society, because companies are not willing to give information about their products, and keep this information to be able to have future profit. The role of competitive advantage can be seen in any field of activity, it provides the values that keep our society moving forward. Competitive advantage is needed in fields like: medicine, education or environmental protection. Companies have to innovate constantly in order to obtain this competitive advantage, but this competitive advantage can be present today and gone tomorrow, because the conditions on the market are changing at a very fast rate.In the past years the economical context has shown us that many companies weren't able to face the economical crisis, and one reason was that they didn't have a well planed strategy from the start. Of course the process of preparing a good strategy should not occur in difficult moments, it is necessary that it should be stated long before such times, because in difficult times it is very hard to find a suitable solution regarding the context and how quickly things change..*

## KEYWORDS

## JEL CLASSIFICATION

## 1.INTRODUCTION

In the past years the economical context has shown us that many companies weren't able to face the economical crisis, and one reason was that they didn't have a well planed strategy. Of course the process of preparing a good strategy should not occur in difficult

moments, it is necessary that it should be stated long before such times, because in difficult times it is very hard to find a suitable solution regarding the context and how quickly things change.

Therefore is important to regard strategy as one of the key elements of a business, and regard that the difference of having a strategy developed and implemented and not having one could mean the difference between managing on the market and bankruptcy.

Managers should also keep in mind all the important factors that can affect a company from inside but also from outside, and develop the means to transform threats into opportunities and in this way having the possibility to deal with all kind of challenges.

## 2. IMPORTANT

The article hopes to give answers to the following questions: what can be obtained after a good strategy implementation, how can competitive advantage be obtained, what can be the cost of not implementing a strategy, which are the steps for defining strategy in a company. Its aim is to be a theoretical article in which the major aspect of providing a good strategy can be transferred to a company with a brief presentation of an international company that has focused in the past years on a successful strategy: the low cost strategy.

### 2.1. Legal requirements

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## 3.The process of defining strategy

The notion of strategy is important for a company which operates on a free market and where it confronts numerous competitors, as same as a army needs a strategy before going to war. The war on such a market is fought through price policies or differentiation policies which can put a mark against other companies, and the role of the army commanders is taken by the company managers who have day by day to reinvent themselves and to find new solutions in order for a company to exist on the market and to prosper on that market.

Many contemporary theories treat strategy as the main way in which a company can obtain competitive advantage, and this is quite true, because a good conceived strategy and well implemented can bring the most desired competitive advantage to a company. Although sometimes it is difficult for a respective company, and here we are talking about the managers, who can not say for sure that they are on the write path when it comes to

implementing the best strategy, there is the possibility to reduce that risk. The best way in which this can be obtained is through the thoughtful and systematical selection and choosing the most appropriate strategy and applying the strategically management process.( Barney & Hesterly, 2010)

Before obtaining competitive advantage a company has to realize what competitive advantage really is. There are many definitions of competitive advantage which say that a firm has competitive advantage when it is able to create more economic value than rival firms. Economic value is simply the difference between the perceived benefits gained by a customer that purchases a firm's products or services and the full economic cost of those products or services. (Barney and Hesterly, 2010)

Others see competitive advantage as a value that motivates the customers ( or end users) to purchase the firm's products or services rather than those of its competitors and poses impediments to imitation by actual or potential competitors.( Christensen, 2010)

The strategically management process is a set of analysis and decisions that can rise the probability of a company to implement a good strategy, a strategy which in the end will generate competitive advantage.( Barney & Hesterly, 2010)

## 3.1 Defining the company's mission

For companies which are at the start of the road or for which have a long presence on the market, defining the company's mission is an essential criteria and at the same time the first step which must be taken in order for that respective company to have even a chance to obtain competitive advantage. The mission can be formulated in a few phrases or it can be resumed at a few words, but that can give a client that first enters in contact with that company, which in a sense represents a psychological moment, a sense that the respective company really knows what it wants from the market and what it wants to give back to the community where it operates and this psychological moment can create a bond between the company and the client and vice versa.

In other cases stating the mission of a company can be presented through which are the main goal of the company in the next period of time. If a company has clear goals that can be achieved, it can induce to the client the fact that the company is really interested in the future perspectives both in regard of the financial plan but also in the environment issue as well.For example the computer company Dell have a message: *The core elements of the soul of Dell* , this soul is made up by 5 parts:

1. The clients. Dell believes in the creation of a relationship based on trust with its clients through the providing of a superior experience at a fair value.
2. The employees. Success is based on teamwork and through the offering the opportunity to each employee to learn and to be able to develop his qualities.
3. The direct approach of a problem or challenge.
4. Social responsibility. Dell believes in a responsible participation on a global market.
5. The passion to win at everything that they do. ( Barney & Hesterly, 2010)

Schematically the strategic management process can look like this:
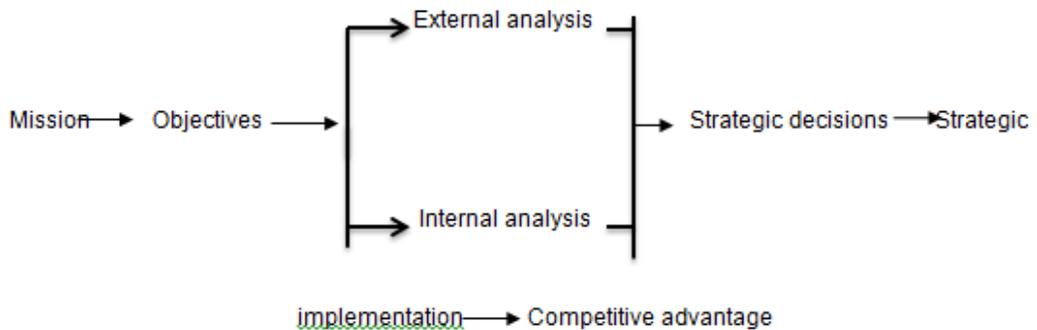


**Figure 1. The strategic management process**
Source: adapted from Barney & Hesterly (2010, p. 5)
Another aspect regarding strategy defining is the fact that it should consistent with the expectations that the other factors have regarding the company, and here we are talking about factors that affect both the internal environment but also the external environment and these are:
1. Internal stakeholders:
   - Human resources
   - Shareholders
2. External stakeholders:
   - Clients
   - Suppliers
   - Competitors
   - The environment
   - Society
Of course in such a context it is hard it is getting harder and harder for a company to be able to please all these categories of stakeholders taking also into consideration the actual economic context, but in such conditions the managers have to be aware of their global responsibilities and to give the same attention to the all kinds of stakeholders that are necessary in order for a company to conduct its activity. ( Nejeti et al., 2010).

**3.2.Establishing the company's objectives**
Although in many cases the main objective of having and running a business is to have profit, this is the main goal that many shareholders impose to their managers, sometimes this objective can have other ways of fulfilling itself:
   - The creation of n number of jobs in  the countries in which our company is present
   - Activity expansion in other parts of the globe
   - Pollution reduction in the factories owned by the company
   - Maintaining the same market share in the future
We can see the context in which the objectives are generated through this main factors that play on the market:
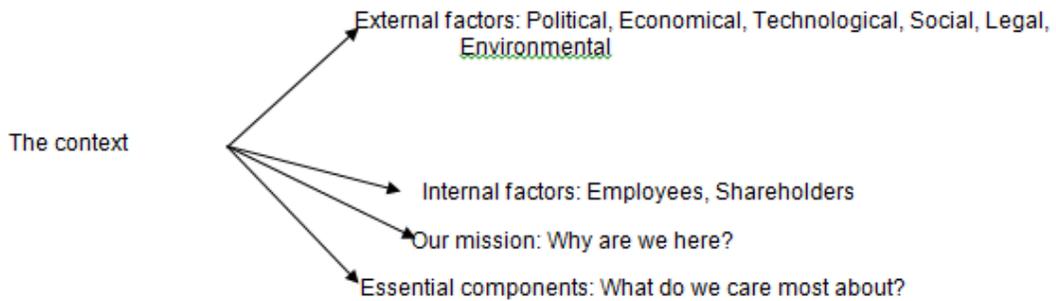
**Figure 2. The context of setting objectives**
Source: Adapted from Philips (2011)

Also the company's strengths should be mentioned in this process but also the week points, and creating some scenarios regarding opportunities that can be gained on the market but also threats and what the company want to achieve in the future:

- The vision: What do we want to become
- Long term stability
- Designing the future now in the present
- The conscientious allocation of resources( Philips, 2011)

Strategy should be the force that should action on the company in such a way that it will achieve its objectives, objectives that need to be designed in the present to have effect on the future. The objectives should be formulated only after a detailed analysis of the company's strengths and weeknesses, aspects that regard the internal environment, but also the opportunities that can occur and threats present on the market.

In the opinion of Philips (Philips, 2011), strategy is a simple issue, in which only the right questions should be asked and these are: "what" and " why" , and not "how" or "when" and the question that defines the company's mission is " why are we here" , this question generates the next important question "what is our main activity" , and the answer reveals itself through the product or the service that the company sells. To make profit represents one of the objectives, and the fulfilling of this objective will enable the company to realize its mission  , and being just a means of realizing the mission, not the mission itself.

Also a share of values that the company keeps in mind when presenting their image to the public can have a powerful impact on the customers.

Our values:

- Act with uncompromising honesty and integrity in everything we do.
- Satisfy our customers with innovative technology and superior quality, value and service.
- Provide our investors with an attractive return through sustainable, global growth.
- Respect our social and physical environment around the world.
- Value  and develop our employees' divers talents, initiative and leadership.

Earn     the     admiration     of     all     those     associated     with     the     company's image.(http://www.3am.com.tw/exec/msg.php?mid=2&cid=2&lg=E)

As suggested in Abrahams(1995) the values that a company tries to respect can be expanded tot include specific objectives:

Satisfy our customers with superior quality and value:

- Providing the highest quality products and services consistent with our customers' requirements and preferences.
- Making every aspect of every transaction a satisfying experience for our customers

- Finding innovative ways to make life easier and better for our customers.

## 3.3. The external and internal analysis

The next step that must be taken in order to fulfill a good strategy decision and implementation is to realize the external and internal analysis. Opportunity and threat identification can be realized through the help of the SWOT analysis, this analysis enables the company also to find its strengths and weeknesses.

This is a good opportunity for all those who compose the management team to have the same view regarding a problem that affects the company, and to find a solution to it using the SWOT analysis. The participants are asked to say which are in their opinion the week points and the strengths of the company, regarding aspects that come inside the company, the structure, the processes technologies but also aspects that come from outside the company. And a good way to identify strategic opportunities is to link the results obtained using the SWOT analysis and to ask every member of the management team to suggest a strategy, which must start with a verb, this will help the company to strengthen its valuable points, to repair its week ones, to capitalize opportunities and neutralized its threats by turning them into opportunities. (Philips, 2011)

Then there should take place a segmentation of each compartment regarding the external factors that can affect the company using the PESTEL method. This method analyses the 6 elements that create the external ambiance: politics, economics, social factors, technologies, environment, laws and regulations.

Politics can influence the activity of a company through government measures, for example tax increase, excise increase, resource allocation for public investments, protectionist measures regarding a sector of the economy, or the listing of a public company on the stock market.

The domain of economics is probably the wastes sector that can influence the activity of a company, and the most recent example is the financial crisis felt back in 2008 and which is still haunting sectors of the economy today in 2014.

Social factors have the capacity to influence the activity of a company on a long term, and here the best example is the demographic factor which in our country is possible to create, because of the low natality, a crash of the pension system, this could be speculated by insurance companies.

Technology affects both companies that are in the production field, but also those which are concentrated on services. Those which produce goods can improve their line of production, and the others can use informatic programs to help ease the work of their employees, and to help them to be more efficient at work.

Environment factors have gained more and more importance in the past 20 years, with numerous decisions taken in this field and that can impose a certain amount of concentration of $CO_2$ in the air, or other substances in the water. Often sanctions and fines are given to companies that do not align to the regulations in this field.

As in regard of the laws and regulations, they can influence directly the activity of a company, and the must be put immediately in practice.

## 3.4. Choosing the right strategy

After designing the mission, establishing the objectives and realizing the internal and external analysis a company can be a little more certain about the environment where it undergoes it's activity, and can have a perspective at least about the near future, because strategy is a term that comes from the military field, we can associate this steps to a soldier who is going at war, that has been trained, has been given equipment and established the main objectives on the battlefield, and now is ready to face the enemy.

There are 2 kinds of strategies from which a company can choose:
- business strategies and here are 2 subcategories:-the leadership through cost strategy

-differentiation strategy
- corporate strategies, this kind of strategies are used by big companies to obtain competitive advantage in two or more industries or markets. ( Barney & Hesterly, 2010)

### 3.4.1. The concept of competitive advantage

In the majority of industries some companies are more profitable than others, no matter if the profitability rate of that respective industry is high or low. Those who excel in an industry are those who have something special and hard to imitate, which enables them to overpass their rivals. These unique skills and rare resources are named in the literature: sources of competitive advantage. ( Evans, Shulman, 1992)

Implementation of a good strategy can lead to sustainability, this sustainability is obtained when competitive advantage is capable to resist erosion caused by the behavior of other competitors.( Porter, 1985)

There are many studies which explore the conditions where a company can create sustainable competitive advantage.( Barney, 1991). Barney ( 1991) offers a list of 4 essential references that can transform a resource or a skill into sustainable competitive advantage:

- It is valuable
- It is rare, it is hard to find by other competitors
- It is hard to imitate
- There are no other strategic equivalent for that respective resource or skill

The resources and skills of a company are considered valuable when they help the company in formulating and implementing a strategy that can improve the efficiency of that company. ( Bharadwaj et. al 1993)

The final requirement in order for a resource or a skill to be able to become a source of sustainable competitive advantage is that respective resource or skill to be irreplaceable.( Bharadwaj et. al1993)

### 3.4.2. Low-cost strategy implementation at Ryanair

The recent spread of low-cost strategies beyond the American domestic market, where Southwest started operating in the seventies, has brought low-cost pricing to the forefront of research. The success of low-cost airlines in Europe has been astonishing. Low-cost carriers offered almost 20% of all European flights in the first half of 2007 (Eurocontrol, 2007).

The most eloquent example when it comes to present the leadership through cost strategy is the airline company Ryanair. Headquartered in Dublin, Ireland, Ryanair flies short flights throughout Western Europe. In 1985, Ryanair's founders started a small airline to fly between Ireland and England. For six years, this airline barely broke even. Then in 1991, Michel O'Leary, current CEO at Ryanair, was brought on board. O'Leary traveled to the United States and studied the most successful low-cost airline in the world at that time: Southwest Airlines. O'Leary became convinced that, once European airspace was deregulated, an airline that adopted Southwest's model of quick turnarounds , no frills, no business class, flying into smaller regional airports, and using only a single kind of aircraft could be extremely successful. Prices in the European air market were fully deregulated in 1997.

Since then Ryanair has become an even lower-cost airline than Southwest. For example, like Southwest, Ryanair only flies a single type of aircraft: a Boing 737-800. However, to save on the cost of its airplanes , Ryanair orders them without window shades and with seats that do not recline. This saves several hundred thousand dollars per plane and also reduces ongoing maintenance costs. Both Ryanair and Southwest try to make it easy for consumers to order tickets online, thereby avoiding the costs of call centers and travel agents. However, just 59% of Southwest's tickets are sold online, 98% of Ryanair tickets are sold online.

This focus on low costs allows Ryanair to have the lowest prices possible for a seat on it airplanes. The average fare on Southwest is $92; the average fare on Ryanair is $53. But, even at those low prices, Ryanair is still able to earn comfortable margins.

However, those net margins don't come just from Ryanair's low costs. They also reflect the fact that the fare you pay Ryanair includes only the seat and virtually no other services. If you want any other services, you have to pay extra for them. If you want any other services, you have to pay extra for them, for example if you want to check bags, it will cost $9.95 per bag.

Finally to further increase revenues, Ryanair sells space on its planes to advertisers. When your seat tray is up, you may see an ad for a phone from Vodaphone. When the tray is down you may see an ad from Hertz.

All these actions enable Ryan air to keep its profits up while keeping its fares as low as possible. And the results of this strategy have been impressive, from near bankruptcy in 1991, Ryanair is the now the largest international airline.( Capell, 2009)

If we take into consideration that the market were Ryanair is undergoing its activity was affected first the events that took place on 9/11 2001 at the World Trade Center towers, and second by the economic crisis starting from 2007, the company's success is even grater, and this success can be linked to applying the cost leadership strategy.

Going on the other side of the Atlantic we can see that the company from where Ryanair has been learning business managed achieve the 39th year with profit, and taking into consideration that this industry is in many ways brutal with no time to take air, and quick decisions are needed.

This performance of Southwest airlines is impressive and some of the strategies presented on the previous page about Ryanair are used by Southwest with the mark that the American company used them first but also strategies that are constantly putting the company in front of this industry: it uses only one airline type the Boeing 737, it doesn't assign seat numbers, it doesn't charge for check bags, Southwest's flights are generally point-to-point. The plane lands, goes through turnaround, and often heads right back where it came from. With less interdependence, the network can survive a problem at a single airport. The system is designed to facilitate short-haul flights, not international travel—Southwest targets the domestic business commuter, not the globetrottingjetsetter.(http://www.slate.com/articles/business/operations/2012/06/southwest _airlines_profitability_how_the_company_uses_operations_theory_to_fuel_its_success_.ht ml)

Financial Highlights:

**Tabel 1. Ryanair financial highlights**

|  | 2013/€ M. | 2012/€ M. | Change |
|---|---|---|---|
| Operating revenue | 4,884.0 | 4,324.9 | + 13% |
| Net profit after tax | 569.3 | 560.4 | +2% |
| Adjusted net profit after tax | 569.3 | 502.6 | +13% |
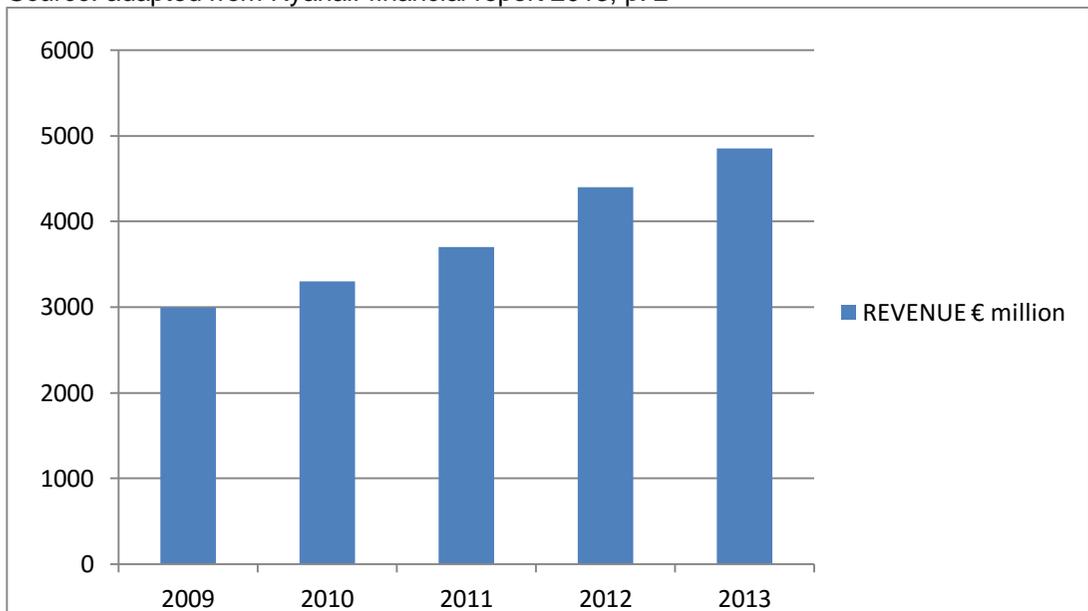
**Figure 3. Ryanair revenue 2009-2013**

Profit after tax increased by 13% to €569.3 million compared to €502.6 million in the year ended March 31, 2012 primarily due to a 6% increase in average fares and strong ancillary revenues, offset by an 18% increase in fuel costs. Total operating revenues increased by 13% to €4,884.0 million as average fares rose by 6%. Ancillary revenues grew by 20%, faster than the 5% increase in passenger numbers, to €1,064.2 million due to a combination of improved product mix and the roll out of reserved seating across the network. Total revenue per passenger, as a result, increased by 8%, whilst Load Factor remained flat at 82% compared to the year ended March 31, 2012.

Total operating expenses increased by 12% to €4,165.8 million, primarily due to an increase in fuel prices, the higher level of activity, operating costs associated with the growth of the airline, and the strength of UK pounds sterling to the euro. Fuel, which represents 45% of total operating costs compared to 43% in the prior year, increased by 18% to €1,885.6 million due to the higher price per gallon paid and increased activity in the year. Unit costs excluding fuel increased by 3%, including fuel cost per passenger (—unit costs‖) rose by 8%. Operating margin increased by 1 point to 15% whilst operating profit increased by 16% to €718.2million.(http://www.ryanair.com/doc/investor/2013/final_annual_report_2013_130731.pdf)

This strategy can be applied by other companies in other industries, for example companies that operate in the field of goods transportation and has a field of several trucks can reduce its cost applying some techniques used by Ryanair. In the sense a manager from such a company can purchase the same kind of trucks reducing therefor maintenance costs, and can choose from the standard model which has the lowest cost.

### 3.5. Strategy implementation

The last stage in this process of defining strategy is the implementation stage, this stage can differ from one company to another when it comes to the duration of the implementation, which depends on the complexity of the strategy, and this period can vary to a couple of months to even years. What is important is that at the end, the results to be seen in the financial reports of the company, but also in the satisfaction of the company's clients and all the components of the internal and external environment.

### 4.CONCLUSIONS

These aspects regarding strategy show that a company must take very serious the facts and the forces that can come from a powerful strategy. In this period when competitive advantage can not appear just out of nowhere it is very important for the management team to have a clear direction and this can only come from a coherent analysis made from present elements in the company.

As shown in the upper examples a good strategy must fit the company like a glove, and must be suitable for the company in the near and far future. Future analysis will try to see the sources of competitive advantage and how they are able to influence the strategy of a company, a backward process considering that a company has established a strategy and it is able to obtain competitive advantage, is it necessary to change the strategy or should the company only try to adapt to new conditions.

Circumstances on the market show how difficult is for a company to adapt to new conditions, and a fact regarding strategy is that in order for a company to implement a good strategy it must have stability in the organizational team both in the management team but also a low fluctuation of employees.

This is done, in case if the competitive advantage is obtained through technology, by having a well protected system regarding that technology. If the competitive advantage is made through innovation, then a good R&D team must be kept in the company, and if the answer is price, a firm has the objective to look for the best report between quality and prince in order to maintain its price competitiveness also having the suppliers that meet this kind of expectation and having the technology that can give the company the lowest price on the market.

In conclusion, three are the most important aspects when regarding strategy:

1.      Good preparation, consider what the company's strengths and weaknesses are , and consolidate the strengths, while trying to minimize the weaknesses.

2.      Time, a good strategy requires time, from the first statement to implementation it can take even years to see the benefits of a strategy.

3.      Strategy is the first step and an imperative one, a step that must be taken in order to obtain competitive advantage

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# QUALITY AWARDS: AN IMAGE OF BUSINESS EXCELLENCE

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**Abstract:** *Across the world, increasingly more governmental organizations and industrial are doing everything possible to promote quality and to survive, the basic principle remains customer satisfaction and even more than that, it speaks of the principle of customer delight. In this sense, quality has become the source of sustained competitive advantage that provides organizations the supremacy of the global markets characterized by competition which becoming more and more intensified. Juran, one of the highest quality gurus say that "just as the twentieth century was the century of productivity, the twenty-first century will be the quality century" which is a very relevant and comprehensive statement of the economic reality of the past and a profound forecast for future business of the twenty-first century. In this regard, in order to achieve this competitive advantage, quality must be managed and this is accomplished through Total Quality Management (TQM). Quality awards models are instruments of total quality management through which quality can be assessed and improved, thus, knowing the quality awards models is critical for findings the new ways to improve the quality and performance of the organizations. The present paper aims to illustrate the best practices on quality improvement in this respect we intend to present the general framework of the quality awards for business excellence. In this sense we present the most important international quality awards, namely: "Malcolm Baldrige National Quality Award", "European Quality Award" and "Romanian Quality Award J. M. Juran". For this purpose we used as main sources of analyzing the structure and the operation mode of these three important quality awards, Juran's work (which is probably the most important work in the field of quality) and other relevant sources in total quality management which treats issues related to quality awards and also we used as sources of updated information the official websites of institutions and foundations who organizing the deployment of these awards.*

**Keywords:** quality awards; TQM; quality excellence; Baldrige quality award; European quality award; Romanian quality award.

**JEL classification:** M1; M10.

## 1. Introduction

Research on quality aim to answer the following question: Why an economic organization must be involved in quality management activities. Regardless of the area in which they operate, the organization aims to improve quality due to a number of reasons, some of which are generated by the competition that exists on
the market and some of the responsibility to customers.
Widening acceptance and implementation of TQM is based on a number of major trends recorded in contemporary society, such as (Ilies, 2003):
- increasing competition nationally and internationally;
- strategy orientation towards quality companies perceived as a major competitive

advantage;

- increasing customer requirement goods and services purchased.

The price has ceased to be the essential factor in the choice of customers. Recent research (Ilies & Crisan, 2011) shows that 80% of international buyers on industrial market, considers quality as having at least equal importance as price in making the decision to purchase. Many large companies have recognized the need to develop a distinct strategies, regarding quality, which means adopting TQM theory as a management philosophy. Many firms still addressing customer satisfaction in a narrow way, referring exclusively to product quality.

Total Quality Management, consists in integrating all functions and processes within an organization in order to achieve continuous improvement of goods and services quality to achieve customer satisfaction. In many countries, industries, and companies TQM has appeared to evolve through several distinct steps or phases. These phases include a focus on product quality, on product process quality, service quality, service process quality, business planning, strategic quality planning, and integrated strategic quality planning (Juran, 1999:14.4).

According to Hafeez, Malak, & Abdelmeguid (2006) changing from detection to prevention required not only the use of a set of quality management tools and techniques, but also the development of a new operating philosophy that required a change in the way companies were managed. Total Quality Management (TQM) means achieving quality in terms of all functions of the enterprise. This includes interaction between all the components of the organisation as well as the components themselves. Without insisting we point below for the crystallization in understanding the concept of quality, the travel path to the concept of quality controlled to total quality management. In this regard we can see the next steps in the evolution of the concept of quality in figure 1.

TQM is seen as a way to transform the economies of some countries to be more competitive than others. However TQM does not and will not produce results overnight, it is not a panacea for all the problems facing the organization. TQM requires a change in organizational culture, which should focus on meeting customer expectations and increasing the involvement of all employees to achieve this objective, as an expression of ethics for continuous improvement (Hoyle, 2007).

According to Juran (Juran, 1999:14.2) many companies have found that all of their radical restructuring, reengineering, downsizing, and numerous quality programs may have helped them survive, but they still do not have a distinctive quality advantage.

Their future will be determined by three key areas: alignment, linkage, and replication. Combined with the fundamental concepts of quality management (continuous improvement, customer focus, and the value of every member of the organization), their work in these three key areas is transforming the way they are managing the entire organization. The almost universally accepted goals of total quality are lower costs, higher revenues, delighted customers, and empowered employees.
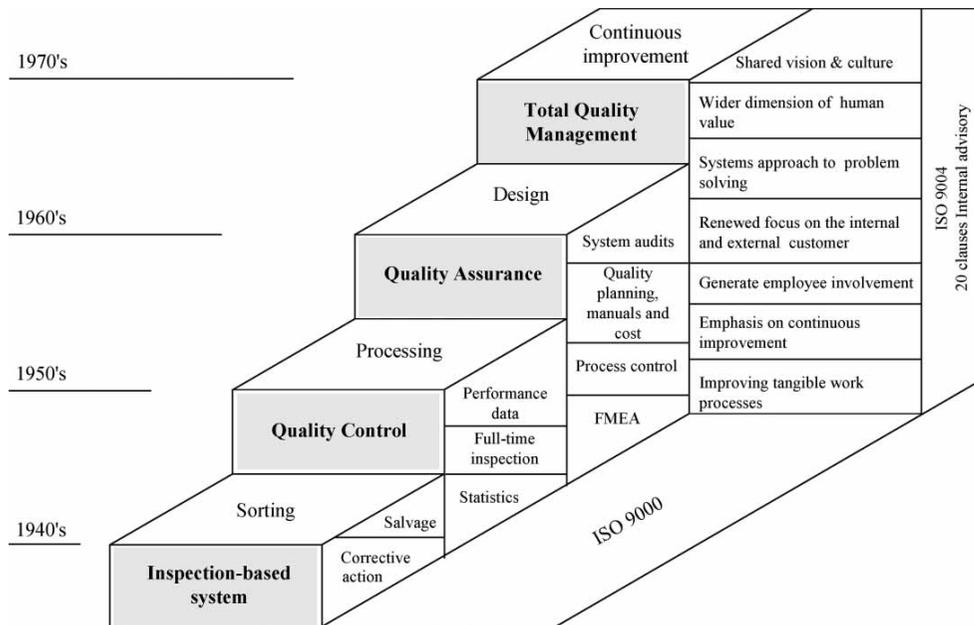
**Figure 1.** Evolution of total quality management
Source: (Hafeez, Malak, & Abdelmeguid, 2006:1214)

TQM requires a change in organizational culture, which should focus on meeting customer expectations and increasing the involvement of all employees to achieve this objective, as an expression of ethics for continuous improvement. The mechanisms of change are: education; communication; recognition performance; managers' behaviour (Hoyle, 2007).

## 2. The Malcolm Baldrige National Quality Award

A number of individuals and organizations proposed such an award, leading to a series of hearings before the House of Representatives Subcommittee on Science, Research, and Technology. Finally, on January 6, 1987, the Malcolm Baldrige National Quality Improvement Act of 1987 was passed. The act was signed by President Ronald Reagan on August 20, 1987 and became Public Law 100-107. This act provided for the establishment of the Malcolm Baldrige National Quality Award Program (Juran, 1999:14.18).

Malcolm Baldrige National Award for Quality (MBNQA) was created to promote quality excellence and to share successful strategies in quality. No other award for business success or progress in management theory is not up to the Baldrige Award.

Over twenty states have begun to develop regional programs for quality, taking as reference the MBNQA prize. Award established a national standard in terms of quality and hundreds of corporations use the Baldrige criteria as a basic guide to improving the quality award programs effectively created a set of quality standards in American industry.

The MBNQA award criteria, is a basic guide to how firms can produce quality. Employment in these criteria is not easy. The values and concepts embodied in the award criteria are (Juran, 1999:14.19):

- customer-driven quality
- leadership
- continuous improvement and learning
- valuing employees

- fast response
- design quality and prevention
- long-range outlook
- management by fact
- partnership development
- corporate responsibility and citizenship
- results focus

The prize is awarded to three categories: manufacturing, services and small business, cannot be granted more than two awards per year for each category. Applicants should provide details about their quality management system and show results and improvements in the following areas (Prybutok, 2004):

- leadership
- information and analysis
- strategic planning quality
- human resources management and development
- management of product quality
- quality and operational results
- focus on client satisfaction and its

To define quality performance, National Institute of Standards and Technology (NIST) developed a set of principles for quality management, including quality determined by consumer, leadership, continuous improvement, satisfaction of employees, quality and design prevention, plans for the future, responsibility company, and results. Baldrige award administrators considers that these criteria form a framework for performance and excellence. The criteria used to assess the performance of a company is divided into seven categories which provides strategic direction of the entire system. These categories are: leadership, strategic plan, focusing on the market and the consumer, measurement, analysis and knowledge management, focusing on human resources, process management and results, as shown in Figure 2.

Leadership, strategy and customers represent the leadership triad. These categories are placed together to emphasize the importance of a leadership focus on strategy and customers. Workforce, operations, and results represent the results triad. A company's employees and its supplier partners through its key processes accomplish the work of the organization that yields the business results. All company actions point towards business results— a composite of customer, financial, and nonfinancial performance results, including human resource results and public responsibility. The seven categories are further subdivided into 20 examination items, each focusing on a major requirement. Each item contains one or more areas to address. There are 29 areas to address. (Juran, 1999:14.22).

Companies that have won are required to present their successful strategies and other companies. The way in which this award affect firms in improving the quality, refers to severe criteria regarding quality assurance of goods and services provided by suppliers. They are a critical link in the chain is Total Quality Management processes.
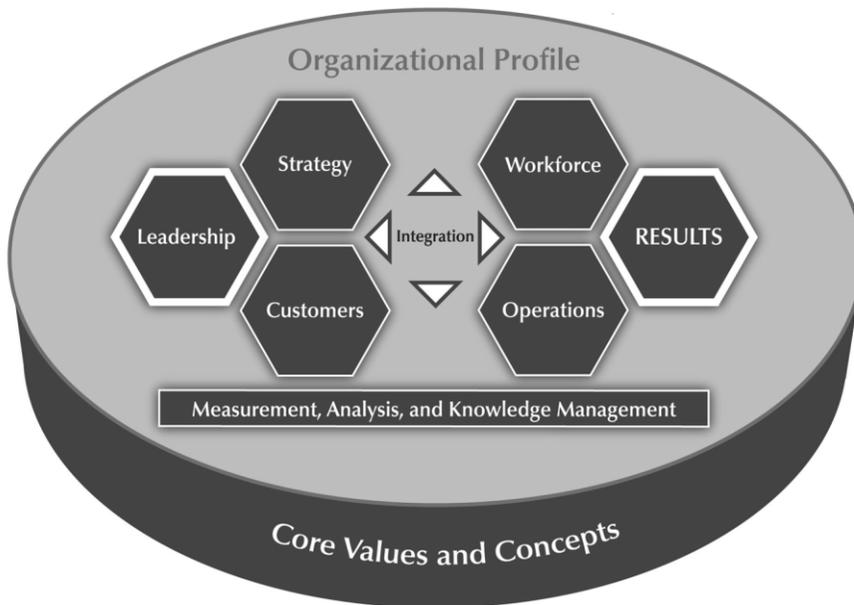
From Baldrige Performance Excellence Program. 2015. *2015–2016 Baldrige Excellence Framework: A Systems Approach to Improving Your Organization's Performance.* Gaithersburg, MD: U.S. Department of Commerce, National Institute of Standards and Technology. http://www.nist.gov/baldrige.

**Figure 2.** The Baldrige Award Criteria
Source:  (http://www.nist.gov/baldrige/publications/education_criteria.cfm)

Baldrige Award is designed to highlight US companies that excel in quality. The award aims to promote:
- quality consciousness;
- understanding the requirements on quality improvement;
- sharing information about successful strategies and profit gained from their implementation.

Unlike ISO 9000, the award focuses on nonprocedural quality aspects such as e.g. leadership, human resource management, authority and employee morale and customer satisfaction (consumers).

Baldrige Award basic purpose is to enhance business results and to ensure customer satisfaction (consumers), taking into account the results achieved by competitors to attract and retain customers and to contribute to increased market share companies (companies). To obtain the award, applicant organizations must use a model of self-evaluation. The model is based on the evaluation results, taking into account the following areas (Ilieş, 2003):
- customer satisfaction;
- employee satisfaction;
- business performance

**3. The European Quality Award**

Recognizing the importance of quality, 14 European major companies formed the European Foundation for Quality Management (EFQM) in 1988 with the appro-val of the European Commission (Mohit, 2012).

European Quality Award (EQA) was introduced in 1991 and first awarded in 1992. It is a competition that can enter the next economic organizations, public authorities and higher education institutions. It is awarded according to the degree of excellence of the organization relative to a reference point: its self-evaluation model. This pattern has

unanimity EU Council and the EFQM (European Foundation for Quality Management). To develop this reference point EFQM appealed to over 1,000 people including many managers, consultants and academics. The research took into account the opinions of specialists Deming Prize and M. Baldrige Award. To explain the European model of "total quality", we first present a simple way of quality in figure 3 which requires the involvement of all staff to continuously improve the process.



**Figure 3.** The European Quality Award Criteria
Source:  (http://www.efqm.org/efqm-model/model-criteria)
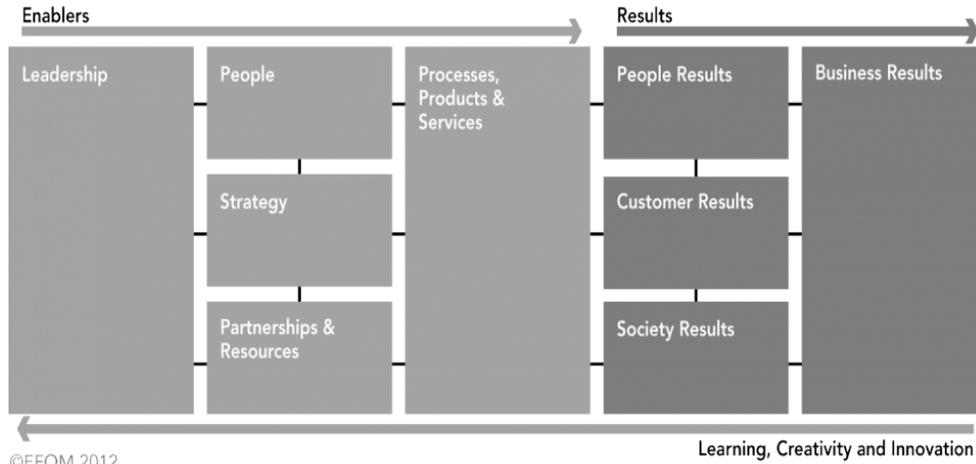
As shown in the figure above award criteria are:
- *Leadership* refers to how the management team together with all other employees are oriented towards continuous quality improvement processes within the organization.
- *People* addresses how the organization manages, develops and builds its own staff skills at individual, team and organization and plan these activities in order to support its policy and strategy and the effective operation of its processes.
- *Strategy* refers to the perception of organizational values and strategic orientation and the means by which it performs. It concerns how the organization implements its mission and vision.
- *Partnerships and Resources* it addresses how the organization plans and manages its external partnerships and its internal resources to support its policy and strategy and the effective operation of its processes.
- *Processes, products and services* addresses the way in which the organization designs, manages and improves processes to support its policy and strategy and meet customers and other stakeholders for generating added value.
- *People results*, it addresses how the organization is perceived by its employees and their attitude towards it.
- *Customer results,* refers to how customers perceive external organization's products and services.
- *Society results,* refers to the way in which the organization is concerned about the community in which it operates, are included social responsibility actions.
- *Business results,* illustrate what actually performs the organization in relation to its planned performance.

The first element is leadership which drives people management, policy and strategy, and resources. These, in turn, drive all processes which drive people satisfaction, customer

satisfaction, and impact of society. These three drive business results.

This model of self is, above all, an instrument of TQM. The EQA is divided into factors and results. The factors concerning how the organization addresses each element and how the results are achieved. Each factor is subdivided into criteria covering several fields. Each of these criteria relate to certain aspects of the activities carried out.

The results relate to what so or organization well-defined periods as medium and long term trends. The results should be expressed in terms such as (Conti, 1993):

- actual performance of the organization;
- goals;
- comparisons with the results of competitors;
- comparisons with the results of the best organizations in their field.

European Quality Award criteria allow obtaining and sustaining a competitive advantage, resulted in (Vokurka, et. all, 2000):

- achieving excellence in complete satisfaction of the client;
- dynamic staff within the organization to pursue excellence;
- identify strategic directions for improving the activity in the future;
- the progress achieved in the field of TQM;
- comparisons with the best organizations.


## 4. The Romanian Award for Quality "J. M. Juran"

At the initiative of a group of 11 professional organizations, non-political and non-profit, some specialized engineering and quality management, other large national professional representative in 1998 came into being the Foundation "*PRC - JMJ*" and in February 1999 acquired legal personality. Joseph Moses Juran (JMJ) - Romanian-born American citizen, was born on December 24, 1904 in Brăila, Romania and grew up in Romania, and around age of 8 immigrated to the US where he became one of the great spiritual masters of quality - is recognized internationally as one of the leading experts in quality management. Honorary Member of the Romanian Academy J. M. Juran gladly accepted the Romanian Award for Quality bear his name (PRC - JMJ foundation website: http://www.fundatia-juran.ro/).

Romanian Award for Quality, is similar conceptually and functionally with "European model of business excellence" used by the organization EFQM (European Foundation for Quality Management) to assess candidates for European Quality Award.

The strategic objective is to stimulate economic organizations, organizations of education and research sector - development, various organizations in the public, private and civil society in Romania, in order to implement the most effective methods of management and quality management in particular and validation of managerial excellence levels achieved by these.

Romanian model of business excellence (figure 4) is represented by nine criteria (PRC - JMJ foundation website: http://www.fundatia- juran.ro/index.php?idcat=72 &meniu=2):

- *Determinants (how was obtained?)*
    – leadership (10%)
    – strategy and planning (8%)
    – staff management (9%)
    – resources (9%)
    – quality systems + processes (14%)
- *Results (what was achieve?)*

- customer satisfaction (20%)
- satisfaction staff (9%)
- impact on society (6%)
- business results (15%)

The fundamental logic of this model, applied since year 2000 to assess candidates of Romanian Quality Award is: exceptional business results, characterized by customer and employee satisfaction through expected impact on society and an positively effect on the organization will be achieved only through a management able to inspire, support and foster a specific TQM culture, properly directing employees and ensuring, through an appropriate strategy and planning, proper management resources and processes.

To win Romanian Quality Award candidates must prove that they are on the path of business excellence implementation, over a number of years, and have met the expectations of stakeholders. These stakeholders are customers, employee's suppliers, shareholders (owners) and at the same time, the company in which the organization operates (Ilieş, 2003).

Evaluate and score awarded to the candidate, are based on the following fundamental aspects for business excellence model: maximum score obtainable is 1000 points. The importance of each criterion is expressed by the ratio (percentage) to which this criterion occurs in the maximum score that can be awarded. The 9 criteria are used to assess the performance of the organization on the path to business excellence.



## Modelul românesc al EXCELENŢEI IN AFACERI

Cele 9 elemente reprezintă cele 9 criterii (incluzând, în total, 32 sub-criterii) ale "Premiului Român pentru Calitate <J.M.JURAN>".

| | | | |
|---|---|---|---|
| 1. LEA-DER-SHIP 10% | 3. MANAGEMENTUL PERSONALULUI 9% / 2.STRATEGIE ŞI PLANIFICARE 8% / 4. RESURSE 9% | 5. SIS-TEME CALI-TATE ŞI PRO-CESE 14% | 7.SATISFACŢIA PERSONALULUI 9% / 6.SATISFACŢIA CLIENŢILOR 20% / 8. IMPACTUL ASUPRA SOCIETĂŢII 6% | 9. RE-ZUL-TA-TELE AFA-CERII 15% |

FACTORI DETERMINANŢI (50%)  REZULTATE (50%)

INOVARE ŞI ÎNVĂŢARE

**Figure 4.** The European Quality Award Criteria
Source: (http://www.fundatia-juran.ro/index.php?idcat=72&meniu=2)

As shown in Figure 4 and evaluation criteria for Romanian Quality Award are (Ilieş, 2003:388):

- *Leadership* - leaders develop the vision, mission and values, and act as an example for a culture of excellence and motivate employees
- *Strategy and Planning* - are based on information from the measurement of efficiency, market research and activities geared towards learning and

development of creativity
- *Resources* - are planned, managed and improved
- *Quality systems and processes* - the processes are improved if necessary, using innovations aim to satisfy all customers and other stakeholders
- *Employee satisfaction* - measuring the personnel results
- *Customer satisfaction* - measuring the customer results
- *Impact on society* - measuring the organizational results
- *Business key results* - results and indicators of the organizational effectiveness

## 5. In conclusion

Quality has become the source of sustained competitive advantage that provides organizations the supremacy of the global markets characterized by competition which becoming more and more intensified. Juran, one of the highest quality gurus say that "just as the twentieth century was the century of productivity, the twenty-first century will be the quality century".

The price has ceased to be the essential factor in the choice of customers. Recent research (Ilies & Crisan, 2011) shows that 80% of international buyers on industrial market, considers quality as having at least equal importance as price in making the decision to purchase.

Total Quality Management (TQM) means achieving quality in terms of all functions of the enterprise. This includes interaction between all the components of the organisation as well as the components themselves.

TQM requires a change in organizational culture, which should focus on meeting customer expectations and increasing the involvement of all employees to achieve this objective, as an expression of ethics for continuous improvement. The mechanisms of change are: education; communication; recognition performance; managers' behaviour.

The present paper aims to illustrate the best practices on quality improvement in this respect we intend to present the most important quality awards for business excellence, namely: "Malcolm Baldrige National Quality Award", "European Quality Award" and "Romanian Quality Award J. M. Juran".

Malcolm Baldrige National Award for Quality (MBNQA) was created in 1987 to promote excellence in quality and to share successful quality strategies. No other award for business success or progress in management theory is not up to the Baldrige Award.

European Quality Award (EQA) was introduced in 1991 and first awarded in 1992. It is a competition that can enter the next economic organizations, public authorities and higher education institutions. It is awarded according to the degree of excellence of the organization relative to a reference point: its self-evaluation model.

Romanian Award for Quality, is similar conceptually and functionally with "European model of business excellence" used by the organization EFQM (European Foundation for Quality Management) to assess candidates for European Quality Award. The fundamental logic of this model, applied since year 2000 to assess candidates of Romanian Quality Award is: exceptional business results, characterized by customer and employee satisfaction through expected impact on society and an positively effect on the organization will be achieved only through a management able to inspire, support and foster a specific TQM culture, properly directing employees and ensuring, through an appropriate strategy and planning, proper management resources and processes.

## 6. Acknowledgements

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# THE SEDUCTION OF MIGRATION WITH REGARD TO ROMANIAN WORKERS

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**Abstract:** *The shock of the transition from a centralized type to a free market type economy and the fall of barriers with regard to migratory labor force in the countries of Central and Eastern Europe, after the fall of communist regimes in the early 1990s, have led to national companies modeling, producing a new configuration of Europe, under the banner of cooperation and common values. If in the case of Romania before 1989 we were dealing with migration restriction in the forthcoming period communism we are witnessing a massive flow of migration of the labor force, its own citizens leaving national territory in favor of establishing either temporary or definitive in Europe or in countries outside the European Union. The term migration has exceeded the strictly considered academic environment, becoming a popular subject, commonly used by the media and the population, but largely minimized by the Romanian political class. Given its particular importance on the socio-economic, cultural and political development, the purpose of this study is to get a better understanding of the magnitude of the Romanian migration and the causes that have led to its genesis and stimulation. Why people choose to emigrate, which are the motives which cause them to adopt this behavior, which are the countries of destination and which are the clichés faced by Romanian migrants there, what are the consequences of such a process, these are the questions to which we want to have an answer. Literature in the field, rigorous studies of visiting scientists from the various areas, the statistical data from the various publications by the National institute of Statistics and online media sources have been given a picture of the phenomenon being investigated, and which have been added to the data collected as a result of the application of a questionnaire in the Romanian community from the United Arab Emirates. This will highlight a reaction in the group, namely the run away from the Romanian state, which is perceived as a passive/reactive player on the chessboard of the European Union. The conclusions of the study indicate the need for the State involvement in efficient management of Romanian migration – in particular, the migration of highly and medium qualified workers, granting importance to the reverse migration, namely the return back-home.*

**Keywords: migration, migratory labour force**, brain drain, Romania, United Arab Emirates.

**JEL classification:** J100

## 1. Several considerations.
**Motto:** "The second component of the demographic dynamic is the international migration [...] The immigrations have the same signification as births, while emigrations represent losses ..." (Trebici, 1991)

In the context of globalization the world becomes more alike a "global village" and we tend to agree with the fact that "the XXI'st Century will be the migration age" (Schatzer, 2001). Migration has existed since ever as human nature feature, playing an important role in

states and society evolution, enriching therefore the cultures and civilization. In base of these considerations, migration has become a fragile topic and strongly commented, especially in the receiving countries of immigrants. As a result, the world's states attention was concretized in a series of conventions and agreements in the field, of which we remember the most important ones: Geneva Convention on Refugees, the International Convention on the Elimination of All Forms of Racial Discrimination, the International Convention on Economic, Social and Cultural Rights, Convention 143 of the International Labor Organization: migrant workers, Cartagena Declaration on Refugees, the Protocol against the smuggling of migrants by sea , air or land, etc.

With the collapse of communism in Central and Eastern Europe and the former communist countries in the EU integration have imposed the liberalization of capital markets engaging in a decisive way, not only the free movement of goods and capital, but also of people, information and ideas. If before 1989 Romanian citizens left their territory either for political or ethnic reasons or family reunification, invoking either to study or work abroad, based on governmental agreements between Romania and other countries, today the main motivations of migration were transformed into reasons, predominantly economic.

In one of the last interviews given by Nicolae Ceausescu he had justified in a polite and complicated way the fact that Romanian citizens cannot travel freely abroad, even if the free movement is guaranteed by Constitution. "His answer was a perfect example of Stalinist sophistries…it's true, the Constitution guarantees the freedom of movement, but also guarantees people's right to a safe and prosperous home. Therefore we have a potential conflict between rights: if Romanian citizens were allowed to leave the country freely, the prosperity of the country would be threatened and they would compromise the right to a homeland. In this conflict of rights, there is a choice to be made, and the right to a safe and prosperous country clearly enjoys priority ... "(Zizek, 2014: 29). It seems that the same spirit of Stalinist sophistry courts the intellectual and political incompetence of elites of today Romania, who failed to get out of the pitfalls of the ideological discourse providing many reasons of population dissatisfaction. The lack of perspective, incoherent governance, public morality degradation and poverty explains the emphasis of Romanian migration phenomenon. Then it is about expanding corruption, which initially manifests itself here and there, and then extends everywhere, as the Head of German Federal Bureau of Criminal Investigation, Hans - Ludwig Zachert states (Coker and al., 2011), in various fields such as education, healthcare, scientific research, which does nothing but to affect the standard of living, the quality of life and increases social discrepancies. Do not think that other countries have bypassed the problem, they're far from it!

In the recent decades Romania has experienced important immigration variations of its citizens abroad. In 1990, permanent emigration was dominant, followed by temporary migration for work abroad in early 2001, and came as a reaction of dissatisfaction unto social - political status and increasing in 2007 and 2008 along with the membership of European Union (EU). With an aging population, a declining birth rate and leaving young labor force, the political class should be aware not only of the positive effects of migration, but also of its drastic effects. Despite the generally favorable context, European funds and the country's membership to the EU, Romania continues to be a country with a relatively low standard of living and unemployment that records an uptrend, topicality that led to the migration of about 4 million people (Ciolos, 2014). Moreover, the media and the specialized agencies warn that remittances are not capable of generating sustainable economic growth and solve the chronic problems with which Romania is facing, but the Romanian state continues to adopt the same passive, indifferent position, demonstrating the incompetence of controlling and managing the mass migration of Romanians, not involving itself actively in supporting migrants and their investments.

## 2. Manpower migration

One of the key factors that shape our world is migration, also called migratory movement of population. According to the Dictionary of Human Geography, migration is "a process by which people change temporarily or permanently their place of residence." In the same dictionary, as concise, clear and properly defined, the term of international migration "involves crossing a border, an official political boundary, regardless of the traveled distance."

Quoting Professor Miftode (1984: 154), which defines migration as "a spatial expression of social mobility", it is obvious that it brings significant social and political adjustments with social and economic policy implications and does not only mean a simple movement in the territory. A classic definition of migration is given by the sociologist Szczepanski (1972: 402), which defines it as a "series of phenomena that resides in individuals or groups moving from place to place in the social space".

The complexity of the phenomenon and the multiple and different consequences that it causes on individuals and states determine us not to have a single point of view on migration and the methods of data collection is not so satisfactory in order to provide a complete picture of the reality of migration flows. Considering two of the defining variables of migration, namely space and time, we can speak of internal migration (between different regions, located within the borders of a country) and of an international migration (external), of a temporary and a permanent migration. Approach to migration varies depending on the context in which it is placed: political, economical, social or cultural.

Professor Sandu draws attention to an important feature of migration today, namely that it does not resemble that of a century ago and that European countries have shifted in the last Century from country of emigration, which provide migrants, to country of immigration, which turned into host or transit countries. Thus, now the distinction between country of origin, transit and destination has become increasingly confused, a country that can have all the three characteristics. Migration affects almost all regions of the world and its motivations are more numerous today than they were once. We mention a few of them, namely: increasing regional disparities, demographic pressure, global crisis of jobs, segmentation of labor markets in developed countries, climate change, the discovery of new natural resources, deteriorating political environment in some countries, armed conflicts and ethnic clashes.

Labor migration has become a topic of major concern in today's world, together with the spectacular and unpredictable changes, which came in avalanche, amplifying the contacts and interdependencies between countries. The revolution of the new technologies of communication and transport, the existence of immigrant networks that provide access to information and offer support, and the possibility to travel from one end to the other of the world are contributing factors of international migration.

Taking into account migration specialists' opinion and certain statistics (UN, OECD, IOM, CGMC) we can say that we have entered a new phase of migration of women. If in the past immigrant women followed their husbands or partners, today they choose to migrate independently, often becoming financial supporters of their families at home. In the same context, global economic competition has intensified efforts of developed countries to attract highly skilled workforce everywhere, the benefits of "brain drain", as known in specialty literature, is still very popular. You can note that certain areas such as medical, computer science and research absorb an increasingly high percentage of Romanian migrants. Stănică (2007:110), citing various sources, shows that the meaning of the concept of brain drain expresses in most cases "educated labor migration from poor and qualified countries to the rich ones", attracted by better conditions of pay, professional recognition and a superior standard of living of the absorption country.

Legislation in force on the entry, residence, access to the labor market after the joining of Romania to the European Union on 1 January 2007 and the preparation level of the

migrants make Romanian migration know different directions, ascertaining for example that in Italy and Spain dominate low-skilled migrants, while in countries such as Britain, Germany, Switzerland, Belgium, France, UAE attract highly qualified migrants among the Romanians.

## 3. Consequences of labor force migration

Because both countries, of origin and the destination of international migration, are very different in terms of cultural, historical, ethnic composition and characteristics of the labor market, any attempt to generalize the effects of migration on them would be difficult to assess, as long as the evolution of international migration changes according to circumstances. Many developing countries governments, as is the case of Romania, encourages their labor migration by balancing its undeniable positive effects, such as reducing unemployment and the pressure on the system of assistance and social protection in these countries and the importance given to migrant remittances, which have contributed substantially to the national GDP in the past few years. But widespread emigration has its costs. The negative effect of labor migration increases with the loss of highly skilled and qualified labor for the home country, while recording in the host country "economic growth through human capital outstanding the creative ability of immigrants" (Zaman and Basil, 2005: 59). According to International Monetary Fund experts there is an increase of brain drain from less developed countries to the most developed ones (about 12.9 million people, of which 7 million in the US and 5.9 in other OECD member states) and a majority and well known trend to remain in the country of destination. Recent conducted research illustrates an increase in the size of the permanent international migration mainly at young people which will result in the medium and long term problems concerning birth rate and fertility (Ghetău, 2007). Consequently it's being distinguished the aging population of the countries of emigration. In Romania there are disastrous social consequences of migration, especially in rural areas. They make changes in family roles and among traditions in family life. An increasing number of school dropouts is registered among children who migrate to work abroad, even if temporarily. Of course there are positive aspects to immigrant and his family. As for the effects on host countries, they are significantly favorable, it is estimated as an increase in population through migration; it is associated with economic growth, workforce deficit reduction and mitigation of demographic aging process. One beneficial size to migration is the diversification of most contemporary societies, which creates prerequisites for a continuous development of human society.

## 4. European migration policy

If at declarative level, according to EU regulation no. 1612/68 EU citizens have the same rights as local ones, in terms of conditions of life and work, in practice things are different. Currently the EU has no functional strategy on migration, the member States policies having more like a reactive and defensive character imposing measures aimed at border control and implementing selective programs about accepting immigrants. The need for an integrated approach at EU level related to migration policy was considered in the following discussions and the conclusions of the Tampere European Council in 1999 was reinforced in 2004 by the Hague Programme, which invited the European Commission "to present a policy plan on legal migration, including admission procedures capable of responding promptly to fluctuating demand for migrant workers in the labor market before the end of 2005". In 2005, the Commission issued the Communication on Migration and Development. The European Council of 2007 reaffirms the principles of the Tampere stressing the need for a renewed political commitment on immigration as a fundamental priority to answer the challenges and opportunities of globalization.

Looking ahead, says Rusu (2003), European policy regarding labor immigration will be

characterized by the following features: we will see differentiated policies on labor, depending on the area of origin, skills/ abilities they possess, the prospects of integration into the society of destination; as concerning the areas of origin of immigrants, although unreported, people coming from areas with highly extremist potential or those with a different western culture will be treated rigorously. It is about that Islamic blanket that leaves his own country in mass.

The experience of the recent years obliges the Member States to introduce and implement integrated, durable and effective policies in order not to point out short terms. We should not forget that importing labor, we import people and speaking about integrated policies begs the question: How and in what way? To answer, it is useful to call on all concepts expressing states and processes of living together, for example: incorporation, inclusion, assimilation, acculturation, diversity, separation, disintegration.

## 5. Method

To identify the Romanian immigrants perception about their reasons to emigrate, the authors conduct a questionnaire survey in UAE Romanian community. Are Romanians interested in coming to the UAE? From here started the 20 questions in our questionnaire, which were drawn using the free platform esurveyspro.com, being promoted exclusively in Romanian communities in UAE virtual space. 85 people answered this questionnaire. Most of the respondents taking part in this study ranged in age from 25's up to 39's and have a Master's degree.

## 6. Results and discussion

*In the context of quitting the visa requirement for citizens of member states of the European Union, with effect from 22nd March 2014, temporary migration for work in UAE was boosted. The number of Romanians currently living in UAE is difficult to know, especially as there is not enough official statistics of the host country.* Out of the whole research population 42,35% reside in UAE with their families, 23,53% live in UAE with their spouses, but without their children, who are left behind in Romania and 34,12% were single, without family responsibilities. Surprisingly, 65.68% of the people who emigrated in UAE are female, young people without health problems, with a higher educational level and income over average (53.01% occupying managerial positions), mainly in urban areas . This percentage can be explained if we consider highly developed tertiary sector in this country with a tradition of international migration.

*From the perspective of our first question "Do you think that life in Romania is more difficult now than before 1989?" there are many reasons for the dissatisfaction of Romanians; 62.35% believe that it is fueled by the lack of perspective, the government incoherence and organization's disorganization, the extent of corruption and degradation of public morality, poverty and involution can be detected and quantified in various areas: demographics, standard of living, quality of life, education, scientific research, health care, increasing social disparities, marginalization and geopolitical isolation.*

*The factors in choosing the country's attractions are mentioned much higher living standards and opportunities for professional growth incomparably better by 61.18% of participants, while 20% admit that the lack of jobs in Romania was the major factor in their decision to emigrate. Also, 23.53% of immigrants show their availability to fill a job that local citizens would not accept, below their intellectual level, giving importance to short-term gains at the expense of social status.*

Based on the results derived from the question "What sources of information you used when you decided to emigrate?" 53, 61% of the respondents say that previous immigrants had an important role in the choice of the destination country. But the entire survey underscores the limited nature of the support for these networks, explaining the lack of unity and support by the Romanians (18.90%). It is one of the problems that they are

facing in the host country with the lack of support from the Romanian authorities (39.37%), discrimination (10.24%) and stereotypes, not always friendly (18.90%). Discrimination in employment based on race, ethnicity or nationality is common in UAE and thus getting a job is easier for local people.

It was noticed that immigrants tend to socialize rather with their fellows and interact less with the citizens of the host country and that they are confronted with situations and adapting problems and integration to a new social environment. Eventually this attitude is understandable, people need roots in a transnational world, they need language, religious and cultural communication, they feel the need of national roots, the need to belong to a local community.

Romanian emigrants have no motivations to return home. The argument of wage income is no longer valid, they considering the importance of health and education system quality. The 100% unfavorable responses to the question "Do you think that Romania gives great importance to return back–home migration?" highlights the unfavorable position of the immigrants to the Romanian state, which continues to lose ground in chapter trust. Meanwhile, 89.41% believe that Romania is basically exporting specialists and scientists, becoming extremely vulnerable on multiple fields and having as a result a loss of strength, vitality and future of our country.

A reaction group is outlined (for example the run from the Romanian state), which is seen as a passive and reactive player on the chessboard of the European Union. The conclusions drawn from the research brings into question the need for state involvement in the effective management of Romanian migration, particularly migration of highly qualified people and giving importance return migration.

## 7. Limitations and suggestions for further research

The research study does not cover a sufficiently large volume of respondents and cannot validate certain patterns of thought or perception. The results provide a starting point for more extensive future studies.

## 8. Conclusions

Globalization and ultra-liberalism generated mostly negative effects for Romania under the pretext of transition to a market economy, resulted in increased social inequalities, reducing social aid, diminishing health and education services, transforming jobs in more like temporary jobs, unemployment explosion and demolition of national culture, which led to human capital, a valuable resource that could have made a difference at a time to catch up the economical gap that still separates Romania from the developed countries of the world. The loss is even greater as those who left, who represents the young wing of Romanian population, do not want to come back in Romania, aiming at rebuilding lives in another society.

After the fall of the communist regime, in Romania international migration for work took place in three stages: "The first stage falls in 1990-1995 and is characterized by a emigration rate of 5 %, the second stage, from 1996 to 2001 has an emigration rate of 6-7% and the last stage, the mass exodus of 2002-2006 reached the highest level, with emigration rates between 10 % and 28 %."(Sandu, 2006)

The world is changing rapidly, and most of the times these changes are unpredictable. We are witnessing the fall of borders and a fierce global competition, where old answers no longer fit new realities. We are known by what we show, foreigners judge us by our leaders and by people who are cheaply bought, and after the behavior of those who represent us across borders and their ability to communicate. The political elite could play better the card of the future ... adopting a pragmatic attitude and putting above the interests of internal understandings and the indispensability to comply with various international bodies and organizations (World Bank, European Union) of Romanian citizens' welfare. We are

not pleased with ideological discourses. We need effective and sustainable policies to support the positive effects of migration and minimize the negative ones; and not the last to promote the return and reintegration of migrants in their home country.

## 9. Acknowledgements

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# ISSUES RELATED TO MANAGING HUMAN RESOURCE FROM THE PRIVATE SECURITY PROVIDERS

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**Abstract:** *The article is meant to present, within an original research, the main issues related to the complex environment represented by the providers of private security personnel, especially within the actual context in which such forces have evolved to a considerable development level. One can easily notice that lately this domain has been seriously tackled by different groups on interest, and, as such, the personnel number of such foorces is now exceeding even the number of the entire Police and gendarmerie forces. Acording to the Romanian regulations and laws, there is a great amount of freedom in administrating such private institutions, with a limited level of controls from the government`s organisms. Furthermore it can be considered a risk factor the fact that, beyond the brief aspects related to some prerequisites for the initial selection of the personnel, the Police or other organisms have basically no type of intervention in the internal management of such entities. Not once, the personnel has been involved in different activities beyond the limits of their basic and legal atributions; actions to have reduced the degree of trust from the public and the benefitiaries themselves. The article presents, of an objective perspective and with arguments, the basic reasons for which such an environment can influence the general societal security. Also, some proposals linked to possible measures to be taken related to the limitation of personnel and institutions from this field are approached. The main research method is the one of case study (either related to the regulations and characteristics of the system acording to currents laws), combined with transversal methods and document analysis. No type of secondary analysis of the phenomenon has been developed, due to the fact that so far, the level of research in this area has been a reduced one, and, as such, even the references and bibliographic resources are reduced.*

### 1.Introduction. Purpose and objectives of the study

When tackling the domain of security, one can easily find different issues of a smaller or greater sensitivity. Those issues can be related to the management of that domain, challenges, threats, existing or possible strategies etc. However, when referring specifically to the area of security providers, at first glance the main idea can be related that the most important is the govern as being the one to provide the security for the

citizens and society. On the other hand, in Romania, by analyzing the current realities and trends, one can observe the fact that thru the providers list, one of the most important source to be encountered is the private society, thru different organizations or physical persons. However, it must be said that this type of security is related only to the private sector, and it can be related to:

-security/protection of the persons;
-security/protection of objectives, goods, values and data;
-security/protection of valuable goods` transportation;
-operational security (of different processes).

The domain of private security is regulated thru the law no.333 of 2003, related to protection of the goods, objectives, values and persons, which states, within its content, aspects related to the private societies in the domains stated above. As follows, a private security society is a commercial society created in accordance with the content of the Romanian laws. Also, those societies must be licensed by the General Directorate of Romanian Police and Romanian Intelligence Service, based on a list of specific documents. The managers (or owners) of the private society are obliged to ensure the appliance of laws while their society is active.

Stating that, we must emphasize that, from an objective point of view, the mixed system of the words private and security can provide a whole lot of issues related to possible risks related to the society itself. As such, we consider of a fundamental importance to tackle this domain as a source of vulnerabilities or even possible threats. The main research method to be used is the case-study method, sometimes combined with the transversal analysis (based on the regulations of the domain of private security providers). Thru this paper we want to provide solid conclusions related to the systemic characteristics of this sensitive but otherwise complex domain, tackled especially in the context of the evolution of the conceptual definitions of the idea of the security.

One of the most important aspects to be tackled is the one of the intersections between this domain of private security and the society itself. It is a fact that that, due to the legal frame allowing it, the private security has been a constant presence in the life of ordinary citizens but also for important companies in different domains. Most of the houses and residences are protected by private companies, almost all of persons choosing a personal guard – except for the government officials – are in contact with private security providers, important companies choose to pay such institutions to ensure an appropriate level of security for their goods, transports, materials, and headquarters. As such, one cannot neglect the very impact of the given domain on the relations taking shape in a society. Furthermore, as those private security providers are intended to sustain the climax of public order and add some more security on request, some of their own vulnerabilities can provide great deal of damage to the societal relations, providing the social environment with flows that can be exploited by different threat factors. In some opinions, in some context, the private security providers can become themselves a threat.

## 2.Terms related to the activities of private security

For a better understanding of the domain tackled by this paper, in the following section we will provide some usual terms frequently sued within the area of private security:

-private security provider represents the institution able – based on appropriate certifications – to provide for individuals or organizations means to protect and ensure security;

-security agent (often addressed as agent) is the person hired in a private security society;

-beneficiary, the person or organization supported by the activity of the private security society;

-security threats, from the point of view of private security, represents any external agent capable, if materialized, of providing a damage to the beneficiary (Panfil, 2013);

-security vulnerability, from the point of view of private security, represents any internal flaw within the organization, capable of being exploited by a given threat;

-security measures are any type of regulations, procedures, involvement of technique or personnel, dedicated to ensure security of a given beneficiary.

### 3.Issues related to human resource from the area of private security

Perhaps one of the most important aspects to be tackled in the field of private security is the one related to human resource issues. It has been a matter of concern from the beginning the idea of allowing civilians to be involved in the field of security without the effective possibility of the main governmental authorities to monitor the selection of personnel. Beyond the simple fact of some basic prerequisites for the capacity of being or being not capable of being hired within the private societies related to private security (like the one of not having a criminal record), otherwise the possibility to evaluate and to monitor the personnel is a limited one. Basically, every interested person can invest in the field of private security, as such the motivation of every society owner is strictly related to the amount of earnings and thus some question marks are to be raised related to the professional interest to develop a quality assurance related to the personnel.

At a simple glance, and by a basic monitoring procedure, multiple flaws can be identified in the relation with the hired personnel:

-the aspect related to their initial training – due to the fact that the current regulation force the society to support a short course dedicated to basic training for the future agents, which is developed in parallel with the new-hired agent being actually involved in all the activities of the organization. Beyond the fact that the course only covers the basics in the field of security and protection of assets, the exam that needs to be passed by the agent for being certified is a merely decorative one, as nobody fails to pass it – as such, one could raise an eyebrow related to the interest of the management layer for having well-trained personnel;

-the aspect related to continuous training, due to the fact that there is no continuous training. The hired personnel has no concern for supplementary courses for the simple fact that nobody asks them to learn more related to the domain. Tackling both aspects related to initial and continuous training reveals the fact that the level of training is a (very) low one and provides a serious amount of risks.

-human resource inefficient screening. As stated before, practically any person without a criminal record can become hired in the field of private security. No background checks are being developed (basically no private organization in this area have the resources, nor the interest to perform such screenings), as such no type of potential affiliations with criminal organizations or gangs can be identified. There were quite a few cases in which some affiliations with different criminal groups were identified, but this was established by the prosecutors after large-scale crimes were committed (for example, the agents that were supposed to guard tanks with fuel were granting access to the thieves for stealing fuel, while the stolen amounts were replaced with water – in exchange, the agents were granted different amounts of money). From our personal pint of view, this is a great issue that needs to be addressed somehow thru legislation or monitoring/control structures.

-low level of income for the agents. Basically, in this field which comprises risks of different types, the level of income is quite a basic one (sometimes near medium). As such, the motivation level is a reduced one and the personnel is exposed to the temptations – thus the corruption level. This can provide a superior risk level for the personnel to associate in different criminal activities and thus, to provide the private security society with a level of mistrust.

-reduced level of quality for the regulations related to the field of private security. Actually, the trend is to provide as much freedom as possible to the owners of those societies and not to restrain them. The national police has the prerogatives to monitor those societies, but due to the lack of personnel, the officers rarely get to be well implicated within the processes of a such society.

### 4.Conclusions

The current paper is intended to provide a general view of the complex environment represented by the areal of private security providers. It is addressed to both researchers from the academic environments – especially from the field of public order and national security institutions, but also the professionals from the given domain. One could easily state the necessity of such actors on the societal scene, however this can domain must be treated carefully and with concern related to the possible threat sources and risks provided to the beneficiaries and of course for the society itself. At a glance, it can be easily observed that, even if the domain is regulated thru dedicated laws, those have different flaws and cannot cover all the objective necessities related to the main purpose of the private security societies. On the other hand, we should emphasize the current intentions from different sources to provide law initiatives in order to ensure a better legal frame for the security services originating from the private societies. However, these intentions can be often blocked by different groups of interest, as some parts the politic layer of Romanian society are often influenced by different types of lobby groups, especially the ones related or even directly involved in the industry of private security itself.

From the point of view of the main risks related to the tackled domain, one of the most important concerns is the one linked to the human resource, as the selection and training procedures are not concerned on the idea of quality, but better on the fact of financial gaining from the owners of the institutions. The income of the personnel is a rather poor one, directly determining a lack of motivation and, as such, often bad performance.

The study itself is based on a mere observation of the realities surrounding the private security providers from the point-of-view of the human resource. As such, the references are scarce, particularly due to lack of approaches in this field, but thus consolidating the character of originality and innovation of current paper.

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Law no.333 of 2003 related to protection of the goods, objectives, values and persons

# LOGISTICS – EVOLUTION THROUGH INNOVATION

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**Abstract:** *The current economic conditions, the rapidity with which the exchange of information, resources and products in the market takes place makes the logistics seem appreciably less significant. However, the importance of logistics has been presented in the military field, through strategies that have led to wining of the great wars that mankind has seen, through the supply of troops with food or moving military equipment. The literature in the field of logistics has numerous works on this topic. But while most focuses on efficient ways of carrying out the component activities of logistics or the strategies of organizations with regard to logistics or its functions, research on dynamics of logistics is underdeveloped. To be able to propose new methods or strategies of logistic activities is necessary to understand the development of this concept, determinant factors and economic and social conditions that gave rise to such developments. Thus, after a presentation of the main landmarks of the historical development of logistics we highlight the importance of the innovation within an organization's value chain innovation, in particular, and how to conduct the business in general. Using generations of innovation identified in the literature, we determine the generation of logistics development, taking into account innovation and how to conduct business. In addition for a better highlight of the own vision over the logistics generations identified, we will present the graphical concept for each generation in part. Last but not least, for each generation identified we try to allocate the chronological landmarks featured in order to reinforce the importance played by innovation in the development of the logistics industry and to give future directions of research within this topic. The study took into account the information presented in articles, books and websites of the relevant specialty in logistics and innovation to be able to build and expose a conceptual theoretical model on the topic.*

## 1. Introduction

Logistics is a term often used in various fields of activity, but is based on a fairly simple meaning. Most often, logistics means to transport (Chopra and Meindl, 2001), where we can draw the conclusion that this simplicity can lead to confusion due to the lack of a universally applicable definition, but with features for every field in which the term is found. The importance of logistics played in the world economy lead us to examine the past to determine the present and to give future directions in the development of strategies in this field.

At the same time, it should be taken into account the catalyst of logistics evolution to establish development boundaries in this field, the periods that can be examined in future studies, to highlight the progress and potential for development of this subject.

In this article, we will refer to logistics, as a whole, because it gives a general perspective that can be taken into account and analyzed and we don't look at the functional level,

since logistics would require an in-depth analysis of each operation individually, which would imply a greater volume of data to be analyzed.

While retaining the simplicity, the future directions of research will provide images that are representative of each period in part, contributing at the same time to the depth of field.

## 2. The evolution of logistics – short chronological perspective

Currently we are so accustomed to the presence of certain services that simplify everyday life that we do not give any importance to the understanding of how this services had developed, starting from its origins and so far, but nor to any future forms of manifestation of them, considering that it is a normal trend, imposed by market conditions in which the organizations operate.

Thus logistics has played a fundamental role in the evolution of mankind, but too few specialties papers treats the topic from strategic perspective, most offering a functional approach, or from the perspective of the various areas of activity. It is therefore necessary to review logistics from a chronologically point of view, to be able to understand the determinants that have led to this development.

DHL Logbook in partnership with the Technical University of Darmstadt presents a history of the development of logistics from the construction of the pyramids in Egypt until our days, by this:

- in the years around *2700 BC* we are talking about a material handling technology in constructing the pyramids.
- around the years *300 BC* we encounter revolutionary Greek oar vessels.
- around the years *700* AD we can talk about logistics procurement for the construction of the Mezquita mosque, the pillars arriving in Spain from all over the Islamic Empire.
- around *1200* years appears the international network known as the Hanseatic League - a international maritime transport cooperation.
- around the year *1500* we see the postal service in Europe - the first service of sending letters in a defined period of time.
- around the year *1800,* the discovery of new means of transport for both road and railroad led to the expansion of the logistical tasks through new technologies and means of transport.
- in the *1940s*, military logistics during the two world wars led to the transfer of concepts in the business world.
- in the year *1956* the invention of container shipping led to the structural development of world trade and to a boom in the international flow of goods.
- around the years *1970-1980*, Kanban and Just-in-time (JIT) concepts have been developed and introduced in Japan at Toyota Motor by Taiichi Ohno in order to connect with other logistics operational functions.
- in the *1990s*, technologies like quick response (QR) and efficient consumer response (ECR) are implemented by many companies in the retail and wholesale.
- in the *present days* management of the supply chain is being watched as a group of key business processes from one provider to the end user.

We can see that logistics was and is in a continuous change, change influenced by a number of factors in the political, economic, social, technological, environmental and legal environments. The company culture, the need for evolution, means and possibilities of the organizations they had at that moment put their mark on the development of logistics since ancient times. But once with them, innovation has played an important role.

## 3. Innovation – necessity, implications and challenges

Innovation is the result of human creativity, an idea to change into something better already, but at the same time can also be the result of experiments or accidents. However, what is actually innovation? Innovation is the act of *innovating* and its innovation process outcome depends a great deal of knowledge, especially tacit knowledge, in essence, the key capabilities within an organization - human resources.

According to Boer (2002) continuous innovation is the interaction between deployed operations, incremental improvement, learning and radical innovation aimed at the efficient combination of the effectiveness of operational and strategic flexibility, mining and exploration.

Literature (Lee, Olson, Trimi, 2012) propose the following classification of forms of innovation, taking into account the organization's value chain.
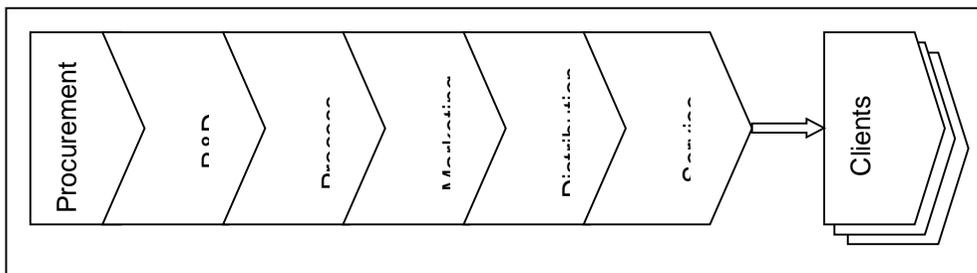


**Figure 1:** The value chain of an organization
Source: Lee, Olson, Trimi, 2012

Thus, we can speak about *the closed innovation*, *collaborative innovation*, *open innovation* and *co-innovation*. All these forms of innovation can manifest in the value chain of an organization, having various implications, as follows:

- *Innovation 1.0 (closed innovation)* – the organizations use to develop unique internal powers, sometimes secretly, fully from outside organizations, such competitive advantage based on these internal unique powers allow the company to be the first to take a step on the market.
- *Innovation 2.0 (collaborative innovation)* - unique expertise of an organization are not sufficient to develop a sustainable competitive advantage. Organizations perceive seeking world-class companies, for working with them, as being much easier. Many new forms of partnerships, strategic alliances, joint ventures and investment arrangements for the pooling of patents/technologies are becoming popular.
- *Innovation 3.0 (open innovation)* - the basic idea of open innovation is to build a chain of world-class value through a new ecosystem of innovation where different complements can be combined through perfect coherent solutions to create value based on cooperation agreements. The global economy and the emergence of information and communication technology that supports the exchange of knowledge on a large scale have opened the possibility of a much more extensive cooperation in the field of innovation.
- *Innovation 4.0 (co-innovation)* - the key element of innovation is to offer a compelling experience with network effect for value creation. Thus, co-innovation is a platform where new ideas or approaches from various internal and external sources are applied differently to create a new value or experience for all types of stakeholders, including consumers. The co-innovation, experience and commitment include a co-creation of value that is quite difficult to counterfeit by

the competition. Co-innovation platform is built on principles of convergence of ideas, collaboration agreement and experience co-creation with the stakeholders.
In this way, the classic value chain, shown in Figure 1, suffers changes as regards redrawing the business model through reinventing the concept of customer value (Govindarajan and Gupta, 2003), redefining the customer database and creating shared value, the identification of new suppliers of products or services, or even outsourcing certain services carried out by an organization (Premkumar and William, 1994).

## 4. Logistics x.0

Because as we have shown above, innovation has played an important role in the development of organizations, logistics has developed with the evolution of the innovation presented.
At the same time we can fit logistics in various generations of development, exemplifying by taking into account the evolution of logistics chronologically presented above.
The basic shape, *logistics 1.0* may be considered classical logistics, characterized by the transport operations that organizations relied on. This form is based on the internal competencies of the organization (Hamel and Prahalad, 1994) to cope with the challenges of the environment in which it operates.
We can represent this basic form as follows:
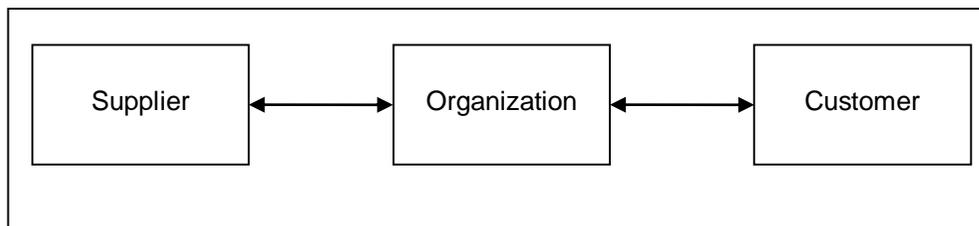


**Figure 2:** Logistics 1.0
Source: author's own design

The second form, *logistics 2.0*, manifests itself by adding new links to the classic form. They may represent partnerships with other organizations, which increases the value added of an organization through the synergy of core competencies (Spanos and Prastacos, 2004; Peteraf & Bergen, 2003) of the organizations, which lead to a differentiation in services offered to customers.
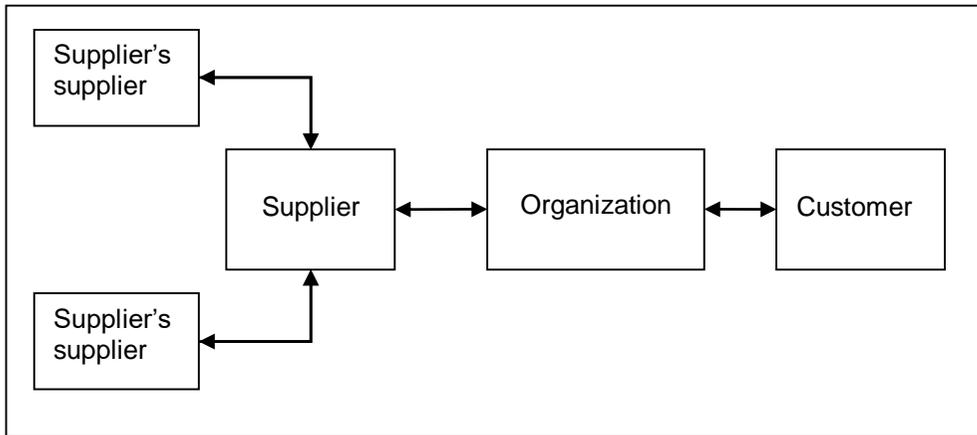
**Figure 3:** Logistics 2.0
Source: author's own design

The third form, *logistics 3.0*, follows the previous pattern. We encounter the same classical structure which allows the addition of links to complement fully the added value created by logistics. In addition to incorporating the communicational technologies that facilitate rapid access to information (Hill, 1994; Mentzer, 2001; Lee et.al., 2000), may encounter various organizations to support the logistical arrangements.
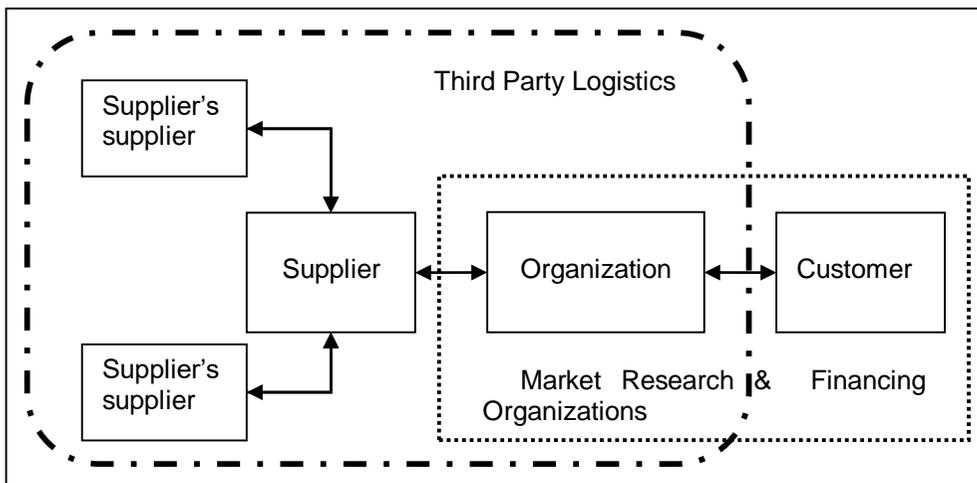


**Figure 4:** Logistics 3.0
Source: author's own design

Also like the innovation, the fourth form, *logistics 4.0* aims to create a platform where logistics is the central element. Thus, through logistical platform and communicational technologies existing in the present it's wished that the pooling of resources used by the above links in order to provide added value by such interconnections is desired.
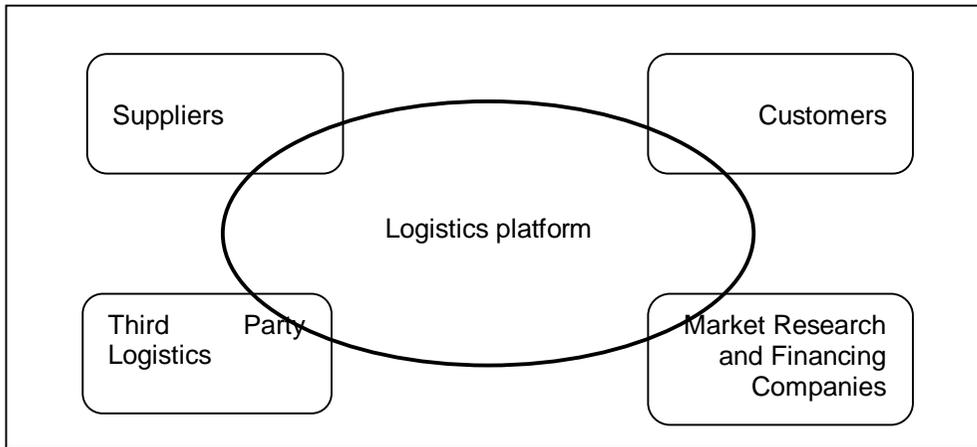
**Figure 5:** Logistics 4.0
Source: author's own design

In this way we can highlight the influence of innovation in logistics, setting a succession of logistics forms that can be encountered in practice. The complexity of each generation is given by the awareness of the organizations in the field of logistics over the importance of cooperation in gaining competitive advantage by exploiting core competencies and dynamic capabilities related.

## 5. Findings

Because logistics plays an important role in the world economy for more than 5000 years, we can transpose the chronological developments presented above in the form of the following graph.
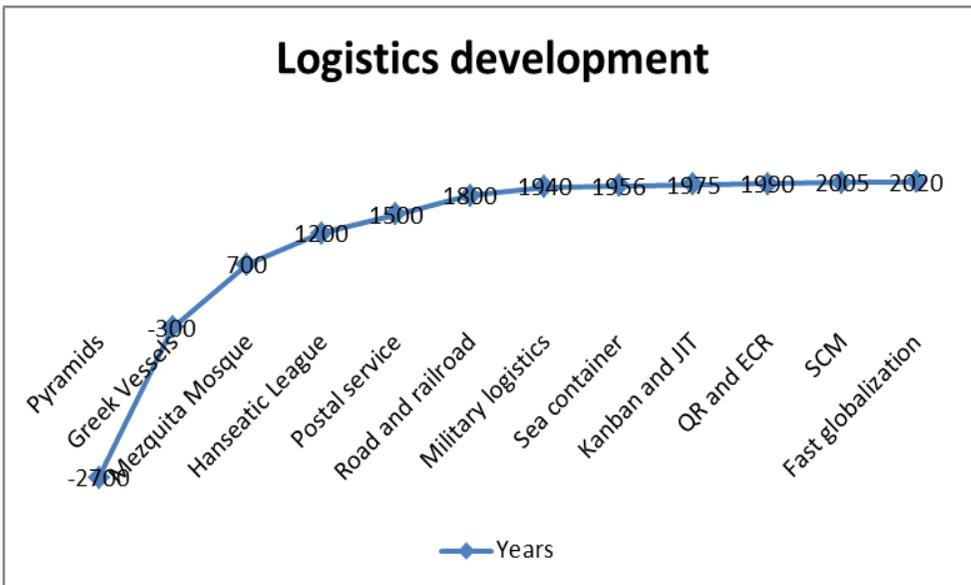


**Figure 6:** Logistics development
Source: author's own design

We can observe a sharp logistics development from the early 13th century, with the beginnings of organizational forms, which require a more developed logistics, account being taken of the dynamic capabilities (Teece et.al., 1997), organizations at the same time being based on cooperation.

In the case of analysis performed, we took into consideration logistics in general, including its components as well as activities like handling, transport, storage, logistics main activities to be able to pursue further research on the elements related to strategies adopted during the period of development, taking into account the potential available both at the level of the organization (Kotzab, Grant, Teller, and Halldorsson, 2009) and the potential available at that time, in terms of technology and human resource, viewed as whole, and to be able to establish the organizational progress and the way it was, is and will be influenced by the other two items presented, strategy and potential.

We can also fit the evolution of logistics as shown in Figure 6, taking into account the generations listed in Chapter 4. Thus, for *logistics 1.0,* we can consider the period between 2700 BC and 700 AD, during which focused more on efficient ways to meet the daily challenges.

*Logistics 2.0* is allocated to the period from 700 AD and 1960 when the classical transport activities meet various forms of collaboration; identifying new partners and new means of transport.

*Logistics 3.0* covers the period 1960-2010, significant period in logistics development, because allow integration of new links just because of market conditions and awareness of any benefit which each link plays in providing end customer products and services the client needs, which in turn is aware of his importance in the logistics chain.

*Logistics 4.0* begin to appear with the 2010s, when there are established national and regional strategies with regard to logistics, great logistics parks appear that combines the advantages of transport by road, rail, air and sea, putting together the resources and powers of the various key players in the logistics market (Pache, 1998).

Thus, taking into account previous presentations on innovation, future studies may focus on analyzing each generations identified, presenting major logistical methods or models of innovation that formed the basis for progress in this area, as well as the need for evolution.

This paper intends to be an important starting point for future studies regarding the importance of logistical activities classification carried out by organizations within a generation to be able to propose new strategies for development in this area, the use of new resources to be able to offer the end customer added value for the goods or services intended to benefit and to determine new directions with regard to the identification of future generations in this area.

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# 'WHY DO SOME NATIONS SUCCEED AND OTHERS FAIL IN INTERNATIONAL COMPETITION?' FACTOR ANALYSIS AND CLUSTER ANALYSIS AT EUROPEAN LEVEL

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**Abstract:** *As stated by Michael Porter* (1998: 57), *'this is perhaps the most frequently asked economic question of our times.' However, a widely accepted answer is still missing. The aim of this paper is not to provide the BIG answer for such a BIG question, but rather to provide a different perspective on the competitiveness at the national level. In this respect, we followed a two step procedure, called "tandem analysis". (OECD, 2008). First we employed a Factor Analysis in order to reveal the underlying factors of the initial dataset followed by a Cluster Analysis which aims classifying the 35 countries according to the main characteristics of competitiveness resulting from Factor Analysis. The findings revealed that clustering the 35 states after the first two factors: Smart Growth and Market Development, which recovers almost 76% of common variability of the twelve original variables, are highlighted four clusters as well as a series of useful information in order to analyze the characteristics of the four clusters and discussions on them.*

**Keywords:** Cluster Analysis, competitiveness, Factor Analysis

**JEL classification:** C38, O11, O47

## Introduction and background

Competitiveness is a complex concept, long debated by economists worldwide. The literature considers competitiveness as one of the essential dimensions of business performance.

Competitiveness issues (definition, measurement, determinants, growth strategies) can be addressed by presenting elements of differentiation and interrelation elements at microeconomic level (firms, organizations) and mezoeconomic level (economic sectors or branches), macroeconomic (country level) or mega economic (a number of countries - such as the European Union). (Ioncică, Petrescu and Ioncică, 2008: 76)

*'Why do some nations succeed and others fail in international competition?'* As stated by Michael Porte (1998: 57), this is perhaps the most frequently asked economic question of our times. Unlike competitiveness at the firm / organization level, the competitiveness at the national level has still no universally accepted definition, despite the widely use (sometimes abuse) of this concept. While it is clearly defined what means a competitive company / organization, not the same can be said about the notion of a competitive nation / country. The first which attempted to explain this concept were the classical theories of international trade competitiveness of countries, respectively the absolute advantage theory developed by Adam Smith, David Ricardo's theory of comparative advantage and even the theory of endowment with production factors (Heckscher-Samuelson Ohlim). (Ioncică, Petrescu and Ioncică, 2008: 77) In the current international context, characterized by economic globalization, the growing trend of liberalization of international trade and

technological progress, there are modern theories of competitiveness, such as the Michael Porter's (1998) competitive advantage theory.

Porter (1990) (1998) has emphasized that national competitiveness has become one of the central preoccupations of the government and industry in every nation. 'In the modern global economy, prosperity is a nation's choice. Competitiveness is no longer limited to those nations with a favorable inheritance. Nations choose prosperity if they organize their policies, lows and institutions based on productivity.' (Porter, 1998: 105) In this context, Michael Porter and K. Schwab (2007) define national competitiveness as the 'set of institutions, policies and factors that determine the level of productivity of a country.'

As pointed out by Popa and Vlăsceanu (2014: 19), at global and European level there are concerns regarding the ways of stimulating competitiveness by raising the employment rate of the labor force, increasing the GDP and aiming at a decent standard of life for the population. They identified a number of factors related with competitiveness, such as economic development, infrastructure, development, legislative regulations, technological access, labor market flexibility, the quality of business environment, while Klaus Schwab (2014) recognize a set of factors likely to be important for competitiveness and growth: investment in physical capital, infrastructure, education and training, technological progress, macroeconomic stability, good governance, firm sophistication and market efficiency.

The complexity of this influences make the mission to capture the essence the competitiveness in boosting the living standards of the population very difficult (Popa and Vlăsceanu, 2014: 19), therefore, along time at the international level, considerable efforts were undertaken aiming at compiling synthetic indicators able to capture all possible influences of various sets of factors.

**Data and methods**

The main data source was the Competitiveness Dataset (xls), the row data on which it was build The Global Competitiveness Report 2014-2015 issued by World Economic Forum (2014a). The report assesses the competitiveness landscape of 144 economies, providing insight into the drivers of their productivity and prosperity. (World Economic Forum, 2014b). The initial twelve variable of our analysis were: Institutions, Infrastructure, Macroeconomic environment, Health and primary education, Higher education and training, Goods market efficiency, Labor market efficiency, Financial market development, Technological readiness, Market size, Business sophistication and Innovation.

Our analysis covers all the 28 European Union member states, namely: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxemburg, Malta, Netherlands, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden and United Kingdom plus Iceland, Macedonia, Montenegro, Serbia, Turkey, Norway and Switzerland. The analyses within this research rely on a dataset referring to the years 2013 and 2014 and were developed by employing the IBM SPSS Statistics 22.0 software package.

*We followed a two step procedure* called "tandem analysis". (OECD, 2008) First we will employ a Factor Analysis in order to reveal the underlying factors of the initial dataset followed by a Cluster Analysis on the object scores of the first two factors which aims classifying the 35 countries according to the main characteristics of competitiveness resulting from Factor Analysis.

1. Factor analysis is a multivariate analysis, which aims to explain the correlations manifested between a number of variables, called indicators or tests, using a smaller number of uncorrelated factors called common factors. (Ruxanda, 2009: 64) The model is given by (OECD, 2008):

$$X_1 = a_{11}F_1 + a_{12}F_2 + \cdots + a_{1m}F_m + e_1 \qquad (1)$$
$$X_2 = a_{21}F_1 + a_{22}F_2 + \cdots + a_{2m}F_m + e_2$$
$$... ... ... ....$$
$$X_Q = a_{Q1}F_1 + a_{Q2}F_2 + \cdots + a_{Qm}F_m + e_Q$$

where $X_i$ (i = 1,…,Q) represents the original variables; $a_{i1}$, $a_{i2}$, ..., $a_{im}$ are the factor loadings related to the variable $X_i$; $F_1$, $F_2$,...,$F_m$ are $m$ uncorrelated common factors; and $e_i$ are the $Q$ specific factors supposed independently and identically distributed with zero mean.

2. Subsequently we performed a Two Step Cluster Analysis, following a two-step procedure, as described by Bacher, Wenzig and Vogler (2004: 4), Chiu et al. (2001) and The SPSS TwoStep Cluster Component - Technical Report (2001: 3): Step 1: Pre-clustering of cases - a sequential approach is used to pre-cluster the cases. The aim is to compute a new data matrix with fewer cases for the next step. Step 2: Clustering of cases - a model based hierarchical technique is applied. Similar to agglomerative hierarchical techniques, the (pre") clusters are merged stepwise until all clusters are in one cluster. As we said above, the input variables in the Cluster Analysis were the scores of the two factors resulting from Factor Analysis.

**Results and discussions**

***Descriptive statistics***
In Table 1 there are displayed the descriptive statistics (mean, standard deviations and variance) for the initial twelve variables that will be used within the Factor Analysis procedures employed within the research, as well as the Romania's values related to the same variables. The scores given for Romania are all below the average of the 35 European countries analyzed, except for those for the criterion of Macroeconomic environment and Market size, where our country got a score above average.
From the above presented data, we conclude that Romania occupies a pretty bad position among European countries in terms of their competitiveness, but a much clearer picture will result from analyzes conducted throughout this paper.

**Table 1:** Descriptive Statistics (mean, standard deviation and variance)

|  |  | N | Mean | Std. Dev. | Variance | Romania |
|---|---|---|---|---|---|---|
| 1 | Institutions | 35 | 4.487 | 0.849 | 0.721 | 3.557 |
| 2 | Infrastructure | 35 | 5.073 | 0.748 | 0.560 | 3.650 |
| 3 | Macroeconomic environment | 35 | 4.914 | 0.937 | 0.879 | 5.196 |
| 4 | Health and primary education | 35 | 6.264 | 0.331 | 0.110 | 5.507 |
| 5 | Higher education and training | 35 | 5.188 | 0.505 | 0.255 | 4.629 |
| 6 | Goods market efficiency | 35 | 4.686 | 0.407 | 0.166 | 4.180 |
| 7 | Labor market efficiency | 35 | 4.393 | 0.523 | 0.274 | 4.042 |
| 8 | Financial market development | 35 | 4.344 | 0.637 | 0.407 | 4.118 |
| 9 | Technological readiness | 35 | 5.267 | 0.709 | 0.503 | 4.485 |
| 10 | Market size | 35 | 4.163 | 1.005 | 1.011 | 4.437 |
| 11 | Business sophistication | 35 | 4.566 | 0.698 | 0.487 | 3.768 |
| 12 | Innovation | 35 | 4.085 | 0.870 | 0.758 | 3.283 |

*Source: made by authors with SPSS Statistics 22.0*

### *Factor analysis*

Preliminary interpretation
In order to determine if our dataset is suitable for factor analysis, we first look to the *Correlation Matrix* to check if there is a patterned relationship among variables. Since the *Bartlett's Test of Sphericity* is significant ($p < .01$), the overall *Kaiser - Meyer - Olkin Measure (KMO) of Sampling Adequacy* (with a value of .945) and individual values for each variable (found in the diagonal of the *Anti - Image Correlation* Matrix) fall into the acceptable range (above .50), we can conclude that our dataset is suitable for factor analysis. The only one exception is *Market size* (.418) which we will keep under observation.

### Factor extraction and rotation

In order to determine the most appropriate number of factors to be extracted, first, we used the Kaiser's criterion (which suggests retaining all the factors with eigenvalues greater than 1.00) in conjunction with the scree test. This three-factor solution was not considered appropriate since the 3rd factor was correlated with only one variable (as one can guess, Market size - the variable we kept under observation from the beginning). Tabacknick and Fidell (2007) recommend that for something to be labelled as a factor, it should have at least three variables, so for the final solution we retained only two factors. The final model computed with Extraction Method: Principal Axis Factoring and Rotation Method: Varimax with Kaiser Normalization, could be considered a good fit since, looking at the *Reproduced Correlation Matrix*, we found that the nonredundant residuals with absolute values greater than .05 are < 50%.

Having determined the number of retained factors, now we are concerned with interpretation. Table 2 presents the eleven variables significantly correlated with the two factors, arranged in descending order of loading. As recommended by Stevens (2002) due to the small size of the sample only the significant individual factor loadings (above 0.7) were retained. The high values of Cronbach's Alpha coefficient of reliability, presented on the last row of the Table 2, mean that there is evidence that the individual indicators measure the same underlying construct (0.7 is considered as an acceptable reliability threshold).

The fact that, In the Rotated Factor Matrix, factor loadings of all relevant variables are highly and positively related to only one factor each and we obtained only two factors could represent a big advantage for factor interpretation and spatial representation.

**Table 2:** Rotated Factor Matrix

|  | Factor 1 | Factor 2 | Communalities |
|---|---|---|---|
| Infrastructure | .937 |  | .912 |
| Business sophistication | .820 |  | .932 |
| Higher education and training | .794 |  | .824 |
| Innovation | .776 |  | .935 |
| Health and primary education | .773 |  | .652 |
| Technological readiness | .756 |  | .833 |
| Financial market development |  | .876 | .793 |
| Labor market efficiency |  | .782 | .724 |
| Macroeconomic environment |  | .736 | .542 |
| Institutions |  | .724 | .920 |
| Goods market efficiency |  | .701 | .798 |

|  |  |  | Total |
|---|---|---|---|
| Eigenvalues | 4.952 | 4.077 | 9.029 |
| % of variance | 41.264 | 33.973 | 75.237 |
| Cronbach's Alpha | .951 | .877 | |

*Source: made by authors with SPSS Statistics 22.0*

### Naming the factors

The two factors resulting from factor analysis cumulate 75.237% of common variability of all the original twelve variables and will replace them in all subsequent analysis, therefore it is essential to have suggestive names and, on the other hand, to reflect as faithfully as possible the structure on which each of them was built. A meaningful interpretation of the factors is not straightforward but a big help is the fact that factor loadings of all relevant variables are highly and positively related to only one factor and the variables seem to cluster in a fairly suggestive way.

The first factor (the 2nd column of the Table 2) cumulates 41.264% of the common variability of all the twelve original variable and is strongly and positively correlated with six of them: Infrastructure (.937), Business sophistication (.820), Higher education and training (.794), Innovation (.776), Health and primary education (.773) and Technological readiness (.756), therefore the most appropriate name to define it would be *Smart Growth*.

The second factor (the 3rd column of the Table 2) cumulates 33.973% of the common variability of all the twelve original variable and is strongly and positively correlated with five of them: Financial market development (.876), Labor market efficiency (.782), Macroeconomic environment (.736), Institutions (.724) and Goods market efficiency (.701), therefore the most appropriate name to define it would be *Market Development*.

### Factor scores

Using Bartlett method we produced factor scores. Factor scores are variables describing how much an individual would score on a factor and are correlated only with them own factor. These scores will be used later for cluster analysis. Another exceptionally helpful use of factor scores is the graphical representation in two-dimensional space of the position of the 35 states relative to latent unobservable characteristics represented by the common factors. On the basis of such representations, one can make an assessment of a global nature and are created prerequisites for performing multi-criteria comparisons. In Figure 1 are shown the 35 states in relation to the two factorial axes: Smart growth and Market development. As one can see, in terms of Market Development the best position is held by Norway and the worst position by Italy, while in terms of Smart Growth, Netherlands holds the highest score, and the lowest score - Bulgaria. If we look to the overall picture of the distribution of the 35 states in two-dimensional space created by the coordinates resulting from Factor Analysis, we can catch a  grouping tendency, but for a greater scientific accuracy, in the subsequent research we will employ a Cluster Analysis procedure.
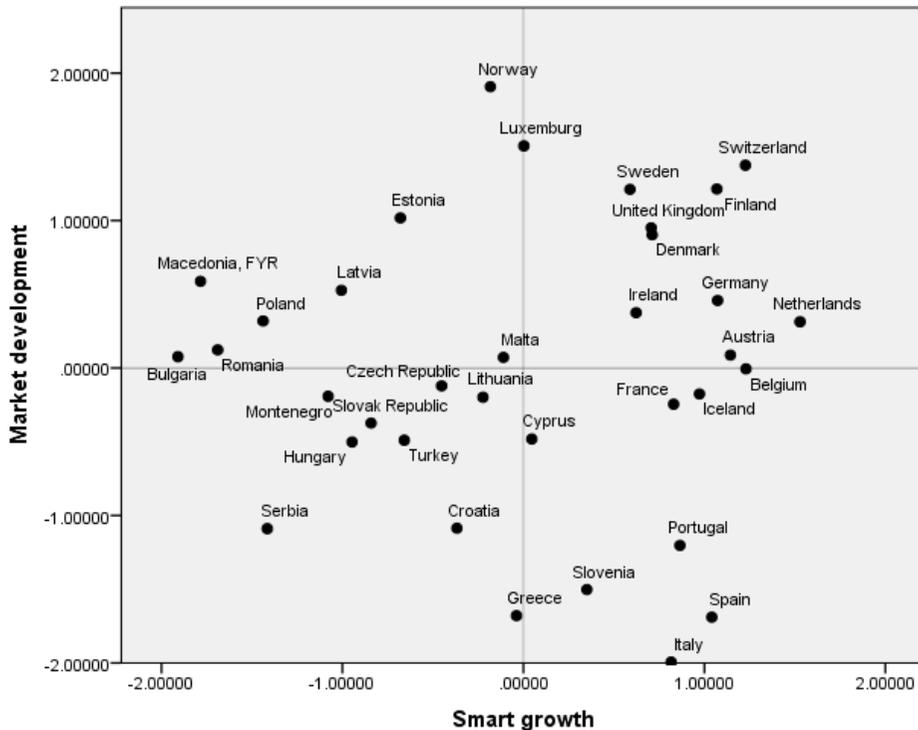
**Figure 1:** Scatter plot of observations
*Source: made by authors with SPSS Statistics 22.0*

### Cluster analysis

For the purpose of identifying country groups that are homogeneous within themselves while also heterogeneous between each other based on the two new variables (named *Smart Growth* and *Market Development*), there was employed a Two Step Cluster Analysis, following a two-step procedure, as described above. Since the input variables were the scores resulted from the factor analysis, the assumption of independence and the normal distribution of the two variables were met. The evaluation variable was GDP per capita, theoretically known as related to competitiveness.This field will not be used to create the cluster model, but will give us further insight to the clusters created by the procedure.

The initial two cluster solution determined by SPSS was not considered appropriate for our analysis; therefore we set the number of cluster to four. The silhouette measure of cohesion and separation shows a good quality cluster solution (average silhouette = .6). The variable with the highest contribution to the determination of the final solution was Market Development (predictor importance = 1.00), while the contribution of Smart Growth was .76.

The cluster analysis revealed a series of useful information to analyze the characteristics of the four clusters and discussions on them. An overview of the four clusters based on the five variables depending on which they were formed, is presented below and is illustrated in Figure 2 and Table 3.

▪ Cluster 1 - include 7 countries (20% of total), namely: Switzerland, Finland, Sweden, United Kingdom, Denmark, Norway and Luxemburg, all in northern and western Europe. The most important predictor within the cluster is MD with a mean score of 1.295, followed by SG (mean score = .588). What particularizes the countries components of this

cluster are the highest scores on both dimensions (factors) and the highest average value of GDP per capita, which is the evaluation variable (53,400 €). These data enables us to say that they would come on top in any ranking on the level of competitiveness.

▪ Cluster 2 - holds 7 countries (20% of total), namely: Netherlands, Germany, Belgium, Austria, Ireland, Iceland and France. The most important predictor within the cluster is SG with a mean score of 1.057, followed by MD (mean score = .115). From geographical point of view, this group is also composed mainly of countries in Western Europe. It seems that the overall level of competitiveness is comparable to that of the first cluster, but unlike it, the most important contribution and the highest score comes from the first factor - Smart growth. GDP per capita values are slightly lower than for cluster 1 but significantly higher than clusters 3 and 4.

▪ Cluster 3 - with 15 countries (42.9%) is by far the largest and the most heterogeneous (the highest values of the standard deviation of means for both factors) of the four clusters. It includes mainly countries in Central and Eastern Europe: Estonia, Malta, Cyprus, Lithuania, Czech Republic, Latvia, Slovak Republic, Turkey, Poland, Montenegro, Macedonia, Hungary, Romania, Bulgaria and Serbia. The most important predictor within the cluster is SG with a mean score of -.945, followed by MD (mean score = - .945). As one can see in Figure 2 and Table 3, cluster 3 has the lowest average scores for both dimensions of the four clusters, which makes likely location of these countries for the last places in the ranking of competitiveness. Moreover, the evaluation variable (GDP per capita) also recorded the lowest average value of the four clusters (10,621€).

▪ Finally, Cluster 4 holds the remaining 6 countries (17.1%) countries located mainly in southern Europe: Portugal, Spain, Italy, Slovenia, Croatia and Greece. The most important predictor within the cluster is MD with a mean score of -1.525, followed by SG (mean score = .444). What characterizes this cluster is that, despite quite high values for Smart Growth (similar to those of cluster 1), Market development presents unexpectedly low values, which may have negative repercussions on the overall level of competitiveness. Such opinion is strengthened by the fact that the average GDP per capita is only a third of the cluster 1.
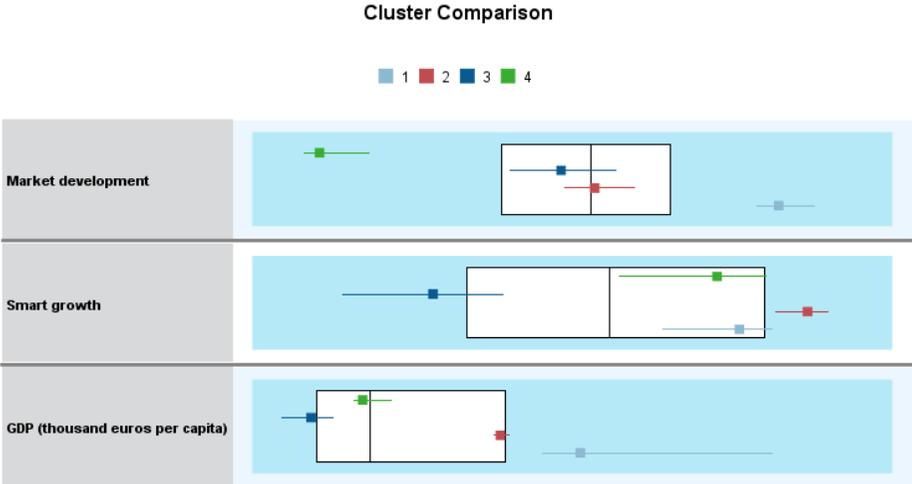


Figure

**2: Cluster comparison**
*Source: made by authors with SPSS Statistics 22.0*

**Table 3**:  Cluster Cancroids

| | | Cluster | | | | Romania |
|---|---|---|---|---|---|---|
| | | **1** | **2** | **3** | **4** | |
| Cluster size | | 7 | 7 | 15 | 6 | |
| | | 20.0% | 20.0% | 42.9% | 17.1% | |
| Smart growth | Mean | .588 | 1.057 | -.945 | .444 | -1.689 |
| | Std. Dev. | .517 | .290 | .614 | .560 | |
| Market development | Mean | 1.295 | .115 | -.048 | -1.525 | .123 |
| | Std. Dev. | .344 | .275 | .527 | .336 | |
| GDP per capita (thousand euro) | Mean | 53.400 | 34.514 | 10.621 | 18.050 | 7.100 |
| | Std. Dev. | 20.501 | 1.886 | 4.701 | 5.378 | |

*Source: made by authors with SPSS Statistics 22.0*

We assessed the predictive validity of the final cluster solution following the procedure recommended by Hair et al. (2010) investigating whether statistically significant differences exist across the clusters. Therefore, was performed a One-Way ANOVA analysis using GDP per capita as dependent variable and cluster membership as independent variable. GDP per capita was chosen due to its known theoretical relationship with the clustering variables, but not included in the cluster solution. As one can observe in Table 4, the results (F = 31.758, p < .05) proves the predictive capability of cluster solution for others key outcomes, which provides evidence of criterion validity.

**Table 4:**  Assessing cluster solution criterion validity

| Variable | Cluster member | Cluster mean (thousand euro) | F | Sig. |
|---|---|---|---|---|
| GDP per capita | 1 | 53.400 | 31.758 | .000 |
| | 2 | 34.514 | | |
| | 3 | 10.621 | | |
| | 4 | 18.050 | | |

*Source: made by authors with SPSS Statistics 22.0*

## 4. Conclusions and further research

The findings of the present research reflect that the pattern in the initial dataset revealed by the Factor Analysis indicated that there were two factors or dimensions of country level competitiveness in the selected data set. Furthermore, the first competitiveness dimension revealed in the data (Smart Growth) corresponded to the components of others composite indices of competitiveness and to the objectives set by the Strategy Euro 2020 (a smart, inclusive and sustainable Europe). The subsequent Cluster Analysis carried out with the scores of the two factors resulting from Factor Analysis as impute variables, highlighted four clusters as well as a series of useful information in order to analyze the characteristics of the four clusters and discussions on them.

This finding may lead us to future directions of research that should investigate possible causal relationships between the objectives of Euro 2020 and the competitiveness level of EU member countries. Another possible research direction could follow the evolution in time of the four cluster solution developed within this paper.

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# EMPLOYEE INVOLVEMENT IN A CHANGE PROCESS - A CASE STUDY FOR ROMANIAN ORGANIZATIONS

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**Abstract:** *Innovation, competitive advantage, change are some concepts that should be on every organization's agenda, due to the fact the global market leads to global competition so in order to increase the market share, turnover or profit organizations have to incorporate those concepts in their strategies. The outside environment is very unstable and things are evolving very fast so managers from all levels have to acknowledge the importance of change and to identify as soon as possible several new ideas that should be the subject of different change processes. Openness to organizational change has become a mandatory feature for those organizations that want to survive and adapt to the external pressure, helping them to be efficient. Even if in many cases managers are the initiators of change, this process is very complex and needs support and involvement from all the members of the organization, so the employee's attitude and commitment to change is crucial. In many cases employees have a negative attitude towards change and manifest a strong resistance, due to the fact that they are not consulted and are not involved in the process of the identification for the need of change. Without understanding and knowing very well what it is expected from them, employees are afraid of the unknown and prefer to perform their tasks as they did before. Creating a climate and a culture for change is very important, because like this change will be something normal, continuous and people will feel comfortable with any change initiatives, without being surprised, confused or scared. Even if any change process should improve the current state of the organization, sometimes change efforts fail because the ones that resist change are stronger than the ones supporting change. The purpose of this paper is to analyze how often are Romanian employees involved in the processes of change and how important is the role they play. We have also tried to see the Romanian manager's perception towards change and the way they perceive the need of involving employees when decisions are made. In order to answer those questions we have based our results on a study made on Romanian organizations from the western side of the country. The sample included managers and employees from organizations operating in industries such as: trade, manufacturing and services.*

**Keywords:** change management; openness to change; resistance to change; employee involvement.

**JEL classification:** M10, M12, M19

## 1. Introduction
Change increases the organization's performance and the results obtained after a change process is implemented can bring several advantages to those organizations that focus on what is happening in the outside environment. In order to identify successful changes that lead to innovation and progress, we consider that a very good knowledge of both external

and internal forces of change is very important. External forces are mainly economic, technological, political, legal, demographic, cultural and natural while potential internal forces of change are the organization's members (managers and employees) and the organization's particularities (strategy, structure, informational system and organizational culture).

Employees can have a very important role in identifying potential changes due to the fact that they are very familiar with the things that take place inside the organization, knowing the main problems and sometimes even the solutions to those problems.

Managers should encourage employee involvement in the decision-making process, especially when employees are the target of change, because if employees feel that they have an active role in the process of change they will support it, without any resistance at all. If change has to be done very quick, and there is no time to consult the employees, after the crisis has passed managers should explain the reasons why employees were not actively involved, in order to make sure that the whole organization will support that change.

In the Romanian organizations most managers are still not aware of the importance that employees can have not only when changes are implemented but mostly when the need of change is identified.

This study aims to identify how significant is the employee involvement in a change process, how do managers and employees perceive change and how often employees are a part of the process of decision-making.


## 2. Literature review

The global economy forces many organizations to adapt and to change the way they operate, threatening in many cases the changes of survival for those that have no response at all to the outside pressures. Openness to organizational change has become one of the ,,musts" especially for organizations that operate in a very unstable environment (Conner, 1992). In many workplaces self-managed teams, cross-training,shared information, participative decision-making and incentive rewards are no longer seen as "innovative" or "high performance" but just a normal way of doing business (Benson et al., 2013).

Identifying the domains of excellence and the business areas with a high potential on becoming visible in a large context, even global, is very important for understanding the way in which the technological entrepreneurial ecosystem has

developed over time (Roja et al., 2014). The need for rapid organizational change is something certain in today's business environment, but no matter how necessary change seems to upper management, many barriers must be broken down if a planned strategic change is to be implemented successfully (Hodges, 2007).

Responding to change can sometimes be very difficult because many organizations associate it with doubt, fear and instability and many times when employees state they cannot do anything to reply to a changing situation, they usually do not know what to do to adapt to the position and prefer to manifest a strong resistance to change (Zafar et al., 2014).

As Kotter stated more that 75% of the change efforts fail (Kotter, 2007), so a focus on how employees think, feel and behave during these transformational periods offers useful insights to managers, in order to understand what has to be done different in order to achieve the goals after the implementation of any change process (Ngyuen and Kleiner, 2003). Involving employees in all the organization's activities including the processes of change should be one the common practices for any organization as multiple research sources consider employee engagement to be a primary antecedent to successfully implementing an organizational change initiative (Dicke, 2007).

Employee involvement is a process for empowering employees to participate in the process of managerial decision-making and improvement activities appropriate to their levels in the organization because at the end of the day the only thing that diferentiates one organization from another is its people (Apostolou, 2000).

The engagement can be different from one employee to another, having different behaviors as shown in the following table:

**Table 1: Classification of employee engagement**

| Engagement types | Description of the behavior |
|---|---|
| Highly engaged | Employees feel a strong personal alignment to the mission, vision and objectives of the organization. |
| Moderately engaged | Employees possess positive attitudes toward work and may engage in productive behaviors, but they are not fully invested in terms of commitment and significant discretionary behavior. |
| Passive | Employees simply come to work and go through the motions without any particular interest in work. While not as problematic as the actively disengaged, passive employees do not create a positive environment for innovation and progress. |
| Actively disengaged | Employees feel disconnected from their jobs and tend to be unsatisfied at work. Their poor attitudes and emotions spread through the company, which can result in their own poor performance and poor performance of others. |

Source: *Managing Employee Engagement During Times of Change* (Hewitt, 2013)

Any change process needs highly engaged employees in order to be successful and the greatest way to obtain a genuine commitment from people is to involve them in the process from the beginning. Even if the original ideas are not theirs, the designing, planning and assessing of all the goals and activities will automatically pull them into the stream of things, making them feel like they are a part of the puzzle (Khattak et al., 2013).

**3. Research framework and results**
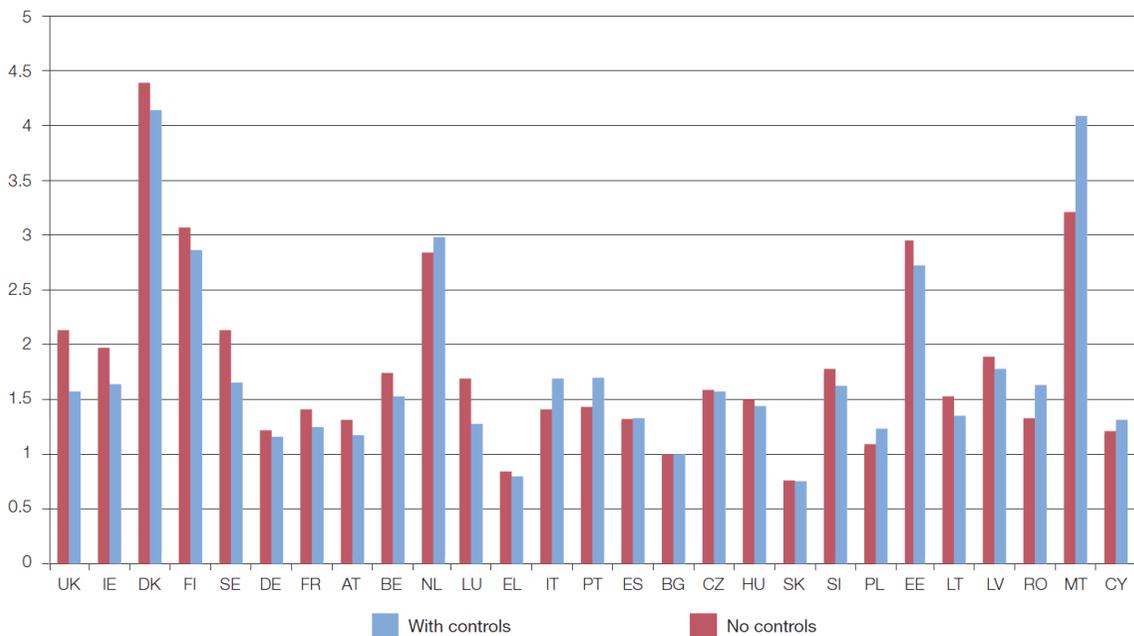


We have based our research on a recent study conducted by Eurofound in 2013 regarding the ,,Work organisation and employee involvement in Europe" where Romania was listed among the countries with a particularly low level of employee involvement. The same study revealed that our country has a very low task discretion and the lowest organizational participation among 27 UE countries, as shown in the following figure:

**Figure 1:** Likelihood of working in a high involvement organisation by country
Source: *Work organisation and employee involvement in Europe* (Eurofound 2013, p. 41)

Given the results above, the purpose of our research was to evaluate the employee involvement in a change process and to understand the reasons why figures from the Eurofound study, for our country, are so low. Therefore the following hypothesis were formulated:

**H1: Employees are rarely an internal source of change;**

**H2: Without a motivation system employees are not an important source of change.**

The methodology used in order to test the two hypothesis included an online questionnaire applied on various Romanian organizations from different industries such as services, trading and manufacturing based on a questionnaire. The information was processed using SPSS 17 and results obtained are presented below.

**H1: Employees are rarely an internal source of change**

**Table 2:** Internal sources of change

|  | Never | Rarely | Neither often, neither rare | Sometimes | Always |
|---|---|---|---|---|---|
| **Employees** | 2.8% | 37.6% | 22% | 34.9% | 2.7% |
| **Managers** | 0% | 4.6% | 10.1% | 30.3% | 55% |

As we can see in the table above, in 37.6% of the cases employees are rarely an internal source of change, because almost always the change ideas and initiatives come from managers.

Even if managers have the legitimate power to decide on which change initiatives will be incorporated in change processes, employees should also be involved in the decision-making process in order to understand which will be the next steps and how important is their role on achieving the desired goals after the change takes place. Like this the resistance to change will be minimum and the change will have the support from all organizational levels. This situation can be explained by the fact that in Romania, the process of delegation still arises many problems, and managers are afraid to give their employees more responsibilities and more power. Therefore our **hypothesis is valid**, and employees are rarely an internal source of change.

**H2: Without a motivation system employees are not an important source of change**

**Table 3:** Employee motivation for change proposals

|  | Never | Rarely | Neither often, neither rare | Sometimes | Always |
|---|---|---|---|---|---|
| **Change proposals coming from employees** | 11.9% | 46.8% | 12.8% | 26.6% | 1.9% |
| **Rewards for those that come with change initiatives** | 36.6% | 35.2% | 15.6% | 6.4% | 6.2% |

Employees are rarely motivated to come with change proposals and often the managers attitude is a very discouraging one, especially when employees have ideas that are not taken into consideration. Some managers are not aware of the fact that employees should have a very active role in finding new ideas of change because they are the ones knowing very well the processes driven by the organizations, being able to see what should be improved or changed. Another problem is that some Romanian managers are afraid to lose their power and in order to avoid that, they minimize the role of their employees.

Another problem related to employee motivation is that in many organizations managers don't have a rewarding system for those that come with change proposals so even if employees want to get involved they see no winning from that. It is very important for a long term employee involvement to have a proper reward system that stimulates creativity and innovation. Giving these facts, our second **hypothesis is valid**, and without a motivation system employees are not an important source of change.

## 4. Conclusions

The results of our study have shown that Romanian employees have a low involvement in the change processes implemented by the organizations due to the fact that managers don't seem to acknowledge the advantages that can be identified by using a participative management style inside the organization.

Managers are the main internal source of change due to their responsibilities and their

power inside the organization, and employees are rarely the promoters of change, the main reason for that being the lack of a motivation system. Without a reward system, employees are not motivated to make any change proposals and often tend to manifest resistance to change.

Openness to organizational change is very important for competitive and innovative organizations and managers should have the ability to make sure that change is supported by all organizational levels. A culture that promotes change is also a key factor for successful change, assuring also that employees are involved as much as possible in this process.

In the case of Romania, results have shown that is still a very stringent need for business leaders that have a vision for change, support it and make others enhance it.

A further research opportunity will be to identify how can managers increase employee involvement and to see which are the most powerful skills that both managers and employees should have in order to innovate and find new and creative ideas of change.

A long term challenge will be to ensure that all organizations will have a high openness to change, where employees and managers work together in order to promote proactive and efficient changes with long term results.

## 5. Acknowledgements

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# IDENTIFYING COMPANY VALUES AND EMPLOYEE SATISFACTION IN MODERN ORGANIZATIONS – A CASE STUDY ON THE METHODS USED TO DIAGNOSE EMPLOYEE SATISFACTION AND RECOGNIZE COMPANY VALUES

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**Abstract:** *Values are key principles in defining an organizations identity, organizational culture, climate, employee commitment and satisfaction. One of the key aspects in obtaining organizational performance is defining culture and expressing the particular principles that make an organization function at its best. Through direct observation of an organization activating in the manufacturing industry and through the application of an employee satisfaction survey, this paper aims at emphasizing what are the basic principles that make an organization obtain performance in its activities. The study's focus is on identifying specific elements recognized as values and the way in which they can actively determine personnel to adhere to the culture promoted within the company. The paper also focuses on determining what are the aspects recognized as strengths from the personnel's perspective and the needs of development in order to improve working conditions and establish a sense of organizational commitment.*

## Introduction

Organizational culture is rooted in concepts such as group norms and organizational climate (Vlasceanu, 2002) and is the main factor used in promoting change and development in modern companies. According to Schein, organizational culture is "a model of basal assumptions invented, discovered or created by a particular group that learns to cope with its problems of external adaptation and internal integration, a model that has worked well enough to be considered valid, and therefore be taught to new members as the correct way to perceive, think and act within a workplace "(Vlasceanu, 2002). Schein also notes that in order to form an organizational culture, it is necessary that the group of individuals who define the culture have a common past that involves a degree of understanding between members, so common values can be promoted and established as rules. An informal rule imposed in the organization will last as long as it will not create disturbances between group members. Aspects of organizational culture may differ from one department to another within a company. This aspect forms subcultures that can be assigned to groups, depending on the commonalities of individuals who adhere to that subculture. (Prietula, 2008).The main features of an organizational culture or subculture is represented by the values that it promotes; values can be displayed or hidden- displayed (or expressed) values are the specific behaviours that a group or a subgroup express in order to define a particular way of threating a situation, of acting through a predetermined model. Hidden values are norms, ideologies, beliefs that a certain way of acting is promoted from within the organization.

This paper focuses on highlighting the hidden and displayed values from an organization that activates in the production industry- a company with a total personnel capital of 400 employees and 10 years seniority on the Romanian market. Hidden values where revealed through active, participant observation and expressed values where treated from employee perspective, by analysing their personal perception regarding specific aspects of the company through a quantitative survey.

**Values, ethics and ideology in modern organizations- Alignment to company values**

Ethical behaviour of employees within an organization is consistent with the ethical standards promoted by the company, its values and norms. Lack of ethics in employee behaviour is largely composed by deviant acts that oppose the rules of the organization (Griffin and Stacey, 2008). Ideology is the basis on which people explain their actions, desires and choices; ideology is also the constraint of universal values which employees may have, in order for them to adhere to and reflect the beliefs of the organization in which they work.(Griffin and Stacey, 2008).

Ideological core of a company defines its durability over time; in other words, the ideological core of a company is represented by its consistency factor, that transcends market variations or social change, and sustains the vision and identity of the organization (Collins and Porras,1996). Along with the company's development and interference change factors, the organization retains its identity to the employees and customers through ideological core and core values. An organizations core values are represented by a reduced set of ethical principles by which the organization is guided in its activities. A modern company must have as a core value the interest in customer orientation, the attention to quality of service or market focus. Companies may have made marketing strategies based on these principles without putting them in their own culture; in fact, the main idea that propagates Collins theory is that a company must not acquire certain values to be part of its core, but simply to have such values, and guide the organizations by them (Collins and Porras, 1996).

Transforming an organization requires a shift in its values; reported in terms of values, positive changes are the result of alignment principles, norms, standards and values of the organization to which it relates. Development relies on addressing new management strategies, and implementing them at a cultural level (Johnson and Phillips, 2003). Transformation does not necessarily require large core modification but can in some cases be done only by increasing employee commitment or by identifying the general aspects that drive workers to obtain performances.

According to Ken Blanchard, in order to align employees to company values a certain process must be developed for employees to accept and identify with company core values (Blanchard, 2003). Blanchard's model involves five general steps with a high degree of applicability in organizations, aimed at identifying personal values from which tensioned situations may derive and on outlining the general satisfaction indicators within organizations.

The first phase implies a process of identification of specific actions (through observation of the entire organization) in order to highlight a common path between employees personal values and general core principles promoted by the company. The second phase consists of identifying problems that may arise from discrepancies between some employee perceptions on the way things are handled within the organization. Phase three establishes general satisfaction indicators for employees. In phase four the main objective being the identification of the level of satisfaction in the company and the way in which it can be used to enhance the company's results. Phase five is focused on the implementing development programs in order to strengthen employee commitment to the company.

**Employee satisfaction- the relation between job satisfaction and organizational culture**

The generally accepted definition of the concept of satisfaction is given by Locke: "perception of the relationship between what we want to achieve from work and what is perceived to be received." (Shah, 2007).Employers which create work environments that can attract individuals who can make significant contributions to the company are positively perceived and thought as capable to sustain a company's processes.

People are constantly surrounded by various types of culture. An organization can have multiple cultures or subcultures; they depend on the size and heterogeneity that the company has. The acknowledgement of factors that unite the company's values is crucial in understanding the role that organizational culture has in obtaining employee satisfaction. A survey developed by Shah has shown that factory workers will have increased productivity if they will be paid according the number of units which they develop instead of the time they have worked. An efficient management system functions on principles that reward employees for their efforts to achieve the objectives that we're given to them.

**Methodological Framework**

Through direct observation and by deploying a satisfaction survey, this paper tries to establish a set of general principles that can be used in developing organizational culture, and diagnosing the level of employee satisfaction from a manufacturing company in the manufacturing industry.

The company's processes, procedures and workflow we're directly observed for a period of two weeks in order to establish a general view on the values and habits that are circulated within the internal structure. Through this, the specific cultural elements can be seen, analysed, and discussed in order for the company to improve and achieve higher performance.

Regarding the employee satisfaction survey, it has the aim of highlighting key issues that employees have and offer insights in how to increase the level of commitment towards the company. The survey was deployed for a company in the manufacturing industry with a total of 413 employees. (questionnaire completion rate- 89,5% from the total employee number). The measurement employee satisfaction is given by two main categories: "hygiene" and motivation; "hygiene" does not motivate employees but if it's not fullfiled it becomes a factor of discontent. The hygiene factors are related to company policies, environment and working conditions and working procedures of formal relations departments, salary and direct supervision.

Motivating factors create employee satisfaction through recognition, achievement, responsibility, advancement and the work itself.

The dimensions that where analysed ( each comprising a variable number of interns) are: The general view that employees have of the company; Environment and working conditions; Direct management; Middle and Top management; Training and career development; Retention and commitment towards the company; Working atmosphere. The questionnaire totals a number of 67 items. The formula for calculating employee satisfaction is *((Sum of response values- Total number of responses)/ sum of the difference between the maximum and the minimum value of the scale)*100*

**Organizational culture analysis through direct observation of the company**

The studied company is an organization defined by doing things well and proper, for staying reliable and for building trust. The company has a strong focus on satisfying the requirements (from the internal stakeholders and from the external clients) leading to great focus on results, customer priority and flexibility. The company is also defined by a sense of achievement, adaptability and independence.

This can be explained by the nature of the company – a joint venture of two different organizations and cultures, mixed with the local habits. This is a challenging situation, not very comfortable for the local organization. However, it led to developing valuable skills in solution-finding, versatility and resourcefulness, customer care, quick response, decision-making and autonomous thinking. It may also have imprinted ambiguity, lack of transparency and feedback, predilection for ad-hoc solutions and for shorter-time thinking. As local employees naturally value stability and predictability, there may be a general

preference not to take too much initiative or personal responsibility, and rather to just to their job in accordance to their job description since they do not have a clear future direction. There is a noticeable difference between ages within the company. Younger employees, many of whom have joined the company more recently, have a higher need and availability for personal initiative, systematization, and meritocracy, as well as for feeling that they have a purpose in the organization.

As shown by the deployed satisfaction survey, people's satisfaction level is good given the not so comfortable context. A good part of that is due to first line management team – especially department managers, who have led people through the changes and who display a set of values and behaviours that encourage performance. The most visible common traits of the management team and company values are as follows:

Achievement – employees manifests a strong sense of achievement and focus on accomplishing the objectives. This comes on the one hand from their ability to respond well to the ever growing requests and to deal with change. It also comes from the managing director's strong drive and high expectations in terms of achievement. At the managerial team level, there is a strong sense of pride regarding the results of the company.

Customer-orientation – employees and implicitly the company place a high importance on satisfying the clients' needs. The focus is on building and maintaining strong relationships, and on responding very well to client requests. This is done however in a professional and systematized manner, combining fast response with process efficiency and cost effectiveness. The focus seems to have shifted in the recent years from good customer relations to effective customer relations that ensure more reliability and profit.

Commercial understanding – an important focus is placed on the commercial side of the activity. Business development and sales are core activities and acknowledged as such by the entire organization. This also comes from the larger organizational values from each of the two joint ventures, and is significantly encouraged by the general manager's own business and sales focus and skill. The customers and the profit made are placed in the center, all activities converging and being systematized and organized as to support those.

Adaptability & flexibility – employees display a good capability to adapt to changing requests and fast technological developments. There appears to be good skill in problem-solving and in solution-finding, as well as high responsiveness. They have a good capacity to deal effectively with problems, even with complex and atypical ones. Also, the managers display good versatility and understanding of different perspectives and needs.

Responsibility & commitment – managers identify themselves with the company. They feel that they have allocated along time a great amount of effort and dedication to support the company's growth. Many of them have grown and acquired their most valuable skills and professional maturity here. This consolidates their commitment to the company and their will to remain here for a long time and to dedicate their know-how and energy to it.

At management level, there is a good level of knowledge, skill, and drive for excellence. There is also a significant gap between the managerial and the execution level in terms of technical competence, drive and broadness of vision. Much control and ownership is kept by managers, while their teams are less encouraged to take up initiative and responsibility. A higher focus on people development and a higher tolerance to error would be recommendable, as to ensure a future generation of experts and managers.

Managers are versatile and adaptable but they also have a good filter, passing on to their team clear instructions and information even in contexts of ambiguity. This is excellent in terms of clarity, but not sharing the relevant aspects and not asking people for input leads to them developing an execution mind set and limiting their performance. Managers may also become overloaded with operational aspects while they could dedicate their skill to more strategic and global matters as management team.

Increasing people's exposure, encouraging initiative and responsibility would be recommendable. More feedback and more listening to people's views would be a first step. More manager-employee interaction could also be a good basis for developing career paths within the organization – even if the structure is flat, good performers can be rewarded in many ways once you know what motivates them. Acknowledging openly the already existing roles such as mentor for the newcomers, or senior expert, or project leader etc. and rewarding them would solve many issues related to career development within the company. It would also reinforce the message that performance and dedication are key criteria for professional success in the company. This would provide people with significance, encouraging performance and commitment on the long term.

At management team level there is cohesion but it still needs to develop. Managers seem to be competent, committed action people. Many of them have learned management by doing, and some have a natural predilection for it while others have higher predilection for expert roles. As such, they are still growing as managers of their own departments, in a learning process of how to manage people and how to systematize work.

**Employee satisfaction survey results**

Employees from the company have a medium to high level of satisfaction with work, with the company and other aspects of professional life that were studied. The indicator is 73.9 general employee satisfaction level on a scale of 0 to 100.

The level of employee satisfaction is given mainly from issues such as direct supervision, environment and working conditions, working atmosphere and collaboration in the company. Employee dissatisfaction relates to retention and engagement and the general view on the company and the perception employees have on top management. Employee satisfaction comes primarily from local relations and working conditions – direct manager/supervisor, environment and working atmosphere. Complaints derive from employee relationship with the company, retention, salary and benefits.

Analysing the dimensions of the satisfaction survey it can be observed that the items are segmented into three categories: the first category includes dimensions with values higher than average of the satisfaction indicator, the second is around the average and a third category with dimensions that are below average satisfaction indicator. Items with higher values relate to the direct manager/supervisor (9 of the 10 items). Items related with the company, career benefits (transport, bonuses), and linking wages with input and retention have low values. These results indicate a possible distancing from company and a low sense of belonging from most respondents.

The general satisfaction indicator has the value 73.9 and the analysed dimensions have a satisfaction indicator with values between 86.8 and 63.6 (23.2 point difference); the items have values of the satisfaction indicator between 95.4 and 44.1 (a big difference of 51.3 points).

**Conclusions on the studied dimensions:**

Direct manager/supervisor- supervision corresponds with the highest scores for the satisfaction indicator proving that employees feel good about the style and effectiveness of the direct managers. They are trusted by the employees and believe in fairness in managing people.

Middle management- managers treat employees with respect, but do not consider their needs. However, they are trusted personnel and considered as good examples to follow.

The working atmosphere and cooperation- there is a unity between all personnel, and a strong cohesion to the local team. Employees work, endeavour and find solutions together.

Training and professional career: employees receive local support for integration, start and conduct of their activities. But the company does not provide enough opportunities for professional development.

Retention and engagement- generally, employees are seen working in the company for one year, but not more. The perception is that employees are not properly appreciated and evaluated in the company, although at a local level they feel well informed, treated and evaluated.

General view on the company- there is a lower sense belonging to the company, in terms of pride, and perception of the company as being a second family for the employees. Employees do not consider that lately there have been changes for the better.

**Overall dimensions of employee satisfaction**
**- Indicator of satisfaction -**

| Dimension | Value |
|---|---|
| General average | 73.9 |
| Direct manager/supervisor | 86.8 |
| Environment and working conditions | 84.9 |
| Working atmosphere and cooperation in the company | 81.1 |
| Middle management | 72.6 |
| Training and career | 72.1 |
| Top management | 68.9 |
| General view on the company | 67.9 |
| Retention and engagement | 66.7 |

Source: Author's Research Data

**In conclusion**

This paper was focused on highlighting the main methods used in diagnosing employee satisfaction and identifying company values for an organization in the manufacturing industry. The purpose for identifying these aspects, as stated before, is to optimize and improve organizational effectiveness through specific development programs. The analysis of a company's values and employee satisfaction can be validated empirically for by adapting to each organization's particular elements. A cultural analysis (in the field of organizational study) can reveal specific insights useful in obtaining engagement from employees and their willingness to submit extra effort in order to increase organizational performance. By analysing employee satisfaction specific elements we're revealed that can make the subject of a detailed qualitative study. This stage of diagnosis provides the frame of reference for setting key elements for an even more detailed analysis. In this regard, quantitative analysis of employee satisfaction and direct observation of organizational activity are the main methods used in preliminary diagnosis of an organizations current situation.

## Acknowledgements

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# SYSTEM OF PERFORMANCE INDICATORS FOR THE STUDENT CENTRED EDUCATION

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**Abstract:** The higher education system in Romania is facing a number of challenges coming from its external and internal environment, challenges which threaten even its very own survival. The significant decrease in the number of high school graduates, the increasing disengagement of the new generations towards the idea of study, the marketing myopia that has characterised the university management act are just a few of the challenges that compel the responsible policymakers to adopt a new management philosophy, a philosophy which has as central point the student centred education paradigm (SCE). For operationalizing this philosophy in the current practice of Romanian universities, it is necessary to develop and use a system of performance indicators for the student-centred education (SPISCE). This system would have the purpose: to monitor the performances obtained in time by the higher education institution (HEI), allowing their comparison with those of other competing institutions; to allow the identification of areas where a significant improvement in SCE is needed; to facilitate the establishment of a client oriented marketing strategy within the institution; to create a favourable framework for promoting an organizational culture specific to SCE among teaching staff members and to redesign their rewards system, taking into account their performances in practicing the SCE. We will conceive the SPISCE starting from the process model, resulting three major categories: input-specific performance indicators, process-specific performance indicators and output-specific performance indicators. The academic year pass rate, the retention rate, the number of graduates who continue with master studies, lifetime value are just a few examples of such indicators. Measuring them will help the management team of a university to understand the supremacy of relational marketing compared to the transactional one, the importance of holding on to students and not just attracting them. In other words, universities must focus on keeping students by offering an experience that brings them as much satisfaction as possible with regard to the competencies obtained and their membership in the academic community. In the final part of the study we measured a series of performance indicators for SCE within the Economic Sciences Faculty in Oradea (ESF) and made suggestions for improving them. We believe that measuring performance indicators regarding the SCE is a requirement for practicing a performant management in an institution of higher education and for the improvement of its competitiveness.

**Keywords**: student-centred education, performance indicators, pass rate, the retention rate, lifetime value, performant management in universities.

**JEL Classification:** A23

## 1. Introduction
The higher education system in the EU and implicitly in Romania is one of the most affected areas of socio-economic life after the last global crisis. It was not by chance that at the beginning of 2015 there was launched in the European public space the idea of privatisation of state universities, a measure that also targets our country

(www.ziarulring.ro-1.04.2015). It is very hard to predict the consequences of such a decision and whether our society is ready for such a measure. Consequently, we will confine ourselves to identify the causes that have brought the higher education system in Romania on the verge of collapse, causes which may suggest a series of solutions opportune to be taken in the future. We have divided these causes in two categories:

A. Causes specific to the external environment of the university:

✓ significant decrease within recent years in the number of high school graduates who have passed the baccalaureate (www.mediafax.ro);

✓ budget commitment insufficient for universities for them to be able to obtain performance;

✓ increased disengagement of the new generations towards the idea of study, school;

✓ advancement in the Romanian public space of human models whose success was not determined by their performance related to studies.

B. Causes specific to the internal environment of the university:

✓ lack of opening on the universities' part towards the business environment that could represent an important resource provider in the form of learning opportunities for students and in the form of financial and material resources;

✓ too little orientation towards the student as main client of HEI, that which equals marketing myopia.

Starting with most of these difficulties, we propose as a solution practicing a SCE which promotes the idea of partnership between the three main stakeholders: the student, the teacher and the employer who promotes the role of mentor teacher and provider of learning opportunities for students. SCE provides an organizational culture and a portfolio of tools that should represent the core of the new managerial philosophies in the universities in Romania and not only. The practice of SCE in a HEI is dramatically dependent upon the layout and use of a system of indicators by which to measure the performance of the institution in this respect. Such a system is an extremely useful tool for the management team who can make decisions based on objective, real information not assumptions. As a result, through the present study we proposed designing a SPISCE.


**2. The necessity and the purpose of using a system of performance indicators related to SCE in a HEI**

The necessity but also the difficulty of designing a SPISCE are determined by the characteristics of the higher education service:

✓ *The high degree of uncertainty with regard to the end result of service rendering*, the quality of the output due to the very large number of variables that influence it. From teaching quality to the students' level of involvement, from the campus conditions to the relationship with colleagues, everything leaves a mark upon the student's experience during the years of study and upon the competences acquired.

✓ *The crucial importance of the client's involvement (student) in the process of service delivery for the quality of the obtained product.* In other words, if we do not make of the student an active partner for the teaching staff members in the process of education, the chances of success are minimal. By active partner we understand assuming the following roles: student as active participant in the process of learning and skill development, the student as researcher, the student as manager, as marketing man, as volunteer, the student as mentor.

✓ *The much extended length of providing the education service increases the risk for students to have difficulty in understanding/perceiving the finality of the service or to lose their patience to get involved.* In these circumstances, the HEI must tangibilize the

end result of the service rendered or to use progress indicators.
- ✓ *The large number of employees in the university who influence the degree of satisfaction of students*, teaching staff members and the staff in the administrative area.
- ✓ *The large number of stakeholders who have the role of clients for HEI: the students, employers and society.* It is not an easy action to design a SPISCE starting from the needs of all three categories of clients, needs that are not always convergent.
  SIPICS roles are as follows:
- ✓ It guides the effort to implement the SCE in the institution, thereby facilitating a more efficient and effective use of resources.
- ✓ It monitors the HEI performances obtained in time allowing their comparison with those of other competing institutions.
- ✓ It identifies the areas where a significant improvement in SCE is required.
- ✓ Facilitates the implementation in the university of a marketing strategy oriented towards the client
- ✓ It represents a favourable framework for promoting an organizational culture specific to SCE among teaching staff members and redesigning their rewards system taking into account their performance in practicing the SCE.

Starting from all the above considerations, we emphasize the need to design and use a SPISCE in any HEI and to include it in the Key Performance Indicators systems they use. The role of the present study is to design a SPISCE model, a model that can be adapted and/or used by the management team of any organizational structures in a HEI.


### 3. The system of performance indicators related to SCE (SPISCE)

Having as start-up the process model, we have structured SPISCE on three categories of indicators:
A. Input-specific performance indicators.
B. Process-specific performance indicators.
C. Output-specific performance indicators.

### 3.1 Input-specific performance indicators

a.1 *The number of opportunities for interaction between HEI and the potential student.* Their role is to facilitate the exchange of information between the two entities in order to: inform the potential students of the HEI offer; to build the confidence of potential students in the HEI; to assist potential students in choosing the faculty according to vocational characteristics, thus avoiding high dissatisfaction or even abandonment during the period of study.

Within the category of this indicator there are included: means of interaction in the online environment: sites, Facebook, Twitter, Youtube, online enrolment of potential students; means of interaction in the physical environment: fairs of educational offerings, promotion visits in high schools, doors open days at the university, training sessions offered by HEI to 12th grade pupils in high schools, vocational tests offered by HEI to potential students.

a.2 *The confidence level of high school graduates in the ability of HEI to meet their expectations.* This should be measured on an annual basis and is extremely relevant for HEI's ability to attract quality candidates. Trust is the basic ingredient of any successful relation between an organisation and its clients, especially in the tertiary sector due to the intangible nature of the services. Philip Kotler said in this regard: *"The company's relationship capital is the sum of the knowledge, experience, and trust a company has with its customers, employees, suppliers, and distribution partners... Relationships determine the future value of the firm."* (Kotler Philip, 2004, p. 105).

a.3 *The average mark for admission in college* reflects the quality of inputs, i.e. the quality

of the new generation of students. This can be compared both with the average admission grade on previous years and the average admission grade from competing faculties.

## 3.2 Process-specific performance indicators

b.1 *The frequency at lectures and seminars of students* is determined by two factors: the quality of the students who show interest in the educational process and the quality of teachers which is reflected in the pedagogical tact, attractive courses and seminars, their interactive nature and seriousness.

b.2 *Examination pass rate* – of the total examinations all students within the institution have had there will be calculated the number of examinations that have been passed (grade 5 minimum).

b.3 *Academic year pass rate* - of the total of students within the institution there will be calculated the number of those who have passed the year. These two final performance indicators are relevant regarding the interest and involvement of students within the institution in the educational process.

b.4 *The satisfaction level of students.* Measuring it must be a constant in the concerns of any HEI. The students' satisfaction may be considered the perception that results from assessing the experience the student has had with the educational service received (Elliott and Healy, 2001). The students' level of satisfaction has major implications upon the next indicator.

b.5 *Students retention rate* is influenced by the quality of the inputs in the process (candidates) but also by the institution's ability to satisfy their expectations. It is one of the most relevant performance indicators with regard to SCE. To increase the retention rate it is necessary to offer interesting life experiences that match the students' life style throughout the years of study, so that the faculty may not only be a service provider for the students but also a community in which they can manifest and feel good, fulfilled. In other words, we should also take into account the social dimension of the relationship with the students not just the academic one: *"the perseverance of students depends mainly on the extent in which the student feels socially and academically integrated"* (Tinto, v., 1993). Studies show that the retention rate is directly proportional to the ability of HEI to practice customer relationship management (CRM). Ackerman adapts this term to the educational sector calling it student relationship management (SRM): *"programs designed to build relationships with students in order to increase retention and loyalty towards school"* (R. Ackerman, J. Schibrowsky, 2007, p. 312).

b.6 *The average number of learning opportunities per discipline* like: work visits to employers, students' participation in competitions, trainings offered to students by HEI partners etc. This indicator is extremely important because the greater its value the greater the probability of having well trained students with a positive experience in the institution. Relevant for the importance of the indicator is also the definition provided by the Quality Assurance Agency for Higher Education in the United Kingdom: *"Academic quality is a way of describing how well the learning opportunities available to students help them to achieve their award. It is about making sure that appropriate and effective teaching, support, assessment and learning opportunities are provided for them."* (QAA, 2004, p. 1).

b.7 *The number of students who benefit from mentoring relationships with teaching staff members, peers in senior years of study or employers' representatives.* This creates the premises for boosting the students' satisfaction and retention rate.

b. 8 *The number of students developing volunteer activities.*

b. 9 *The number of students involved in decision-making structures of HEI.*

b.10 *The number of student members in associations and student circles.*

b.11 *The number of students involved in research projects carried out together with the teaching staff members.*

b.12 *The number of students who access mobility scholarships.*

b.13 *The number of partnerships with employers managed by HEI.*

b.14 *The cost of the opportunities lost as a result of school abandonment. This is represented by the incomes the HEI would have obtained if students would have completed their studies.*

### 3.3 Output-specific performance indicators

c.1 *The rate of work integration after 6 months from graduation* is one of the most relevant performance indicators related to SCE. It measures the quality of the educational process in its entire complexity and the success of graduates, which should represent the major goal of the institution. The relevance of this indicator can be enhanced if we take into account only graduates who occupy a job suitable for their level of training and specialization.

c.2 *The satisfaction level of employers with regard to the employed graduates*. It is an indicator pretty difficult to measure but very relevant for the quality of the service provided by HEI.

c.3 *The number of graduated entrepreneurs* is extremely important especially in a society where the average inclination towards entrepreneurship is lower than in other European countries.

c.4 *The number of bachelor graduates who continue with master studies.*

c.5 *Loyalty* becomes essential in the current context for the survival and success of a HEI (Haz, Nesset, 2007). It can be defined as a long term relationship with the client directed toward a specific objective (Söderlund, 2006). The actual measurement of loyalty can be made by analysing: the number of students who manage relationships with the HEI after graduation; the average length of the relationship with the graduate. The importance of the indicator is given by the fact that the graduates are an extremely important resource for HEI.

c.6 *Lifetime Value* (LTV) is a measurement of incomes which the organisation will receive from a client during their relationship (r. Ackerman, a Schibrowsky, j. 2007, p. 312). Obviously it is preferable that this lifetime value be an average as high as possible for HEI.

In conclusion, we emphasize that the design of SPISCE is made starting from the following belief: *"the principle of service marketing is the one according to which the client will receive an experience or an emotion or other benefits from the service provider, with primordial outputs for a university such as mental cultivation, ability development rather than a tangible proof like a degree"* (Dann, 2008). Based on the performance indicators presented in this chapter there can be build *a synthetic performance indicator related to SCE* by which to evaluate the overall ability of the HEI to effectively practice a SCE.

### 4. Research on the measurement of performance indicators related to SCE within the ESF

The role of the chapter is to measure a series of performance indicators related to SCE within the ESF in order to: understand their practical use; see their development in time and to understand the possible factors that have influenced this development; make a series of propositions for improving them. The measurement of all the indicators are to be made for the bachelor cycle in full-time study, for the last five years.

### 4.1 The academic year pass rate

With regard to the performances of the ESF in terms of pass rate, these are presented in table 1. Analysing the data in the table we see that:

✓ The average passing rate in the last five years is 87%. In other words, on average 13% of the ESF students do not pass the year. It is a disturbing value because the students who do not pass the year represent the basis of those who abandon their studies.

✓ We record a lowering direction in the pass rate of the academic year, the minimum value

registered being 79%, with 12 per cent less than the maximum recorded at the beginning of the analysed period. It is a negative evolution for the faculty, especially given the conditions in which it overlaps the constant reduction in the number of students enrolled (59% in 2014 compared to 2010). Such a situation requires taking urgent measures on the part of the ESF.

**Table 1**: Pass rate of academic years within the ESF

| Academic year | No. of students enrolled | No. of students who passed the year | Pass rate |
|---|---|---|---|
| 2009 - 2010 | 1615 | 1475 | 91% |
| 2010 – 2011 | 1502 | 1331 | 88% |
| 2011 – 2012 | 1349 | 1209 | 89% |
| 2012 - 2013 | 1144 | 913 | 79% |
| 2013 - 2014 | 953 | 816 | 85% |
| *Total* | *6563* | *5744* | *87%* |

Source: Internal documents of ESF.

Also very useful are the information related to the students' pass rate for the three years of the study cycle. Thus, analysing the information for the studied period, we obtained the results in table two. As expected, the lowest pass rate is registered for the first year of the bachelor studies cycle.

**Table 2**: Academic year pass rate for the three years of the study cycle within the ESF.

| Year of study of the 3 year cycle | Pass rate |
|---|---|
| 1st Year | 84,86% |
| 2nd Year | 92,17% |
| 3rd Year | 90,5% |

Source: Internal documents of ESF.

To increase the pass rate within the ESF as well as within any other faculties we propose:
- ➢ Adjusting the educational process to the new learning styles of students, visual learning and experiential learning having priority;
- ➢ Developing mentoring relationships between teachers or senior students on the one hand and the students on the other hand, in order to help them integrate into the culture and system of the faculty;
- ➢ Raising the importance of the year tutor who must take the following responsibilities: to present the faculty requirements to students, constant communication with students to determine their problems and solve them if possible, to monitor students' performances and initiate discussions with them when the results are not satisfactory;
- ➢ Creating a social and academic community by the faculty/university in which the student can integrate, can be a member;
- ➢ Involving the student's family in the educational process by constantly informing them related to the student's performance.

### 4.2 Retention rate within the institution
This is an extremely relevant indicator regarding the intensity of the SCE practiced in the HEI and extremely important for its overall performance. A low retention rate reflects a low quality of SCE and significant income losses for HEI. Analysing the retention rates over the last five years listed in table three for the ESF, we can draw the following conclusions:
- ✓ The average retention rate for the five years analysed is 90,48%. In other words, on average, nearly 10% of the ESF students drop out every year from the faculty for

various reasons. These will be presented in subchapter 4.4.

✓ There has been recorded a constant reduction of the retention rate, the minimum value registered being 86,88%, with 5,62% less than the maximum registered at the beginning of the period analysed. In other words, the retention rate decreases by more than 1,1% every year, a situation that obliges HEI to adopt improvement measures for this performance indicator.

**Table 3:** Retention rate within the ESF

| Academic year | No. of students enrolled | No. of students who dropped out of faculty | Retention rate |
|---|---|---|---|
| 2009 - 2010 | 1615 | 121 | 92,5% |
| 2010 – 2011 | 1502 | 130 | 91,3% |
| 2011 – 2012 | 1349 | 121 | 91% |
| 2012 - 2013 | 1144 | 127 | 88,9 |
| 2013 - 2014 | 953 | 125 | 86,88 |
| *Total* | *6563* | *624* | *90,49%* |

Source: Internal documents of ESF.

The retention rate is influenced by the academic and social experience of the student. In other words, HEI must provide the students with: opportunities to develop professionally so that they can reach the goals set in their career; social life opportunities so that they can manifest themselves as members of the community. The best way to improve the retention rate of students within the ESF but also within any HEI is practicing a SCE with everything it entails, organisational culture and specific methods.

## 4.3 Number of bachelor graduates enrolled in master studies

This performance indicator related to SCE reflects in a considerable measure the students' level of satisfaction at the completion of the bachelor cycle. A low number of bachelor graduates who continue with master studies is a proof for the low level of students' satisfaction, which should be a warning signal for the HEI management. Analysing the data in table four, we can draw the following conclusions:

✓ The average number of bachelor graduates enrolled in master studies is 63%. This means that, on average, 37% of the bachelor graduates do not continue with master studies.

✓ The minimum value registered for this indicator during the studied period was 55%, a very low one from our point of view.

**Table 4:** The number of bachelor graduates enrolled in master studies within the ESF

| Academic year | No. of bachelor graduates | No. of graduates enrolled in master studies | Rate of bachelor graduates enrolled in master |
|---|---|---|---|
| 2009 - 2010 | 411 | 316 | 76% |
| 2010 – 2011 | 395 | 231 | 58% |
| 2011 – 2012 | 405 | 224 | 55% |
| 2012 - 2013 | 336 | 216 | 64% |
| 2013 - 2014 | 300 | 181 | 60% |
| *Total* | *1847* | *1168* | *63%* |

Source: Internal documents of ESF.

## 4.4 Identifying the main causes which form the ground for abandonment of studies by students

For this purpose we have organized in 10.03.2015 a focus group formed of 8 students or former students (the first are in danger of abandonment and the latter abandoned their studies). Following this focus group we succeeded in identifying certain patterns, identikits of students who abandon studies or present a high risk from this point of view:

A. *The student enrolled in two faculties.* Usually this category of students drop out in the first year, making it less opportune to undertake retention measures which would target them.

B. *The students who work during their studies.* Unfortunately these students have very little time and energy to dedicate themselves also to the responsibilities specific for the role of student. For this category there can be initiated the following measures to increase retention:

✓ Involving students in research projects together with teaching staff members, projects for which they are to be paid;

✓ providing opportunities such as paid internships or part-time jobs within the partner firms of HEI;

✓ facilitating the grant of scholarships to deserving students by HEI partners.

C. *The students dissatisfied with the experience they had with the faculty.* One of the most often cited reason is the lack of applicability of the information received or the fact that there is too much theory in the detriment of practice. The conclusion of ARACIS is relevant for this: *"the ideal image of the cultivated, intelligent, creative student concerned about intellectual culture is replaced by a model of student gifted with abilities and vendible competencies for the labour market."* (ARACIS; Quality barometer 2010, p. 117). As a result, the ability of the faculty to provide students the opportunities to develop skills required on the labour market will significantly influence their satisfaction, thus increasing the probability of their retention. For this category of students there can be initiated the following measures to increase retention:

✓ diversification of the learning opportunities portfolio that teaching staff members give their students within each of the disciplines;

✓ teaching staff members should focus on providing learning experiences such as learning by doing;

✓ HEI should focus on developing partnerships with employers and involving students in them (internship, work visits to companies etc.).

D. *The student with inadequate entourage.* It is applicable to students who surround themselves with friends who create unfavourable conditions for them to devote themselves to study and to the role of student. The situation is encountered especially among those who no longer live with their family whose role of monitoring them diminishes significantly. For this category of students there can be initiated the following measures to increase retention: semestrial or annual submission of the students' academic situation to their families; providing opportunities for social life/leisure in the university campus: indoor and outdoor sports competitions, cultural evenings, associations and student circles with activities dedicated to students, trips etc.

E. *The student facing difficulties of integration in the academic environment.* It is particularly the case of students for whom the knowledge acquired in high school does not offer a solid foundation to understand the university courses. For this category of students there can be initiated the following measures to increase retention: segmentation of students in two categories (the ones who have graduated from a specialized high school in accordance with the specific of the faculty to which they were admitted; the ones who have not done so) and having them treated differently; developing mentoring relationships between students to assist the ones having difficulties of integration.

F. *The student having difficulties to pay tuition fees.* For this category of students there can be initiated the following measures to increase retention: the possibility to postpone the tuition fee payment; facilitate contracting study credits; providing fruition opportunities

(work in HEI, service provision to HEI partner organizations or part time jobs etc.).

These are the main reasons for students' study abandonment. HEI should periodically analyse these causes in order to understand their magnitude and to initiate measures to improve retention. This approach is perhaps nearly as important as attracting new students.

## 5. In conclusion

Practicing a SCE significantly conditions the success of any HEI in the current context characterized by an exponential growth of competition and by an increase in the disengagement culture of the new generation. Consequently, SCE has to be part of the management philosophy and of the current practice specific to a HEI that wants to be successful on the market. This is very difficult, almost impossible to achieve without the use of a system of performance indicators related to SCE. The designing of a SPISCE can start from the process model, resulting three major categories of indicators: inputs-specific, process-specific and outputs-specific. The measurement of certain performance indicators specific to SCE in the ESF has highlighted the fact that a slight improvement in them can lead to significant income growth for HEI. As a result, this should be a desideratum for any management team of HEI, especially under the present conditions characterized by a more and more accentuated penury of resources for the higher education system in Romania.

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# ROMANIAN MANAGERIAL APPROACHES

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**Abstract:** *Globalization has deeply turned the macroeconomic environment as well as the behaviour of organizations on the global market. Increasingly fierce competition on this market has contributed to the emergence and crystallization of the euro management which was called upon to respond to this challenge. It is closely related to organizational culture and developed on the basis of the integration of markets and economies which led to the appearance, in the management area, of a methods ' concentration, management techniques and methodologies specific to the European countries. As a part of the European management, the Romanian management involves the formulation of some specific traits, defining features, detached from its approach both on processes and management functions as well as on the components of the management system. This approach results from the organization's system feature called "management system". The objectives of this work consist in the formulation of some relevant answers to questions like: "Do the Romanian Managers have a certain conception in terms of functions of the management processes?"; "Was there outlined a specific content for each of the five managerial functions?"; "Is the content of the management components /subsystems already patterned?". As a methodology, from the answer to these questions , there will be taken some conclusions on the "Romanian management" from the theoretical-methodological point of view as a first stage and, on the second stage, as a pragmatic approach on the Romanian organizations and generally within the business environment in Romania. As a result, in the end we present the defining elements of the "Romanian management pattern", to the extent that we come to the conclusion that one can speak of such a model and which are the common and distinct traits as against the European management.*

**Keywords:** Management System, Management Functions, Romanian Management System

**JEL Codes:** M10, M12, M14

## I. The Objectives and methodology of scientific reaserch in the field:
### 1. Reaserch objectives:
This paper attempts to highlight the main feature of modern management in theory and practice in Romania.as well as the advantages that modern , professional management brings to Romanian organizations today as follows:
   a. Studying literature, foreign and national , in management, essential for clarifying the status and trends in management theory in Romania, differences manifested in theory and their impact on economic and managerial performance , both on on the organization level and macromanagement in general.
   b. The Role of management in increasing the efficiency of the organization.
   c. Revealing particuliarities of Romanian management and determination of building and consolidating a Romanian model centered on the two management approaches that are at the organization level : functions of management processes and management system components

The paper also refers to types and styles of management that are commonly used in Romania..The paper ends with a series of conclusions and proposals for achieving

these objectives :

## 2. Research Methodology:

The first part of this methodology is the documentary research , namely the collection, registration and exploitation of information and expertise resulting from studying literature, Romanian and foreign((meaning books, treatises , monographs , articles in journals indexed BDI , other theme related thesis).

Research continues with formulating traits defining characteristics of Romanian management(detached from its approach to management processes and management system components ( this latter approach is derived from the organization's system feature called " management system " ) .

Basically , we try to conclude: that this work consist in the formulation of some relevant answers to questions like:

"Do the Romanian Managers have a certain conception in terms of functions of the management processes?"

"Was there outlined a specific content for each of the five managerial functions?"

"Is the content of the management components /subsystems already patterned?"

In the third sequence we will try to preliminary draw conclusions on the Romanian management ,insisting on its theoretical and methodological dimension.We will study the characteristic that define Romanian business environment and the main problems faced by Romanian managers.

The next step is for the pragmatic approach . Testing sequences research results will show whether the conclusions presented earlier coverage are pragmatic. For it we will appeal to cases , case studies , applications etc.to  the romanian representative organizations for managerial and economic perspective , that defines romanian business environment and the changes induced in romanian organizations by using professional managers.

Finally , we will try presenting defining elements of the Romanian model of management, to the extent that we conclude that  it can be invoked a Romanian managerial  model .

## 3. Estimated results:

Romania, in its commitment to sustainable development path will not be able to evade its new type of organizational knowledge society. Even if the level of  development positions us still far from economically advanced countries. Romanian organizational environment cannot be an exception to the overall orientation of contemporary society to knowledge and technologies. Research projects for this domain are already a significant presence in fundamental and applied research topics of research institutes and universities in Romania. Scientific research is the real source of revolutionary knowledge, that secures Romanian economy progress on the medium and long term. Implementation of development projects on a national scale, of a knowledge-based economy is not an easy task, asking her top specialists. It is clear that performance is impossible without obtaining new knowledge, without the intervention of permanent and substantial scientific research, which is the main support of the new type of management scaffolding. In fact, even the European Commission argues that the knowledge society "scientific research and technology will be more than ever the economic and social engine"

Unfortunately, however, most organizations in the valuation of these concepts is, at best, a distant goal, a future issue of the organization can now dispense. This concerns in particular large organizations with management less flexible and less attached innovative approaches. On small sized companies, with prominent external exposure, emerged convinced that the only way to success is to adopt a long-term contact ,different views on how to conceive and practice management. In this respect, engaging the entire organization in the creation, acquisition, assimilation, understanding and appreciation of

knowledge are actions that began to take shape. It is true, however, that the creation of knowledge-based management practices with still experimental forms is done in these organizations. Given the global trend to move towards the knowledge society, Romania is obliged to observe the same direction if it wants a worthy position in the economy of the future. The role of scientific research is essential in achieving this.

**The expected results of our scientific research covers:**
 a. Progress of management theory in our country
 b. Aspects of organizational management status in Romania exercised on the requirements and demands of scientific management
 c. The first conclusions on the definition and explanation of management based on two specific approaches - the functions of management processes and system components management ( systemic approach to organization , the management system )
 d. The final validation of research results by formulating a relevant answer to the question "there is a Romanian model of management? "

## 1. Introduction
According to literature , management is considered both a science and an art:
- As a science , management considers both the tools, methods and techniques that describe which activities and actions initiated by managers to achieve objectives. Management science lies in studying these processes and their management relations within to discover regularities and principles that govern them and the design of new systems , methods, techniques, ways of management, which ensures obtaining and competitiveness.
- As art , science management uses to organize, find , controlling and motivating a group to achieve objectives. The art lies in the use of talent management in the conduct of management processes.
- Scientific management relates to the implementation legalities , methods, concepts and techniques provided by management science in practice .

Management is an organized, effectively using available resources ( material, financial and human. The resources available are used properly to achieve the targets, in order to maximize profit. To reach the targets required implementation and compliance management concepts for production systems in order to maintain a dynamic balance and necessary competition. As a result , management is dynamic and not static, modified according to social changes, putting into action human factors, material, informational , in order to achieve forecasted results .

Specialists consider management as a driver of economic growth intensive type. North American Professor Peter Drucker , a renowned specialist in management, states that management is actually " an important resource for developing countries and a fundamental necessity for developing countries"* It is scientifically proven that failures in leadership are due to total or partial lack of management knowledge , this applies in all fields both at the macroeconomic level and at the level of organizations, public institutions, administrative authority.In U.S. literature    most widespread definitions of management are considering Manager position and define management as " the process of coordinating human resources , information resources , physical and financial resources to achieve organizational goals or economic unit " .**  The organization's management system can be defined as all the elements of binding, the organizational , informational , motivational etc. within the organization , through which the whole exercise and relationship management processes , in order to obtain a bigger effectiveness and efficiency. Another definition considers management as " that process of obtaining and combining human, financial and

material resources in order to achieve desired products and services to a particular segment of society.". French specialists define management as " a science of driving techniques and management company" . After Romanian company management addresses the specialists "management processes and relationships within the economic entity in order to discover regularities and principles that govern the design of new systems, methods and management techniques to ensure greater efficiency in all areas of economic activity ". It follows that science aims to study management and relationship management processes. In the years around 1750 , Adam Smith made a first knowledge of the economic benefits of division of labor , while Ch . Babbage develops the advantages given to the organization of production.At the beginning of the twentieth century, Henry Ford introduced the assembly line and mass production appeared . At the beginning of the twentieth century, the ideas of F. Taylor , marked the real start of organizing production, design and process control . *„Frank and Gilbert Liliane institutionalizes study movement and Walter Shewhart introduce application of probability in the quality control."* .Sampling work was studied by L. Tippet , but the most spectacular action in the management of records after the Second World War. According to Herbert G. Hicks can define a number of steps in the development and strengthening management as a distinct discipline , namely:
 - Prescientific management (before 1880) ;
- Scientific management ( between 1880-1930 ) ;
- Human relations school (1930-1950) ;
- Expansion , refinement and management development (after 1950 ) .
The first major theoretical contribution it Adam Smith in his " Study of the nature and causes of the wealth of nations" ( 1776 ) discusses a matter of organization , namely the division of labor , which assigns it a number of advantages :
- Increasing dexterity performers ;
- Eliminating unnecessary time by switching from one type of work to another ;
- Better use of the machines.
The evolution of management in Romania:
In our country management , both as a theory and as a practical activity , there was still early. It should be noted a number of achievements in the management plan in Romania during the period before WWI , two of which are worth mentioning.First in Europe using a type system in the Taylorist work organization, based on rules and micromovements time to romanian weaving cotton in Pitesti, then it was picked up by other units of heavy and light industry. The introduction in the curriculum at the Academy of High Commercial and Industrial Studies in Bucharest  ( course of company management).
*,**Peter F.Drucker  - The Practice of Management  (pg3-6)


**2.Romanian Managerial Approaches:**
To define the particularities of Romanian management and analysis of these features it is considered the nature and structure of the Romanian economy. The structural frame of the Romanian economy is influenced by business, organizational culture and managers competency. Analysis of the factors that have an impact on the national economy can highlight the main approaches to increasing the efficiency and effectiveness of managerial approaches of Romanian organizations. Mainly this lack of historical continuity of democratic structures and  functioning market economy had a significant impact on organizational culture and have printed some particularities that influenced the business environment and not least economic results.
Characteristics that define Romanian business environment are:"
> ➢ **Character of uncertainty**
> ➢ **Competitivness deficit**
> ➢ **Problems of informational nature of economy**
> ➢ They are determined primarily by the legislative instability both in the fiscal and

economic , economic and financial indiscipline induced by control government institutions, insecurity of business as a result of failure to comply with legislation on:

- ➢ **Bankrupcy**
- ➢ **Economic contracts**
- ➢ **Financial transactions**
- ➢ **Banking discipline**
- ➢ **Administrative corruption"***

"Another peculiarity of Romanian management is the low age factors and management structures of organizations .If in Western Europe they can reach his peak at 45-50 years from us to have a function to 30 years constitute more or commonplace. This has a great influence on the lack of managerial experience and therefore represents a risk factor for organizational performance. At this effective corporate governance issues , those related to insufficient capital and organizational , legislative and institutional infrastructure fragility prevented the structuring of a domestic economic order in accordance with the performance standards. A great influence on the Romanian management as well as on other management systems, is organizational culture by the confusion between the desire for stability and change, lack of hierarchies vaolrice after 1990 , nostalgia for the past that led to a number of risks that":**

- a. **The risk of inconsistency**
- b. **The risk of obsolescence**
- c. **Resistance to change risk**

\* "The Romanian Economy on postsocialist transition (N.G.Niculescu ,I.D Adumitracesei 2004)

\*\* " Organizational Changing trough Reengineering"( I. Verboncu/ ONicolescu/I.Popa E.Ceptureanu/S.Ceptureanu 2011)

Romanian management is called upon to solve problems regarding the measures to be taken and necessary strategy in order to increase competitiveness and profitability Romanian organizations:

- ➢ Bureaucratic culture ( feature large state firms , but also present in some private) where decisions have to be at the highest level without participation of employees and with great reluctance also observed in planning strategies .Also these companies have a great resistance to change and preserving the status quo.
- ➢ Entrepreneurial culture specific to family or small and medium companies , more flexible but lacks the leadership skills needed to create a strategic perspective and to adapt to the external environment with success ..The success conditions of management process in Romania must have as a point departure like:
  - a. Increased strategic capacity of managers to opt for various projects and to define priorities;
  - b. Formulation of specific and quantifiable goals;
  - c. Articulation , a vision that integrates the medium and long term transformations in the conditions imposed integration management;
  - d. The need for better representation of the interests of stakeholders in decision-making processes;
  - e. Management by objectives;
  - f. Strengthening organizational infrastructures for strategic management of economic and social processes ;

Management is the main factor for achieving economic performance and competitiveness growth factor for Romanian organizations.To achieve this goal it is imperative that management constantly adapt to new economic realities , technical, tehnological . Romanian managers behavior can be characterized in terms the motivation and behavior

in: *
- The structuring of tasks (no existence of any planning or reduced);
- Manner of decision-making ( ( without explanation subordinates );
- Attitudes toward subordinates ( they have sanctioned and controlled , rigid and uninteresting existence of a communication towards improving employees*

"Succes Management" (A.Prodan  1999)


Why it is necessary to improve management professionalization of romanian managers:
**Causes:**
- The lack of comprehensive national strategy to accomplish the objectives and resources.
- Insufficient sectorial strategies even if exists in some sectors
- Political instability, economic and legislative
- Lack of transparency of major strategic decisions
- Corruption and high tax evasion
- Necessary to ensure that organizations adapt to the rapid changes taking place in today's society
- Involves profound changes in all management subsystems
- Implementation of management systems different from the classical;
- Profesional management principles entered after the revolution of 1989 , particulary due to appearance on the market of foreign managers;
- Were first applied to subsidiaries of multinational companies;

**Methodes:**
- Promote generalized strategic management;
- Promoting managers whether they are political or technical management on professional and competence criteria;
- The introduction of private management on contract basis at state institutions;
- The introduction of performance indicators for all sectors;
- Improving communication management publicly as human premise for macroeconomic objectives;
- Harnessing economic instrument asw important management tools for economic recovery;
- Using organizational flexibility of the economy;
- Promoting motivational systems focused on performance;

**Effects:**
- Increased confidence in the political class;
- More efficient management of the national economy;
- Increasing the competitiveness of the national economy in all sectors;
- Increasing the international visibility of the Romanian economy and Romanian Management;


Management styles commonly used in Romania after 1990 due to introduction of market economy and democracy:
- Family style :based on personal interests,profit in the current period , the possibility of risk and development of the comp[any is the main criterion that activity is based of.(This style defines small and medium sized companies);
- German managerial style:Managers show responsibility towards employees and society , are willing to assume risk in certain situations.For these managers important is continuing the business, honor and reputation.
- French managerial style(Characterized by authoritarianism as a form of personal power, far away from everyday activities and use of delegation in its sole

discretion.

The Main problems faced by Romanian Managers are:
    a. Management Strategies;
    b. Planning difficulties;
    c. Instability;
    d. Lack of innovation;
    e. Organizationa structure;
    f. Management style;
    g. Human resources management

Because in many Romanian organizations complacency signs of dullness and aging , managers would need to ask again which assumptions about the environment , mission and competencies that reflect reality.The means through which Romanian managers can analyze these elements are

• preventive measures
• early diagnosis

Putting Romanian organizations in user behavior with the new realities of the environment or the new definition of  the mission and the new basic skills to be acquired developer or preventive measures. For each   product , policy, distribution channel ,organization management   to question the policies, practices accepted in the habit and to rethink managerial instruments ( about 3 years). There is a low inclination for strategic planning and short-term orientation . Managers are designed to make the employees understand the objectives set in the strategic planning and the following are the main categories of information relevant for future activities. The lack of a strategic vision to employees creates difficulties in applying management by objectives. Distance to the power and the high degree of uncertainty avoidance are two characteristics of Romanian management. Lack of awareness of Romanian managers is a phenomenon more frequently and prompted the development of a management characterized by normative and organizational instability.

These characteristics are determined by the rapid changes developed by dominance of informal relationships and confusing time . Because of this they perceived problems encountered and solved , but without this leading to their accumulation over time, deepening them and their subsequent transformation in conflicts. Decision-making is characterized by ambiguity , causality is confusing , supports scientific substantiation necessary information are almost nonexistent , and the fluctuation of employees at organizational chaos creates . The main consequences are: Procrastination habit of solving problems or deficiencies are resolved quickly just those involving the personal interests of managers , although some are equipped with modern computing means employees know not to use them. *

## 3. WAYS to achieve the objectives:

The organizational structureof Romanian organizations is pyramidal ,that highlights the power distance . Flat organizational structures , with a reduced number of hierarchical levels , are less agreed as in Romania focus in particular on social status . Changes in frame of Romanian organizations are perceived by employees as a factor of disturbance due to anxiety that characterizes Romanian society. Romanian companies are categorized in terms of organizing a large number of bureaucratic procedures to be respected and resulting delays in achieving the objectives. A flexible organizational structure like an american organization is difficult to introduce  in Romania because performance and domestic competition are not approved by the companies' employees because of collectivist mentality of romanians and   cultural values of the country. Romanian employees prefer a more relaxed pace of work. Applying a French organizational structures nearest our country could not be introduced due to the long period of communism which have common traits on the high degree of centralization and

authoritarianism rejected traits of Romanian employees. Structure in small companies rely on kinship ties existing between its members but it favors cronyism and corruption which removes able workers and performers. Matrix organizational structure is typical for companies that are organized in projects that involve the completion of activities and projects through interdepartmental collaboration and assuming multiple responsibilities and long-term orientation given that Romanian managers and employees prefer short -term orientation. Regarding the Romanian organizations to face globalization and increasing competition on the European market should use a higher percentage strategic planning to use the forecasts to analyze environmental changes and adapt it to anticipate these changes not only post factum decision to correct their appearance. One way to improve the performance could be:

1. Potentiation execution f work at each job;
2. Amplification overall functionality of the organization;
3. Integration to a higher level of the market and the national economy;

I mean briefly how management actually contributes to the generation of added value in enhancing the effectiveness and economic efficiency." (O.Nicolescu, I.Verboncu, *Organization Management fundamentals*, Ed Universitara, 2008)

A way to organizational change would be:
- ➤ Monitoring changes in the strategic dimension of management
- ➤ Audit of organizational culture;
- ➤ Transferring the know-how management;
- ➤ Implementing best practices in management
- ➤ Annual reconsidering the position of management organization addressed sizes;

## 4. Conclusions:
One way to improve the performance of Romanian organizations would be:
Communication between managers honest and open with subordinates to resolve crisis situations can be one of the prerequisites of success in these organizations. Potentiation execution of work at each job, amplifying the overall functionality of the organization, higher level of integration organization's activities in the market and national economy.
What is expected from Romanian management:
- ➤ Formulate specific and quantifiable goals;
- ➤ Increasing the strategic capacity of managers;
- ➤ Better representation of stakeholders in decision-making;
- ➤ Providing management by objectives;
- ➤ Strengthening the organizational structure;

Professionalizing management and implicitly people who implement it ,is necessary to ensure that organizations adapt to the rapid changes taking place in society today.
Addressing the function managerial processes allows conclusions to be drawn:
- a. The literature in Romania is, overwhelmingly , adept design management processes that have as main attributes or functions planning, organizing , coordination, training and control- assessment .
- . he center of gravity in terms of management is the management school at the Academy of Economic Studies , initiator and promoter of numerous concepts, theories , methodological elements etc. Specific management science
- Especially after 1989 , there were numerous valuable works for management who insisted on the need to address management processes through the functions set out , each of them having a well-defined place and role in the performance of individual managers and group .

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# ANALYSING ORGANIZATIONAL CHANGES – THE CONNECTION BETWEEN THE SCALE OF CHANGE AND EMPLOYEES' ATTITUDES

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**Abstract:** *In the 21st century all organizations have to cope with challenges caused by trigger events in the environment. The key to organizational success is how fast and efficiently they are able to react. In 2014 we conducted a research survey on this topic with the contribution of Hungarian students on Bachelor courses in Business Administration and Management. They visited organizations which had gone through a significant programme of change within the last 5 years. The owners, managers or HR managers responsible for changes were asked to fill in the questionnaires about the features of these organisational changes. Several issues regarding change management were covered, besides general information about the companies. Respondents were asked about the trigger events and the nature of changes, and about the process of change and participation in it. One group of questions asked leaders about employees' attitude to change, another section sought information about the methods used in the process. In this paper, after a short literature review, we will analyse the adaptation methods used by organizations and the connection between the scope of change and employees' attitude toward change.*

**Keywords:** change management; adaptation methods; nature of change; resistance and responses to change;

**JEL classification:** M10; M14; L21

## 1. Introduction

We are living in a fast changing world. Several factors in organizations' environments are changing, and they require reactions from these organizations. At the beginning of the 21st century it is an interesting research topic to analyse what leaders and managers of the organizations think, believe and perceive about changes, how they react, and how successful their actions are.

This question was in our minds when we conducted empirical research into organizational changes in Hungary. Bachelor students, studying Change Management were asked to find an organization which had gone through significant changes within the last 5 years. The owners, managers or HR managers of the companies were asked to fill in the questionnaire about their change programme. 105 responses were collected, mainly from medium size companies from the Eastern part of Hungary.

In a previous study Ujhelyi and Kun (2015) analyse the distribution of change triggering factors among different types of organizations, according to total number of employees, number of graduated employees, legal form, annual total revenue and ownership structure on the same sample. In this paper, after a short scientific review, the companies' adaptation methods, the scope of change and their connection with employees' responses to change will be analysed.

## 2. Literature Review

We live in a fast changing world. Human beings and organizations also have to pay attention to these signs and sooner or later they have to respond to these changes. Organizations can choose from three different types of adaptation (Dobák, 1996). Reactive change is when the organization adjusts to the new situation after the changes have taken place. Many organizations do not wait until this moment. As soon as they perceive that changes are occurring in the environment they begin to prepare for the new situation and will be ready with the response at the time the changes take place. This type of adaptation method is called preactive change. The scientific literature also explains a third method, called proactive change. In this case organizations do not wait until changes happen, but try to influence their environment to fit to their own goals.

### 2.1. The Nature of Changes

Researchers dealing with change management analyse the background to changes from two well defined points of view. First they analyse what kind of factors, or trigger events, cause changes (Senior and Swailes, 2010). In connection to this we should mention PEST or PESTLE analysis, well known from strategic management. This method helps in the diagnosis of the external environment, in defining problems and designing organizational goals which fit the new situations. In another article Ujhelyi and Kun (2015) pointed out significant relationships among these factors and organisational attributes on the same sample.

The second research topic is to explain the nature of change (Senior and Swailes, 2010). Several authors have created models in relation to this. In what follows we will present a few significant approaches.

Grundy defined three types of change in terms of the rate of change (Grundy, 1993). In the case of smooth incremental change the rate is constant. Bumpy incremental change is characterised by relatively static periods, when the rate of change is low, but these periods are replaced by an acceleration in the rate of change. The third type in Grundy's model is "discontinuous change".

Balogun and Hope-Hailey (2004) identified four different types of change considering the nature (incremental, or big bang) and the end result (transformation, or realignment) of change. The four types are evolution, revolution, adaptation and reconstruction.

The last model we wish to introduce is Dumphy and Stace's scale. They defined four scale types: fine tuning, incremental adjustment, modular transformation and corporate transformation (Dumphy and Stace, 1993). Fine tuning change is an ongoing process with minor refinements. Incremental adjustment involves distinct modifications. In the case of modular transformation, radical realignments are focused on departments or divisions of the organization. Corporate transformation is characterised by radical shifts in corporate strategy and revolutionary changes are needed throughout the whole organization.

### 2.2. Resistance to Change

Probably the biggest challenge managers face during a change programme is resistance to change, "efforts exerted by employees either overtly or covertly to maintain the status quo" (Spector, 2013: 10). However, resistance depends heavily on the scale of change and the way it is implemented. The reactions of employees to change move along a broad scale. Coetsee (1999) listed seven alternative responses: commitment, involvement, support, apathy, passive resistance, active resistance and aggressive resistance. The major forces for resistance are also frequently categorised by researchers. Individual and organizational sources are distinguished (Robbins and Judge, 2013).

## 2.2.1. Individual Resistance

Individual sources of resistance are habits, the need for security, economic factors, fear of the unknown, selective information processing and fear of failure (Robbins and Judge, 2013: 616; Nelson and Quick 1994: 546-547).

Human beings rely on habits because life is very complex and these programmed responses simplify it.

We all have a need for security: we are afraid of changes because it threatens our feelings of safety, our values or personal contact and can result in a loss of prestige (Robbins, 1991: 640).

Economic factors means that we believe that changes will lower our income or cause us to lose our job (Robbins, 1991: 241). This is called "fear of loss" by Nelson and Quick (1994: 546).

Fear of the unknown: "changes substitute ambiguity and uncertainty for the known" (Robbins, 1991: 641). If something changes in our organisation we have to learn various new skills (for example how to use a new technology or new equipment). We often insist on old but wrong systems and situations because of our previously comfortable life.

Selective information processing is very important in our life. People hear what they want to hear because their present life appears to them to be very simple and safe as a result of the selective nature of their perceptions (Robbins, 1991: 642).

Some people fear changes because they fear their own failure. This resistance stems from an approach that the change itself will not really take place: we are unable to use the new computer system, the new booking-software and so on (Nelson and Quick 1994: 546).

## 2.2.2. Organisational Resistance

It is not only people but also organisations that insist on the current situations and systems. They want to continue doing what they have been doing for years. The sources of organisational resistance can be the following: structural inertia, group inertia, threat to expertise, threat to established power relationships and threat to established resources allocations (Robbins, 1991: 642-643 and Bakacsi, 2004: 281-286).

Structural inertia means those built-in mechanisms of the firm that help them to produce stability. These are the different methods and regulations which have been successfully used in the past.

We talk about group inertia when group norms may act as a constraint even if individuals want to change their behaviour.

People do not want to lose their power and authority as a result of changes. This causes resistance in certain cases within the organisations, which is termed a threat to expertise and a threat to established power relationships (Robbins (1991: 643).

Those people or groups in organisations that control the allocation of important resources often see changes as a threat. They do not want to lose this privilege and therefore they try to interfere in any changes (Bakacsi, 2004: 285).

Other authors review other factors of resistance. Nelson and Quick (1994) list the following: disruption of interpersonal relationships, personality conflicts, politics and cultural assumption and values. Bakacsi mentions the importance of changes, the expectations of success of the change, a lack of confidence in the organisation, and subcultures and their norms (Bakacsi, 2004: 281-286).

As far as possible, leaders have to recognise these factors of resistance in order to manage changes successfully.

## 3. Data and Methodology

Empirical research was conducted in 2014 to study organizational changes in Hungary. Hungarian students in Bachelor courses in Business Administration and Management were asked to search for organizations which had gone through a significant change programme within the last 5 years. Students visited these organizations and asked the owners, managers or HR managers to fill in a questionnaire about the features of organisational changes.

The total number of questionnaires is 105; however, as a result of missing or failed answers the sample size can be lower in the case of some items. The total headcount in 2012 was 1332.94 (standard deviation = 6762.86, N = 104) while in 2013 it was 1340.63 (standard deviation = 6706.83, N = 105). The mean of the Total Revenue in 2013 was 3168.68 million HUF (standard deviation = 8961.82 million HUF) for the 97 respondent organisations that provided an answer to this question.

In this research we analyse three main questions. We would like to know what kind of adaptation method organizations used. In the literature review the three alternative methods - reactive, preactive and proactive changes – have already been explained. Our second question is the scope of change. Respondents were asked to choose from four alternatives – fine tuning, incremental adjustment, modular transformation and corporate transformation – based on Dumphy and Stace's (1993) scale. The third issue we intend to analyse is the alternative responses to changes explained by Coetsee (1999). We asked organizational leaders to define what percentage of employees responded to changes with commitment, involvement, support, apathy, passive resistance, active resistance or aggressive resistance.

We are using descriptive statistics, ANOVA and $t$-tests to compare the scope of change and adaptation strategies in terms of their connection to employee attitudes (responses to changes).

## 4. Results

One of the questionnaire items offered descriptions of the scope of change, and the respondents had to choose the one that best fits their organisation. All the respondents ($N$ = 105) provided a valid answer. Fine tuning change was selected by 42 of those questioned (and thus was the most frequent), incremental adaptation by 20, modular transformation by 14 and organisational transformation by 29.

In response to another question about the organisation's strategy of adaptation, 46 of the respondents (104 was the total number of valid answers) reported reactive, 34 preactive and 23 a proactive strategy. Although only one type of strategy should have been selected, in one questionnaire both the pre- and the proactive strategy were marked. Thus, in our sample the reactive strategy was the most frequent, and the proactive the rarest.

The respondents were also asked to share 100 percentage points among seven statements in order to characterise their employees' responses, and attitudes toward changes. Descriptive statistics of the answers are presented in Table 1.

**Table 1:** Descriptive statistics of employees' attitudes towards change

| Attitude statement | *N* | Mean | S.D. | Median |
|---|---|---|---|---|
| Commitment | 102 | 21.81 | 22.63 | 15.00 |
| Involvement | 102 | 37.40 | 26.84 | 30.00 |
| Support | 102 | 11.97 | 12.50 | 10.00 |
| Apathy | 102 | 17.77 | 19.17 | 10.00 |
| Passive resistance | 101 | 6.93 | 12.88 | 0.00 |
| Active resistance | 102 | 3.02 | 6.19 | 0.00 |
| Aggressive resistance | 102 | 0.87 | 3.44 | 0.00 |

Note: *N* = sample size, S.D. = standard deviation.

According to Table 1, most of the organisations reported positive employee attitudes towards change. More than one third of the organisations experienced a willingness to actively participate, immediately followed by a strong commitment. Together these two account for nearly 60% of the total. An additional 12% reported an attitude of verbal but not active support. Thus, the positive attitudes are cumulatively more than 71%. The neutral (apathetic) attitude is just below 18%, and the negative attitudes are cumulatively less than 11%.

In the following, we examined the relations between employees' attitudes towards change and the scope of change, and also between these attitudes and the organisation's adaptation strategy. First, the varying scope of change is compared with ANOVA analysis. Table 2 contains the results.

As the results in Table 2 suggest, the scope of change has no significant connection with the reported employee attitudes, except in the case of the apathetic attitude, where the larger scope of change seems to lead to a lower level of neutral attitude compared to other attitudes.

Recoding the scope variable into a binary one – where fine tuning and incremental adaptation form one named 'Small scope', while modular and organisational transformation form another named 'Large scope' –, we can perform independent samples *t*-tests to reanalyse the connection between scope and attitudes. In this case the apathetic attitude remains ($t$ = -2.67, $p$ = 0.01), while 'being disposed to active participation' has become significant ($t$ = 2.04, $p$ = 0.44). Other attitude statements still show no clear dependency on the scope of change.

Simplifying the examination even more, we summarize the percentages assigned to attitudes into three combined variables, and then we repeat the previous analysis. The new variables are:

'Active participation' = 'Commitment' + 'Involvement';

'Supporting attitude' = 'Support' + 'Apathetic, neutral behaviour';

'Opposing attitude' = 'Passive resistance + 'Active resistance' + 'Aggressive resistance'

**Table 2:** ANOVA for employee attitudes and scope

| | | Fine tuning | Incre-mental | Modular | Organi-sational | F |
|---|---|---|---|---|---|---|
| Commitment | N | 40 | 19 | 14 | 29 | 0.64 |
| | Mean | 23.55 | 26.05 | 17.64 | 18.66 | |
| | S.D. | 21.92 | 31.21 | 19.44 | 18.48 | |
| Involvement | N | 40 | 19 | 14 | 29 | 1.66 |
| | Mean | 44.15 | 37.37 | 30.36 | 31.52 | |
| | S.D. | 27.68 | 28.64 | 24.22 | 24.63 | |
| Support | N | 40 | 19 | 14 | 29 | 0.12 |
| | Mean | 11.15 | 12.11 | 13.43 | 12.29 | |
| | S.D. | 13.15 | 13.98 | 11.02 | 11.78 | |
| Apathy | N | 40 | 19 | 14 | 29 | 3.61[**] |
| | Mean | 12.33 | 15.26 | 17.93 | 26.84 | |
| | S.D. | 13.77 | 15.23 | 14.04 | 26.25 | |
| Passive resistance | N | 39 | 19 | 14 | 29 | 1.11 |
| | Mean | 4.92 | 7.37 | 12.21 | 6.78 | |
| | S.D. | 7.41 | 14.85 | 21.14 | 12.20 | |
| Active resistance | N | 40 | 19 | 14 | 29 | 0.77 |
| | Mean | 2.82 | 1.58 | 4.79 | 3.40 | |
| | S.D. | 6.86 | 3.36 | 6.05 | 6.74 | |
| Aggressive resistance | N | 40 | 19 | 14 | 29 | 0.57 |
| | Mean | 1.20 | 0.26 | 1.50 | 0.52 | |
| | S.D. | 4.87 | 1.15 | 2.85 | 2.05 | |

Note: $N$ = sample size, S.D. = standard deviation, $F$ = value of the $F$ statistic; [**] = significant at level 0.05.

In this way the independent samples $t$-test results shows a highly significant connection between positive attitude variables and the binary scope variable as presented in Table 3. This means that a smaller scope of changes seems to lead to a more actively or passively supporting attitude on the part of the employees. Conversely, the negative attitudes show no significant relation to the scope of change.

The link between adaptation strategy and employee attitudes is examined via ANOVA. So as to be able to better analyse and interpret this, here we use only the combined attitude variables (which are introduced in the previous analysis). The output data from this examination are shown in Table 4. Based on these we can draw the conclusion that adaptation strategies and the supportive or opposing attitudes of the employees are significantly connected; however, attitudes towards active participation are not. As the means of the attitude percentages show, positive attitudes seem to be strongest in the case of the preactive strategy, while higher percentages of opposing attitudes are connected to proactive strategies.

**Table 3:** $t$-tests for employee attitudes and scope with combined variables

| Attitude | Scope | N | Mean | S.D. | F | t |
|---|---|---|---|---|---|---|
| Active participation | Small | 59 | 66.32 | 29.12 | 0.01 | 2.86[***] |
| | Large | 43 | 49.47 | 29.82 | | |
| Supporting attitude | Small | 59 | 77.78 | 24.21 | 1.14 | 3.03[***] |
| | Large | 43 | 62.13 | 27.81 | | |
| Opposing attitude | Small | 58 | 9.10 | 14.18 | 4.94 | -1.11 |
| | Large | 43 | 13.23 | 21.02 | | |

Note: $N$ = sample size, S.D. = standard deviation, $F$ = value of the $F$ statistic of Levene's test for the equality of variances, $t$ = $t$ statistic of the independent samples $t$-test for the equality of means; [***] = significant at level 0.01.

**Table 4:** ANOVA for employee attitudes and adaptation strategies

| Attitude | | Reactive | Preactive | Proactive | $F$ |
|---|---|---|---|---|---|
| Active participation | $N$ | 44 | 34 | 22 | 2.24 |
| | Mean | 58.59 | 65.24 | 47.91 | |
| | S.D. | 31.52 | 28.26 | 29.16 | |
| Supporting attitude | $N$ | 44 | 34 | 22 | 2.74[*] |
| | Mean | 67.84 | 78.97 | 63.55 | |
| | S.D. | 28.52 | 22.08 | 27.93 | |
| Opposing attitude | $N$ | 43 | 34 | 22 | 3.42[**] |
| | Mean | 9.95 | 7.15 | 19.14 | |
| | S.D. | 18.46 | 10.89 | 21.88 | |

Note: $N$ = sample size, S.D. = standard deviation, $F$ = value of the $F$ statistic of ANOVA for the equality of means; [*] = significant at level 0.10, [**] = significant at level 0.05.

## 5. Conclusions

Our research results show that organizations more frequently engage in 'Small scope' (fine tuning, and incremental adaptation), rather than 'Large scope' (modular and organizational transformation) changes. From the adaptation strategy point of view reactive change is the most frequent. Most of the respondents reported positive employee attitudes toward change (cumulatively more than 71%), however the remainder of the employees are neutral (apathetic), or show passive, active or aggressive resistance towards changes. Regarding the connections between the answers we were able to find significant connections when we simplified the examination.

The smaller scope of changes seems to lead to a more active and supporting attitude from the employees. This result is in line with scientific literature which states that we have a lower level of resistance in the case of smaller changes (Brown and Harvey, 2011). The research result regarding the adaptation strategy also sounds logical. We found that positive attitudes seem to have the highest percentage in the case of the preactive strategy. When we use a preactive strategy we have more time to communicate the changes and employees are more frequently involved in actions. However this is another important issue regarding the management of organization changes, which was not analysed in this article.

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*SUB-SECTION: MARKETING*

# REMARKS ABOUT ONLINE ADVERTISING - A QUALITATIVE RESEARCH AMONG ROMANIAN PROFESSIONALS

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**Abstract:** *In the online environment, the users have more control regarding what they want to see and this affects the advertising they are exposed to (due to the profiles created by the websites they have visited). Organizations can personalize the advertising campaigns designed at a higher level, to better meet the needs of the consumers. This paper offers an in-depth view about online advertising from 12 Romanian experts, who represent companies or digital advertising agencies and who employ this tool in order to promote themselves or to develop campaigns for their clients. The empirical research undertaken has a qualitative nature, semi-structured detailed interviews with the professionals have taken place in February-March 2015, in Bucharest. Online advertising was mostly defined by the specialists as being dynamic; and some of the attributes that characterizes this domain are measurability and personalization. Clear objectives settled, correct targeting of users, a well-established strategy and planning are the key elements that would lead to a successful online advertising campaign. The Romanian agencies offer integrated online advertising services, from research and market analysis to implementation and results' assessment of the campaigns. The formats they have been using are: search, display, video, social media advertising, affiliated marketing and sponsorship. Most of the representatives interviewed suggest that their companies' offers might / will change due to the dynamics of the medium. Online advertising helps the other online marketing tools perform better and develop the online presence of the companies. All the respondents have confirmed that following the introduction and great use of smartphones, their companies have adjusted the online advertising campaigns to better target the potential customers that use mobile devices. Most of the companies that invest in online advertising campaigns come from sectors such as: retail, telecom, FMCG and banking. Most of the experts have a positive attitude towards the future of online advertising in Romania and predict its future development.*

**Keywords:** online advertising; qualitative research; Romanian professionals.

**JEL classification:** M31; M37.

## 1. Introduction

The present paper presents a detailed overview regarding online advertising from the point of view of 12 Romanian representatives of digital advertising agencies, after a short review of the scientific literature on the topic, since online advertising has older roots (1994) and many researchers have discussed it and its dimensions (Robinson, Wysocka and Hand, 2007; Song, et al. 2011; Taylor, 2011).

Advertising is an extremely important communicational vector for the organization in the context of the promotional activity developed by the organizations (Popescu, 2003: 19-20). It can be defined as "any paid form of communication about an organization and its products and services by an identified and typically paid sponsor" (Brown, 2007: 21). The only major problem that appears is the high amount of messages that the companies want to transmit and the large number of consumers to whom the organizations want their messages to be transmitted to. Consumers are exposed to advertising through their TV

sets, radios, newspapers, magazines, mailboxes, computers etc. and represents a prominent feature of economic life (Bagwell, 2005: 3).

Online advertising can be defined as a form of promotion that uses the internet in order to deliver marketing messages in order to attract customers (Meyers and Gerstman, 2001). Online advertising offers a better match-making vehicle than the traditional advertising in terms of efficiency in delivering certain messages to certain users who have certain characteristics and needs.

For companies, the Internet and the online marketing tools represent efficient and interactive tools for obtaining information from users. In the communication process, these online tools offer the companies the possibility to develop a more dynamic relationship with their clients, to better know their behavior and their needs and to offer them the products and services that want. All the data offered by the Internet about the clients can be used by the organization in order to improve the communication between the company and the clients, for an improved user-experience, such as personalization (messages, advertisements etc.) and customized offers (Mogos, 2015: 279), that can lead to trust and loyalty increase towards the organization and its products / services (Galbreath, 2002)

The structure of online communications help the agencies and advertising networks obtain more data about the users than it is possible through traditional mediums, offering a substantial decrease in costs in what concerns the selection of target audience of organizational and commercial communications (Goldfarb, 2014: 116). The better personalization of advertising campaigns, so that the ads appear to those persons who are more likely to be interested in the products or services advertised, show that online advertising is much more efficient in what concerns targeting, and that the messages can / should be delivered to those users that are mostly likely to do the action wanted by the company (Evans, 2009: 43).

## 2. Research Methodology

The present qualitative research has an exploratory character and has the purpose to encompass the views and remarks of experts, related to the Romanian online advertising market. *In-depth interviews* were carried out among *12 online marketing specialists*, the majority of them being Marketing Managers (or similar management positions) at Romanian advertising agencies, such as: Leo Burnett, Ogilvy & Mather Romania, Godmother, 2Parale (two representatives), Webdigital, White Image, Catalyst, Incandescent Marketing, Brand Conversations, Digital Ink and the Online Division Manager from Gerroma SA. The professionals have experience in the field of online advertising for 5 to 14 years.

The chosen *investigation method* was the selective survey, the *research technique* was the explorative interrogation, and the *research instrument* was the semi structured detailed interview, based on a conversation guide (Pop, 2001: 86-87; Cătoiu et al., 2002: 207). The interviews took place in February and March 2015, in Romania - Bucharest, in Romanian (all the quotes from the interview included below were translated very rigorously into English by the author).

In the present paper only a part of the results obtained from the interviews are being presented, the ones related to the following objectives established:

*O1.* Determine the specialists' opinions and / or definitions of online advertising.

*O2.* Identify the first three attributes associated with online advertising by the Romanian experts.

*O3.* Identify the most important elements that contribute to a successful online advertising campaign.

*O4.* Determine the offer of online advertising services offered by the Romanian companies and sector of activity where online advertising campaigns apply the best.

*O5.* Identify the specialists' opinions regarding the future of online advertising in Romania.

## 3. Main Results

In order to determine the specialists' opinion regarding online advertising (*O1*), the respondents were asked how they would define the domain. It can be noticed the fact that seven of the respondents have used the word "*dynamic*" in order to define online advertising; one of the experts called it "*chameleonic*". Other definitions given by the practitioners include: "*the sum of activities, methods, strategies and channels, all of them correlated to reach business objectives, no matter the services or products offered*", "*online advertising is seen as an extension of traditional advertising – the perception is due to the interactive formats available in the online environment, as compared to the classical (e.g. tv, radio etc.) and can create a pleasant experience with the user, if the formats are implemented correctly; it does not create trends, but it is an environment of tools, diffusion and support*" or "*online advertising is innovating and continuously changing; it is also a domain that asks for all the resources a marketer has: research, design, projection, analysis, creativity, implementation, tracking, improvement and repetition*". In the scientific literature, the effectiveness of online advertising campaigns is often discussed (Baltas, 2003; Breuer and Brettel, 2012).

Asked about the first three attributes the professionals associate online advertising with (*O2*), the majority of the respondents have mentioned "*measurability*" and "*personalization*". Also mentioned by at least two specialists, other characteristics of online advertising are: "*flexible / adaptable*", "*efficient*", "*performant*", "*creative*", "*optimized*" and "*scalable*". Some of the attributes mentioned only by one respondent include: "*cheap*", "*controllable*", "*complex*", "*of the future*", but also "*superficial*".

In order to identify what elements lead to a successful online advertising campaign (*O3*), the specialists were asked to mention at least three things. "*Setting clear and measurable objectives*" and "*targeting (the ads and messages should appear only to those persons interested, they should be personalized according to the online behavior)*" were mentioned the most, by the professionals. The "*strategy (has to be an integrated one)*", "*planning (should be realistic, taking into consideration the reality's unpredictability)*" and "*return on investment (and a constant analysis of the results)*" were also mentioned by at least two of the respondents. One of the respondents mentioned "*the offer*" as being an important element that would contribute to the success of the online advertising campaign: "*the offer should be relevant and personalized, it should anticipate as well as possible, the needs of the consumer, because without such an offer, the campaign cannot have results*". "*The budget*" is also important "*even though the online is seen as a cheap environment, a successful campaign should have a budget for the online media to deliver results*". Attention to the "*implementation of the campaign, as it can have a positive impact*", "*optimized landing page – it should include a simple message that will drive the consumer to do a single simple action*" and "*tracking*" were also mentioned by the specialists.

Most of the professionals interviewed confirmed that the companies they represent offer integrated online advertising services (*O4*) and the Manager of an important digital agency highlights that "*the offer is correlated with the demand on the market and is continuously changing, because even though there are the same channels, the strategies are changing, new attributes appear, new technologies and other aspects that we need to take into consideration in order to remain competitive on the market*". The agencies offer full services, from research and market analysis, development of online advertising strategies, designing and testing, implementation, tracking, optimization and improvement to results' analysis. The online advertising formats mentioned to be used by the interviewed companies (for promoting themselves or their clients) are: *Search advertising* (Google AdWords, Bing, YouTube), *Display advertising* (Google Display ads, used either for remarketing purposes or different conventional or unconventional display formats used for performance or for brand awareness), *Social Media advertising* (the most mentioned was Facebook Ads, followed by YouTube and LinkedIn Ads), *Video advertising* (YouTube ads, either pre-, mid-, end-roll, site skins or live streaming), *Affiliate marketing* (two of the

respondents work at one of the biggest affiliation networks from Romania, some of the other specialists mentioned that they design affiliate marketing campaigns for their clients), and one of the experts mentioned that they use a *Sponsorship* advertising format (IAB, 2014: 23), advertorials, for their clients. One professional mentioned that "*the tendency is for the online to generate the trend and diffuse in offline; if until now, at the end of the spots, we used to put www at the end, now we are thinking the spots for online and the concept is promoted also offline*".

The Digital Account Manager of an important advertising agency from Romania was the only one mentioning that their company's online advertising offer will not change in the next three years. The great majority (11 out of 12) of professionals interviewed mentioned that their companies' offer might or will surely change because of the dynamics of the online environment: "*we have to constantly adjust our online advertising services, by taking into consideration three main factors that influence our offer: the change in consumers' preferences; growing requirements from our clients for a certain type of campaign / service; and the decrease in results (clicks, leads, reach) brought by one of the online advertising channels*". The agencies might / will modify their online advertising services offer in the future, also because of the development in the area of media services, more than in media planning and buying; or because they not yet offer services such as: web development, content writing, SEO (search engine optimization) and they want to respond to their clients who search for partners that offer integrated online marketing solutions.

Online advertising is an important online communication tool that can be used together with the other online tools, such as: website, email marketing campaigns, newsletter, blog, social media marketing, portals / forums or infomediars and instant messaging (Pop and Acatrinei, 2011: 123). Most of the interviewed specialists mentioned that their companies use the online advertising as an online marketing tool for their business, because of the high conversion rates they return (both in awareness and in results), because they are efficient and because most of their target is present online and by an online advertising campaign they get to a higher percent of their target, also, in most cases, consumers take the buying decision online. One of the respondents mentioned that: "*an account on social networks can better grow or be maintained with online advertising campaigns*", which is a very good example of how companies can use several online marketing tools to develop their online presence.

The specialists were also asked whether there existed changes regarding the development of online advertising campaigns following the introduction and growing use of smartphones. All of them responded affirmatively and the Pay per Click Marketing Manager of one of the agencies interviewed detailed that: "*the mobile traffic has reached 20% and one of the main modifications needed is the adaptation of the website for mobile devices. Little sales are done from mobile, but the information process is done also from mobile, reason why the mobile advertising campaigns are a necessity. We have mobile dedicated campaigns for almost all our clients that run desktop / laptop campaigns. Essentially, the main objective is to reach the potential clients no matter the device they use*". Another expert mentioned that they have optimized their campaigns for all the devices right from the beginning, others have developed special applications for Android and iOS.

Online advertising can be used by companies or organizations from all domains, in all fields of activity. In Romania, according to the practitioners' expertise, the sectors that invest more in online advertising are: retail, telecom, FMCG (fast moving consumer goods) and banking, as well as: IT&C (information technology and communications) and fashion. Some other domains, from which our respondents have clients from, are: automotive, pharmaceutical and HORECA (hotel, restaurant and cafe) industries.

9 out of 12 professionals had a positive attitude and response when asked about the future of online advertising in Romania (*O5*). "*Since the Romanian users spend more and*

*more time online, of course the investments in online advertising are going to grow*", was one of the reasons of the positive attitude. One of the professionals stated that "*the market will grow due to the great influence of important players, such as: Google, Facebook and Yahoo, and the local publishers will grow very little in the next five years*". The Performance and Media Director of one important multinational advertising agency from the ones interviewed, estimates that "*it will grow, since the level of advertising in Romania is very close to the one from West (1-2 years back)*". A Digital strategist also reinforces that "*the market share of online advertising, as compared to conventional instruments, is continuously growing*" and advises that "*a big data layer added to online advertising would provide the most efficient tool for targeting, monitoring and optimization*". Even though his positive attitude, a respondent hopes that it will be a "*good grow, not a negative one, with spam and aggressiveness*". The more reluctant opinions included arguments such as: "*online advertising is still unstructured and there is excessive focus on cost and low concern about return on investment; also, except some big companies, generally decision and execution people lack know-how in this changing environment*". Another argument that draws attention consists in designing integrated campaigns (online with offline and public relations) because "*online advertising campaigns alone will not produce the wanted result*". The Managing partner of one of the advertising agencies, feels the need for "*existence of some standards, with sanctions / penalties for disobedience*".

## 4. Conclusions

The report of the Interactive Advertising Bureau (IAB, 2014: 4) confirms that in 2013, the revenues from online advertising in the United States of America has reached $42,78 bn., recording an increase of 17% from 2012. Thus, online advertising has become an important source of revenue for the companies that have an online presence and develop promotion campaigns in this environment.

The paper brings an innovative view upon online advertising from the point of view of 12 Romanian practitioners, experts in this field, who develop online advertising campaigns, both for their companies / agencies and for their clients. They offer insight information on what characterizes online advertising, which are the elements that would transform an online advertising campaign into a successful one, the range of services offered and the factors that influence its modification, arguments on why online advertising is used together with the other online marketing tools available by the companies, sectors that employ it the most, as well as their view about the future of the Romanian online advertising.

The semi-structured interview included not online the aspects mentioned above, but also several detailed questions related specifically to online advertising formats. The analysis of those questions is the subject of a different scientific paper, entitled: "*A Qualitative Research Regarding the Online Advertising Formats Used by Romanian Companies*".

Future directions of research may include a survey among Romanian consumers with the purpose of identifying their view on how the companies are employing online advertising and find similarities / dissimilarities between their point of view and the professionals' point of view.

## 5. Acknowledgements

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# „NOSTALGIC CONSUMPTION"

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**Abstract:** *Scarcity left deep scars in the memories of Romanians, especially when talking about their access to objects, products and even brands, back to 1989. Therefore, after this limit, the scarcity had to be reinvented in an abundant world, as the market was defined by copiousness in terms of products, services and other opportunities. Yet, even before the revolution, Romanian spoiled themselves with certain products (brands), not necessarily better, but rarer than those they were used to. On these premises, the study aims to explore how nostalgia intensity is influenced by the complete moment experience, which consumers by 1989 received when interacting with specific objects or even brands that Romanians continue to interact with even after the moment of 1989, until nowadays. Focus group discussions and in-depth interviews were conducted in Bucharest, Cluj-Napoca and Timisoara, as these are the main cities where the revolution started back in 1989, in order to contact those who were directly involved in changing the political regime. The information obtained through the focus group discussions and in-depth interviews is exploratory and even if the data are rich and valuable, these do not entail any form of statistical analysis in the sense of a quantitative research study. Present results suggest that the complete moment experience, received by interacting with specific objects or brands both before and after 1989 and until now, intensely affects nostalgia felt by consumers / users of those items.*

**Keywords:** consumption, nostalgia, authentique,

**JEL classification:** A14 – Sociology of Economics; Z13 – Economic Sociology

## 1. Summary
In a world in which we live moments of the most varied, in which we have started to pay heavy prices for all kind of stimuli which later become perceptions, then memories, and finally "once in a life time experiences", most of us want to stand out, to get out of patterns and therefore to act free in any activities. Differentiate yourself or die is an idea which is not long ago mapped, that seems to become more and more real and more present too. To differentiate firstly means to accept that there is an attitude / conduct / lifestyle / a common approach, a pattern or a mould for living, which then has to be denied. Basically differentiation involves understanding the cone of shadow from which you wish to exit.
In addition to this, the present paper intends to prove the existence of a typology which, under the same umbrella of the need for differentiation, talks about those who are able to take a step forward, but not necessary guided by their need to stand in front of everybody else, but rather from the need to experience the concept of loneliness or adventure or to live unique moments.

Therefore, in the research I decided:

    - to identify the influence that nostalgia has on today's consumption in the context of Romania's transition from Communism to Capitalism;

    - to analyse the relationship between the process of initiation of the consumption behaviour and stereotypes, plus the predisposition to express all kind of prejudices, as a branch of consumers process of taking decisions and being rational;

    - having in mind the dynamics of consumer behaviour in Romania, to shed light on changes that occur in the consumer-object interaction, once with the transition from hyper-consumption to a new consumer behaviour (characterized exactly by human predisposition to be influenced, in their process of acquisition, by prejudices and stereotypes. This behaviour is rather specific for those who experience today consumption by referencing to the before '89 economical context);

    - to observe all the defining elements of those who are tributary to that consumption behaviour that is characterized by various predispositions of decision-making and to understand the reasons for the consumption of those who stand in the mirror of these reactions;

    - in the future I would like to put up an easily identification solution of these types of consumers, in order to settle the right background for developing new techniques of market research, by having as „stars consumers" those people who are at least influenced by prejudice, stereotypes, the need to stage or influenced by the nostalgia in the formation of the purchase decisions.

Starting from this paper I propose to outline new perspectives on consumption and to put the foundations of the concept of „genuine (naturel / authentique / firesc) consumption" and also for its satellite concepts: consumption biased by nostalgia, prejudice and the need for standing out. On these premises, I propose to venture into the world of consumer behaviours, starting for the possibility of the existence of a purchasing behaviour triggered by any other stimulus but the belonging to a group. This idea can be constructed, of course, as a form of a hierarchical structure, such as: I differentiate in order to give me as an example for the group, to become the leader.

Now, let's take an in depth look on the following specific objectives of this work:

    - I would like to identify the role that prejudice and stereotyping plays in triggering consumer behaviours at national level, in the context of Romania's transition from the period of scarcity in 1989 to the abundance, which occurred after this period;

    - Identification of the influence that nostalgia has towards those consumers that experienced the acquisition of products/objects present on the market back in Romania of 1989 and that continued to use them until today;

-Identify the role that natural consumers have in outlining a new step on the development scale of consumption;

    - Substantiation of possible new market research techniques in Romania for purposes of using the results of the present work (quantitative research included) for brand communication development, according to the local context and therefore with those wishes and other expectations of natural consumers.


## 2. Conceptual specifications and theoretical framework

Definition of genuine (*firesc* / *authentique*) consumer aims to fill a space left free when the purchase behaviours were defined. Consumer society (Goffman, 2007), in its transition to hyper-consumption (Lipovetsky, 2007) provides an opportunity to shape a new consumer segment, characterized by a non-conformist attitude. In terms of time, consumer behaviour is rather on the border between hyper-consumption and something else, not necessarily between Goffman's consumerism and hyper-consumption of the contemporary era. Even one of the first definitions of consumption "food, clothing, housing, health, transport and leisure occupations define each domain of consumption" (Larousse, 1996 , p.66 ) , took

care to enumerate a list of objects for consumption , a process which enables us to believe that for understanding of consumption is very important the context of the abundance of products and stimuli to which consumers are exposed to every day. Therefore, not coincidentally, the abundance has become one of the most important features of consumption. And due to the central positioning of the features in the definition of consumption we can easily see that any form which use to be taken in its evolution, our focus must be upon the quantity and availability of products. Based on what Baudrillard said, according to which one of the most important pillars of the consumer society is the abundance of "multiplication of objects, services, material goods, which represents a fundamental shift in the ecology of the human species" (Baudrillard, 2005, p 29) we will consider, throughout this paper, the context of the shelf abundance. Abundance or riches (belșugul), says Baudrillard (2008) , becomes a key factor in consumer decision-making , even if we are not necessarily talking about a trigger , but rather an entire context ( Pattanaik , 2009) , in which people are continuously adapt for finding solutions for their needs. But if we understand abundance as another step of consumption growth, then we will surely remember a previous stage of history - the deficit / scarcity (Craib, 1976). It has left deep traces in Romanians' memory when it comes to their access to objects, products and brands just before 1989. Then, after this threshold, the deficit or lack of wealth had to be reinvented in the context of hyper-markets and their shelves. Even so, in the context of 70-80's, Romanians managed to pamper themselves with some products (even brands ) harder to obtained than other products that were sufficiently common in order to represent subject of collaboration consumption - Collaborative Consumption ( Felson , 1978) – meaning the daily usage, those products that were found everywhere. On these premises, the current study aims to explore how consumers are influenced by the intangible aura of certain products / objects / (even brands) when they meet them again in today's economic environment. Thus I propose to focus on how nostalgia of consumption before 89 (in the context of Scarcity mentioned by Craib) influences the consumers today, when they are exposed to a multitude of products, specific to a single category (including those objects / products that were found in the past).

Now, having in mind the evolutionary path of consumption, we can rightly ask: what triggers the purchase and especially which is the form that the consumption takes today? Which is the defence mechanism of hyper-consumers ( Lipovetski , 2007) overexposed to the abundance of products? Assuming that consumption represents simply the consumer's behaviour, then we know that it is nothing but people's conduct within the meaning of purchase or consumption of goods, while their customer is the end user (Cătoiu, 1996). The need for discovering what does engage all the modern economic system, priori eliminating the subject, the manufacturer and the need to associate with others (all taken in the context of purchase / consumption), made me not to set any limit for myself on this perspective and to focus in-depth consumer's behaviour. Therefore, in composing next ideas I have considered all the information already identified by Lancaster (1966), as he argued that the goods are consumed due to their characteristics, and new goods (such as shown in our context) are nothing but recombination of the characteristics that defined old ones. Furthermore, I propose the following exercise: thinking about the definition of nostalgia, as the opposite concept of progress, against which it is viewed negatively as reactionary, sentimental or melancholy (Keightley and Pickering 2006), we can have as prerequisite work idea that the new products will automatically awaken nostalgia for past consumption. Even if in this way, the old features of objects are appreciated and will be in discussion for consumer preferences, recombination will prove to be purchased every time (Lancaster, 1966) – dynamic products on the shelves and even the appearance branding are the main proves for this idea. Interesting to note for this paper is the actuality aura of Wund's Curve (Lancaster, 1966): in the context of genuine consumers. This concept focuses on people's reaction to the news and indicates neither their greater propensity to choose nor the newest the products / goods, but nor the oldest.

We could say that this conclusion represents the virtual hedonistic victory's reaction to innovation and it sustains our definition of genuine consumer, that stands before a decision and constantly bombarded by an abundance of products decides to choose those goods that serve he's hedonistic need to experience (regardless how consumption nostalgia acts on the one hand and innovation on the other hand). If we stick to this idea and bring it into question the definition of consumption (Larousse, 1996) mentioned earlier, we can now charge it that is quite limited (niche) on a particular context, which would actually remove the idea of consumption in the context of deficit / Scarcity (Craib, 1976). Indeed the difference of Plenty / Abundance (Baudrillard, 2005) and Deficit Scarcity (Craib, 1976) is made from the perspective of a single variable, so the distinction between the two concepts aims rather the context of consumption, not its definition. Even so, Larousse's definition is incomplete, therefore I believe it is important to discuss other perspectives on consumption; one of them belongs to Falk (1994) I consume, therefore I am - this exposure makes us think to a rather complex task, than a complete one. Basically, if we do a disciplinary parallel the Desein (Heidegger, 1927) becomes conditioned solely by the consumption. Paul Du Gay (1996) outsources some perspective on consumption and places the concept in the industry, talking about consumption as a creative activity opposite to production. A common note of these perspectives on consumption is concept's complexity – even if it about those things which represent the subject of consumption, the supply of consumer goods or the consumer itself, every time the full experience is the one that emerges as a benefit of this work. So, taking into account everything we have learned so far, both with having in mind the idea that consumer's intentions represent "the most important approach in decomposing or unpacking a concern about a specific, a hierarchical set of actions - organized by their importance for a better solving the need that represents the subject of concern." (Ratneshwar, 2003), the consumption itself becomes the usage of certain goods to meet various needs of dictated most often by cultural contexts. Thus, we can speak of nostalgic consumers, biased consumers, those with blazon, genuine consumers, those who are not necessarily looking a good utility, but for a balance between product's utility and the moment when the whole process of consumption began. As an example we can take a consumer that is about wants to decide upon choosing a bottle of mineral water. He will choose glass bottle, because he is not a nostalgic consumer, but neither will he jump in the arms of innovation (guided rather by the product's utility than the brand behind the object). Thus the most likely will be for him to choose the middle option. In order not to stick with just an example and to maintain focused on study's purpose, it is important to define the object of consumption, with reference to any tool with which one interacts. Consumption can therefore be understood as a complete experience obtained after interacting with certain goods (both products and brands). This idea was highlighted by economists too and put under the umbrella of usage: A. Wolfelspenger and H. Lapage (1995) believes that in the process of purchase, the consumer receives an active role as he becomes capable of evaluation. In addition, consumer's budget is not perceived from the amount's perspective any more, but from its potential (Wolfelspenger, 1995). The essence of the theory places the consumer in a position where he is able to be for himself his own creator of satisfaction, while objects become at least a bunch of instruments in the process. When the consumer prefers instead to let be influenced by the nostalgia that binds him to the usage of those objects, then he becomes tributary to past experiences, with the risk of under-assessment of current experience (or even total lack of any experience). In this process of defining the nostalgic consumer, we should know first of all know the concept of nostalgia, which implies at its origin the state of longing dor – a painful condition arising in relation to the returning home, or in a comfort zone / area. This idea was later supported in the seventeenth century by Johannes Hoffer, who talked about nostalgia as about a familiar condition and not necessarily as a frequent homesickness (Davis, 1979). By on these premises, it looks like nostalgia has its origins into the whole

context and not necessarily on the lost, desired object (e.g. you don't become nostalgic about a certain house, but after the representation of it in your whole, so after your experiences developed in that certain house). The situation looks the same on the outcomes of the FGDs and IDIs that conduct this study, as consumers talk about "how was before and how cigarettes were before… Where else can you find those times nowadays?" (R.B. 51y.o). This statement proves that even they perceive the goods that performed well back in 89 as a standard of quality, they instinctively assess the usage of those products from the complete experience's perspective. On these premises, nostalgia gains the proportions of a historical emotion (Boym, 2007, p8). Fred Davis (1979) anticipated our context where nostalgia proves to influence the complete experience of usage by highlighting in his study the strong connection between nostalgia and historical moments in general - politics–for example "The nostalgic feeling interfere deeply with any nationalistic and patriotic emotions." (1979, p.72). Indeed, the overall conclusion of each group was that politics regimes had a big contribution in shaping consumption contexts. In this way, nostalgia became same kind of a "safety valve for disappointments and frustrations suffered due to the loss of values once cherished." (ibid. p.99). In order to test the nostalgia of our respondents, I've used a scale, developed by Sarah Penney in her RIBM doctoral symposium, which involves understanding any changes in thoughts or attitudes in response to different stimuli (in current case, I refer to goods or sometimes, brands).These were specially chosen from those that have a halo of historical awareness. To be more specific, I've tried to choose those products that were present on Romanian market both before and after the 1989 moment. The test model can be found in a copy attached to this paper as an appendix as it performed very well with providing consistent results for the current research. To sustain by argues, nostalgic consumers proved to choose every time the goods that helped them anchor themselves in past experiences, but even so, they remained sceptical enough to leave open the door in a real-life situation to choose products or brands that perform well on the utility scale (exactly as *authentique* consumers do).

When we get back to scarcity (Craib, 1976), with all these ideas in mind, this concept proves to develop two sides: one that refers exclusively to narrowing down the consumption options and another one (important for current study) which speaks about scarcity in terms of a Society's base unit – "Scarcity represents the only condition for our history to exist." (idem, p. 129). As it is described by Craib, the history proves to be always an inferior version of the current situation of any society. This perspective supports nostalgia's bias in terms of appreciation of some specific products or brands that proves to perform better than contemporary ones, as respondents told us that "Current products are far from the standard of quality of those on the market back in 1989…" (Adrian, FGD 2, Bucharest, over 50y.o.). Still in supporting nostalgia experienced by consumers, Simone Denise (2011) raises our attention regarding smokers who even if find easily every negative effects smoking implies, when it comes to nostalgic consumers, they can't detach from the context. They even tend to appreciate the qualities of cigarettes from those times while shaping them an aura of having real benefits "They were healthier, they used not to have a large amount of additives and this discussion can be escaladed in other contexts too." (Mihai, FGD2 Bucharest, over 50 years). The same perception repeats in the case of a bicycle, whose technical characteristics are perceived as more refined before the Revolution. In conclusion, in order to support the parallelism between Simone's results and mine's I'll have to give the complete experience more weight due the implications that objects have in relation to the body.

Finally we can conclude that nostalgia has potential to influence the perception upon the complete consumption's moment experience as an event that happened once can change the context of consumption from that point forward, without altering goods' proprieties. All the details behind the comparing that consumers make continuously between past experiences and current ones succeed to offer an important touch in

understanding consumption's influence upon nostalgia: that the situation is exactly the opposite: nostalgia is influencing consumption and the elements that create the context become crucial in understanding inhibited behaviours.

## 3. Methodology

This research tries to set itself on an exploratory path by differentiating from other papers that offer advices on „How to....." with theoretical content. The second part of the project – the social survey- is designed to test from a qualitative perspective, using the focus group technique, the degree in which consumption behaviour of people is inclined towards brands that were on the market both before and after 1989. Subjects were gathered both from Bucharest and Timisoara. In this way we tried to gather persons that we're connected to the black market from both cities from which the'89 revolution sprung.  By doing so, we sought to recruit persons for the focus groups that were regular consumers both before and after 1989.

The group agenda gathered persons between 40 and 50 years of age and persons with ages over 50 years in order to meet the required age for speaking wittingly of the experience of smoking (two groups in which the brand Kent was discussed from a consumerist perspective) and to ensure a generous period in which respondents could be key decision makers regarding the products they choose to consume before and after 1989. We did not follow a differentiation on the basis of gender, because we chose for the debate products which addressed both male and female consumers.

 The number of respondents participating in the focus groups is not nationally representative- the approach is rather aimed at discovering the motivations of today's consumer consumption, which is their conduct in relation to consumption and its subject, to understand how it affects nostalgia consumption in the past day. Therefore, the purpose of the chosen methodology – and the entire study- is a qualitative one, which has rather the purpose of identifying the motivations behind the purchase, than issuing patterns nationally representative.

## 4. Conclusion

This research remains at a design stage level; the number of respondents is not sufficient to support an exhaustive conclusion, but we believe that pre-testing has provided compelling grounds for making future efforts in completing a study that explores the correlation between people's propensity for prejudgment and behavior consumption. This paper aims to become the framework of a more elaborate project with the purpose of verifying the existence of neo-consumers and nostalgically consumers.  Shaping a new typology of consumer has - besides the scientific purposes- the intention to broaden the horizons of research in this domain and identify new opportunities in the field of communication and branding. Having a clear image of these potential consumers helps provide an improvement to meeting the needs of this segment in the mass of buyers , while supporting development efforts of those areas of industry that decide to use a specific communications channel .The paper managed to prove that there are other behavior pattern of consumption - different from that of Lipovetsky. The paper also identified the nostalgia that consumers of certain products –both before and after 1989- have experienced following the revitalization of products/brands over time. However, there are more elements to be discussed regarding consumption in the sense that the paper has the potential to develop research tools for identifying consumers of specific brands in order to improve them or create future brands that respond better to customer needs.  A new generation of customers seems to be emerging as the abundance of products is increasing and the need for differentiation also being increased along with it. In conclusion, we hope to continue developing this research project, and afterwards to open new opportunities in

the understanding and development of brand communication, raising more questions concerning the dynamics of consumer behaviour, and to certify the existence of this typology of consumers through nationally representative quantitative research. In the interest of specialized writings, this paper aims to further support the achievement of a quantitative study that legitimizes this behavior at macro level. Putting the problem in terms of a sociology of normality, translated by studying the process by which people come to desire interactions with - objects / people - for the sake of unpredictability , living experience or just the interaction itself may play a role in the exploration of interpersonal processes and people's attitudes toward objects which they come in contact with.

## 5. Acknowledgements

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# A CRITICAL ANALYSIS OF PATIENT SATISFATION WITH DIABETES CARE

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**Abstract:** *Consumer satisfaction represents one of the core principles of marketing as it is acknowledged that organizations survive and prosper only by properly meeting the needs and wants of their customers. The same logic can be applied to the healthcare sector, especially in the current context of increased public scrutiny and funding pressure. Furthermore, research shows that patient satisfaction is linked to positive effects from both a marketing and a medical point of view. From a marketing point of view, patient satisfaction is closely linked to positive word of mouth and likelihood to recommend, while from a medical poinbt of view, research suggests that satisfied patients are more inclined toward treatment adherence, are less likely to seek another opinion elsewhere thus delaying treatment, while medical staff tend to have a higher morale.  Yet, research regarding patient satisfaction with a particular illness is scarce with studies rarely building on previous results. The article takes on this challenge and aims to critically analyse several empirical studies conducted on patient satisfaction with diabetes care in order to synthesize results on particular determinants and suggest areas for further research. Diabetes is currently one of the most spread chronic disease around the world, while also affecting both old and younger patients. At the same time, it is a chronic disease characterised by the need for disease management efforts on behalf of the patients as well as high treatment adherence in order to avoid complications. It is also a costly chronic disease especially because of the numerous complications which patients may arrive to face during their struggle with this disease. In order to achieve the aim of  this article  we have chosen to adopt a  marketing approach meaning that we see diabetes patients as clients of the medical institutions. Results show that diabetes particularities call for a broader view on patient satisfaction determinants. The added value of the article lies in the healthcare marketing approach and the synthetic presentation of existing research in this domain.*

**Keywords:** patient satisfaction; marketing; diabetes care

**JEL classification:** I11; M31

## 1. Introduction

Over the past decades, patient satisfaction has come to the forefront of debates concerning the organization of healthcare providers. This has happened in the context of health care reforms and increasing challenges to the system which include the increasing pressure on health expenditure determined by an ageing population (Aiken et al., 2012), increased public scrutiny on healthcare funding, rising public expectations from a system funded directly by the users, or indirectly
through taxes or various insurance types (Calnan, 1997; Kotzian, 2009; Aiken et al., 2012). At the same time, efforts for increasing patient satisfaction are acknowledged to have a double effect, from both a marketing and a medical point of view. Research conducted so far shows that, from a marketing point of view, patient satisfaction is closely associated with a positive image of the health care institution, and represents the basis for future choices or recommendations for a certain facility (Magaret et al., 2002). From a

medical point of view, patient satisfaction is associated with improved patient compliance and adherence to treatment, increased staff morale and a reduced tendency of patients to seek other opinions (Taylor and Benger, 2004; Boudreaux and O`Hea, 2003).

Yet, despite the considerable research conducted on this topic, there is currently no agreement on a common definition of the concept of patient satisfaction or on its determinants (Bleich et al., 2009; Sitzia and Wood, 1998; Taylor and Benger, 2004; Gill and White, 2009). Therefore, in order to set the frame for this study, we have chosen to discuss patient satisfaction in terms of the definition provided by Hjortdahl and Laerum (1992). According to the two authors, patient satisfaction represents a set of "complex relations between the patient`s perceived needs, expectations and experience of care; the particular reaction to the consultation and its outcome, relative to a conscious or subconscious standard that the patient had set before or during the encounter" (Hjortdahl and Laerum 1992, p. 1287). We therefore regard patient satisfaction as a subjective judgement of the healthcare services received.

With regard to patient satisfaction determinants, research suggests that they might be factors related to demographics or visit characteristics (Boudreaux et al., 2000; Fitzpatrick and Hopkins, 1983; Quintana et al., 2006), expectations or personality traits (Gill and White, 2009; Bleich et al., 2009), physical maintenance, physician and nursing care, internal facilities and support staff (Chahal and Mehta et al., 2013; Otani et al., 2009), disease severity (Otani et al., 2012), admittance numbers (Messina et al., 2009), patients' values and perceptions of the healthcare system (Baron-Epel et al., 2001). Studies have been conducted on various groups of patients such as emergency department cases, paediatric or adult patients, chronic illnesses patients, patients admitted to gastroenterology units, (Magaret et.al, 2002; Taylor and Benger, 2004; Hjortdahl and Laerum, 1992; Quintana et al. 2006; Messina et al., 2009; Scotto et al., 2009; Shendurnikar and Thakkar, 2013; Hunt and Glucksman, 1991).

Although most studies tend to focus on particular types of settings (emergency rooms, primary care, surgical units etc.), a distinctive area of research in this field deals with patient satisfaction with particular illnesses. Unfortunately, the number of such particular studies is scarce although for a better understanding of patient satisfaction drivers we need to also consider how the particularities of different illnesses affect patients' needs, wants and expectations with their medical care. This article takes on this challenge and aims to critically discuss a series of empirical studies conducted on patient satisfaction with diabetes care. The added value of the article lies in the fact that it brings together in a synthetic manner the results of empirical studies on patient satisfaction with diabetes care conducted over different periods of time, in various settings and countries, while also discussing them comparatively. We believe this allows for the identification of recurring patterns in patient satisfaction with diabetes care research as well as contributing to a better understanding of satisfaction drivers.

The rationale for choosing to discuss patient satisfaction with diabetes care lays in the fact that diabetes is a chronic illness with an alarming increase in diagnosed patients over the years (IDF, 2013). Also, the age of diagnosis is lowering, thus implying that more and more patients with diabetes are in their productive age interval, meaning that they are economically active (IDF, 2013). This has as direct consequences considerable economic and social effects such as increased spending on diabetes treatment, medication, medical leaves for diabetes patients etc. Also, diabetes management often involves severe dietary restrictions, daily self-administration of oral medication or insulin as well as requiring a change in lifestyle and constant monitoring for associated complications (Redekop et al., 2002, Diț et al., 2012) which makes treatment adherence sometimes challenging, thus increasing the need to meet patients' expectations.

To put the situation in figures, according to the International Diabetes Federation (IDF), in 2013, the total number of patients diagnosed with diabetes was 382 mil and it was estimated to reach 592 mil by 2035, meaning a 55% increase (IDF, 2013). The estimated

increase percentages until 2035 for the various regions of the world take values between 22.4% for the European region and 109.1% for the African Region (IDF, 2013). Mortality rates for patients suffering from diabetes over 60 years old range between 38% in Europe and 76% in Africa with a mortality rate of 37% for North America (IDF, 2013). The top ten countries for number of people diagnosed with diabetes is given in Table 1, below.

**Table 1:** Top 10 countries for number of people with diabetes (2013 data)

| Country | No. people | Country | No. people |
|---|---|---|---|
| 1. China | 98.4 mil | 6. Mexico | 8.7 mil |
| 2. India | 65.1 mil | 7. Indonesia | 8.5 mil |
| 3. United States of America | 24.4 mil | 8. Germany | 7.6 mil |
| 4. Brazil | 11.9 mil | 9. Egypt | 7.5 mil |
| 5. Russian Federation | 10.9 mil | 10. Japan | 7.2 mil |

Source: International Diabetes Federation,
http://www.idf.org/worlddiabetesday/toolkit/gp/facts-figures

## 2. Methodology

The articles we reviewed were selected following three electronic databases searches conducted in June 2014. The electronic searches were conducted through the Anelis Plus platform which offers access to a number of 25 databases including IEEE, Scopus, SpringerLink, Proquest Central, Sage, Wiley Online Library, Thomson Web of Science, EBSCO Host, Scopus, JSTOR, and Cambridge Journals. The approach of this literature review is therefore not exhaustive, but a selection of articles in this field was made based on inclusion/exclusion criteria and article availability. The key words used for the searches were: patient and consumer satisfaction associated with the following terms: diabetes and chronic illness. English, French, Spanish or Romanian language original articles providing empirical results were considered, with no restriction as to the publication year. In order to avoid a lack in focus, the current literature review does not cover the satisfaction of diabetes patients with healthcare systems in general. Also, we chose to exclude articles dealing with measuring patient satisfaction following a particular intervention, medical protocol, or clinical trial as they tended to relate more to the specific medical outcomes and the acceptability of the treatment, rather than to patient satisfaction with the medical care provided. However, we did consider those articles that discussed the effects on patient satisfaction of various approaches to treatment such as patient-centeredness or offering information on treatment alternatives as we considered this an integral part of patient care. Articles were further on selected if they presented the results of an empirical research and the methodology and research results sections of the articles were detailed enough to allow for proper analysis. The total number of articles retrieved following the three searches was 28, out of which 20 could be accessed in full. Following careful revision of the articles abstracts and contents, 10 articles (1 in Spanish, 8 in English and 1 in Romanian) were retained as relevant empirical studies as per the inclusion/exclusion criteria presented above.

The aim of this review is to critically analyse the findings of the articles selected, in order to identify and discuss patient satisfaction determinants with diabetes care, while also suggest areas for further research. This literature review is part of a larger study conducted on patients with diabetes in Romania aimed at identifying patient satisfaction determinants with diabetes care, ranking determinants and suggesting concrete measures for improving the healthcare services provided to these patients in both ambulatory and hospital settings. The research is conducted from a healthcare marketing perspective.

The article is particularly aimed at scholars in the fields of patient satisfaction with healthcare services and the healthcare sector, as well as professionals in the fields of

healthcare marketing and policymakers in the field of healthcare.

The specific objectives of the article are to:

- identify patient satisfaction determinants with diabetes care;
- suggest further research areas with regard to patient satisfaction with diabetes care.

## 3. Results

From the point of view of their structure, all the studies we analysed started by pointing out the particularities of diabetes as an illness. It was emphasised that diabetes is a complex, chronic and costly disease (Venkat Narayan et al., 2003), being perceived as significantly more difficult to manage than other chronic diseases (Saatchi et al., 2010) as it affects patients in a number of ways such as: imposing severe dietary restrictions, daily self-administration of drugs, constant testing for complications such as nephropathy, neuropathy, heart disease, stroke etc. (Redekop et al., 2002). This implies that diabetes is not only consuming resources for diabetes treatment, but as it is a degenerative chronic disease; considerable resources are also consumed for the treatment of complications associated with it (Dominguez Guedea et al., 2010). Furthermore, most interventions for diabetes treatment rely on the active involvement and participation of patients (Venkat Narayan et al., 2003) as diabetes requires continuous medical care and patient self-management education in order to prevent acute complications and decrease the risk of long term complications (Saatchi et al., 2010).

Studies further analysed various factors influencing patient satisfaction as per the disease characteristics they had identified. Because of this, the types of factors analysed in relation to patient satisfaction with diabetes care in the studies under review vary from socio-demographic variables, to the impact of prescribing alternative medicines, psychological aspects of family caretakers or measures to support patient active involvement. A synthesis of the main research objectives, study samples and research results for the ten studies we considered are presented in Table 2 below. A further discussion of these findings will then follow.

**Table 2:** Summary of research objectives, study type and sample and research results

| No. | Author/ Year | Research objectives | Study type and sample | Research results |
|-----|--------------|---------------------|-----------------------|------------------|
| 1. | Venkat Narayan et al., 2003 | Association between quality of care and patient satisfaction. | Cross-sectional study 591 African-American out patients with self-reported diabetes Country: United States of America (USA) | Patient satisfaction was positively associated with: income, employment, degree of diabetes education, health care coverage, being cared for by a physician for diabetes care, ease of getting care during the previous year. Patients' performance on preventive practices and preventive measures offered by healthcare providers were associated with higher satisfaction. |

| 2. | Saatchi et al., 2010 | Assess the psychology-cal well-being and treatment satisfaction of patients with Type 2 diabetes. | 112 out patients with type 2 diabetes Country: Turkey | Educational status, compliance to diet and physical exercise are significantly related to depression, anxiety, energy and positive and general well-being scores. |
|----|----|----|----|----|
| 3. | Redekop et al., 2001 | Patient characteristics associated with health-related quality of life and treatment satisfaction. | 1348 out patients with type 2 diabetes. The DTSQ was used. Country: The Netherlands | Quality of life was negatively associated to insulin therapy, obesity and complications. Treatment satisfaction was negatively associated with age, insulin usage and higher levels of haemoglobin A1c. |
| 4. | Diț et al., 2012 | Influencers of patient satisfaction. | 85 type 2 diabetes outpatients. Country: Romania | Disease severity, visit frequencies and the feeling of self-efficacy in disease management are independent predictors of patient satisfaction with diabetes health care. |
| 5. | Vladislavovna Doubova et al., 2009 | Satisfaction influencers in patients with type 2 diabetes and/or hypertension. | 1323 patients in family medicine clinics. Country: Mexico | Negative self-rated health and type of institution providing treatment were associated with dissatisfaction. |
| 6. | Dominguez-Guedea et al., 2010 | Family caregivers' support and treatment adherence. | 29 family caregivers. Country: Mexico | Avoidance attachment and negative affection are significantly negatively correlated with patient treatment adherence. |
| 7. | Garrett and Bluml, 2005 | Outcomes of active patient involvement program. | 256 patients with diabetes Country: USA | Significant improvement in clinical indicators of diabetes management, patient satisfaction with diabetes care, self-management goal setting and achievement as well as a decrease in employers mean projected total direct |

| | | | | |
|---|---|---|---|---|
| | | | | medical costs. |
| 8. | Uhlmann et al., 1988 | Patient request fulfilment on patient satisfaction and medical outcome. | 51 adult outpatients with type 2 diabetes. Country: USA | Fulfilment of patients' requests was significantly associated with patient satisfaction. |
| 9. | Bradley et al., 2011 | Interest in complementary and alternative medicine treatments and satisfaction with health care, current self-care practices and motivation to improve health-care practices. | 321 type 2 diabetes patients from a large integrated health care system, not using insulin. Country: USA | Patients with greater interest in CAM treatment options tended to be less satisfied with their diabetes care, more motivated to engage in self-care and more likely to use other CAM therapies for their diabetes. |
| 10. | Williams et al., 2005 | Autonomy support with patient satisfaction, perceived competence, glycaemic control. | 634 patients of 31 Colorado primary care physicians. Country: USA | Autonomy support is significantly related to patient satisfaction, perceived competence, depressive symptoms and glycaemic control. |

Source: The table was compiled by the author based on the article bibliography.

With regard to the timeframe of the studies we analysed, it is worth noting that apart from one study conducted before 1990 (Uhlmann et al., 1988), all the others have been conducted after the year 2000 (5 studies between 2000 and 2010 and 4 studies after 2010), thus suggesting an increase in the interest shown in patient satisfaction with diabetes care over the last decade.

From the point of view of the methodology and sample size, the articles reviewed present the results of quantitative research through questionnaires. Sample sizes vary considerably between studies from 51 (Uhlmann et al., 1988) to 1348 (Redekop et al., 2001) patients. As per the synthesis in Table 2, diabetes patients surveyed come from various settings (primary care facilities, inpatients, or outpatients in a certain community). One of the studies also considered a group of 29 family caregivers (Dominguez-Guedea et al., 2010) in an attempt to identify their influence on patient satisfaction and treatment adherence. Five studies covered the satisfaction of patients with type 2 diabetes, while the other four made no distinction as to the diabetes type. Dominguez-Guedea et al. (2010) considered family caregivers for both type 1 and type 2 diabetes. Studies were cross-sectional, none of them attempting to investigate patient satisfaction with diabetes over time. Also, none of the studies attempted to compare results across settings.

As far as the study objectives are concerned, seven studies attempted to test the extent to which a certain variable is significantly related to patient satisfaction. They focused on the impact of the quality of care (Venkat Narayan et al., 2003), different patient characteristics (Redekop et al., 2001), the influence of family caregivers support (Dominguez Guedea et al., 2010), the interest in alternative treatments (Bradley et al., 2011), patients active involvement, request fulfilment and autonomy support from the physician (Garrett and Bluml, 2005; Uhlmann et al., 1988; Williams et al., 2005). The other three studies

attempted to identify patient satisfaction determinants. The factors they considered include quality of life and treatment satisfaction (Saatchi et.al, 2010; Redekop et al., 2002), disease severity, visit frequency and self-efficacy (Diț et al., 2012), doctor-patient interactions and self-evaluated health status (Vladislavovna Doubova et al., 2009). Two of the studies used existing measurement instruments for patients satisfaction with diabetes care (Saatchi et al., 2010; Redekop et al., 2001) and patient well-being (Saatchi et al., 2010).

In terms of the patient satisfaction determinants with diabetes care, all the aspects presented above correlated significantly with patient satisfaction. It is therefore worth noting that the articles we analysed present a broader spectrum of patient satisfaction determinants than those generally identified in the patient satisfaction literature, which mostly deal with patient-medical staff interactions, facilities and equipment or socio-demographic variables. In the case of the studies under review, patient satisfaction determinants also included aspects closely related to the particularities of diabetes such as family caregivers support, the physician's support for autonomy and empowerment of patients with diabetes, the existence of alternative treatment options or the psychological well-being and quality of life of these patients. This means, that patient satisfaction with diabetes care is not only influenced by the medical care patients receive in terms of their interactions with the medical staff or their views on the healthcare facilities, but are of a much more complex nature as shown above. Patient satisfaction with diabetes care thus also appears to be influenced by the impact of various treatment options, the degree to which patients feel they are involved in their own disease management, the fulfilment of their requests for medication and information or the doctor's availability. In order to clarify and synthesize the results obtained, we suggest grouping the predictors of patient satisfaction with diabetes care in the following three categories: socio-demographic aspects, psychological and emotional support offered by family members and the medical staff including empowerment, support for autonomy and patient-centeredness and disease characteristics including self-management and disease severity leading to number of visits and self-efficacy.

With regard to the economic impact of patient satisfaction with diabetes care, only one article (Garrett and Bluml, 2005) considered the financial impact of the patient satisfaction determinants that they analysed. Their research proved that higher patient involvement in collaborative diabetes management practices not only led to an increase in patient satisfaction with the medical care received, but it also translated to lower medical care costs.

## 4. Limitations

This research was limited to the articles available in the scientific databases to which access was provided through the Anelis Plus platform. This may have resulted in a number of valuable articles not being included in this review. However, taking into consideration the coverage and high quality of the databases available, we are confident that the articles we analysed shed good light on the subject of patient satisfaction with diabetes care.

## 5. Conclusion

Based on the analysis presented above, it is our view that a holistic approach should be considered when discussing patient satisfaction with diabetes care as this is a chronic disease that increasingly affects economically active persons. At the same time, the duration and complexity of this illness also impacts patients from a psychological point of view, while they also need to remain focused and motivated in order to ensure proper treatment adherence and diabetes management.

Studies in this area appear to focus on specific aspects of patient satisfaction as opposed to building on and developing existing knowledge. At the same time, the economic aspects of patient satisfaction with diabetes care remain little researched despite affecting patients,

employers and healthcare systems. Furthermore, the analysis we conducted shows that there is quite a considerable pool of patient satisfaction determinants. From a marketing point of view, this requires further research aimed at identifying and ranking determinants in order to guide process improvement programs and increasing the efficiency of funding allocation. Last, but not least, we deem appropriate to conduct more qualitative studies in order to acquire in depth knowledge on the matter of patient satisfaction with diabetes care.

## Acknowledgement

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# THE ANALYSIS OF FLAT GLASS EXPORTS FOR ROMANIA USING THE GRAVITY MODEL

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**Abstract:** *The intense international competition and reduced rates of economics growth force the companies at dynamic and appropriate strategies to address internal and external market. The manufacturing industry from Romania has competitive advantages defined by tradition, qualified labour force, indigenous raw materials, and its products serve various industries – construction, automotive, food – that is expected to experience a future sustained development. With approximately 2,500 employees, the glassware sector from Romania is part of the manufacturing industry which has constantly decreased in the last 25 years. Romania has a long tradition in the glassware sector and remains a strategic player in the region being integrated in the global flows from the industry. Geographical orientation of Romanian trade of flat glass for export is analyzed using the gravity model. The purpose of this article is to determine the essential factors of flat glass export level from Romania to states with which has commercial partnerships using both a gravity static model, but also a gravity dynamic model – a common model in the literature, used to analyze the trade flows between world countries or polarization strength of cities and commercial centres. The empirical results of both models have shown that the gravity attraction of local and destination economies, transport costs – measured by the distances between capitals and lack of common border –, language interconnectivity, and also belonging to the BSEC (Organization of the Black Sea Economic Cooperation) are the most important factors affecting the Romanian exports of the flat glass.*

**Keywords:** gravity model; Romanian export; export drivers; flat glass.

**JEL classification:** C23; F23; R15

## 1. Introduction

International Chamber of Commerce considers that globalization rewards companies which are innovative and competitive. As international companies enter on the local markets, local companies enter on the global market, increasing competition, improving product quality, expanding the product range, and keeping the price at a low level (http://www.iccwbo.org/).
Due to the increasing globalization, the export is a way of foreign market entry and sales expansion for companies, thus it is an important field of research in marketing (Cavusgil and Kirpalani, 1993; Samie and Anckar, 1998). As an answer, the researchers have responded to this topic focusing on internal and external antecedents of company export performance (Aaby and Slater, 1989; Cavusgil and Zou, 1994; Szymansky, Bhradway, and Varajan, 1993). In spite of increased interest, the empirical research on exporting are

limited and provides few perspectives for those responsible with export performance and development (Czinkota, 2000; Katsikeas, Leonidou, and Morgan, 2000).

Previous research on export area has identified three categories of factors that influence on company export performance: the external environment factors (Garnier, 1982; Rao et al., 1989), the organizational factors (Wiedersheim-Paul et al., 1978; Cavusgil and Nevin, 1981), and decision maker factors (Simmonds and Smith, 1968; Cavusgil and Nevin, 1981).

Through this paper we attempt to identify the most important drivers of flat glass export from Romania to other countries applying the static and dynamic gravity models based on data that were annual collected during 2001-2013. Data regarding the annual GDP of analyzed countries and Romania were taken from the database of the World Development Indicators of World Bank. Data on exports and imports of flat glass (7005 code – float glass and surf ground or polished sheets) of the analyzed countries were taken from Trade Map. In the study, the models were estimated using the methodology based on panel data with fixed effects models (FEM) or random effects models (REM). To determine the model type, Hausman test has been applied.

## 2. Literature review
### 2.1 Drivers of extern market strategy

Marketing as a discipline is universal, but its application differs from one country to another, for the simple reason that countries and people are different. These differences make that a successful marketing approach in a region may not be successful in another region or country. Consumers' preferences, competition, distribution channels, communication media may vary.

It is important for a successful manager to understand the degree to which extend the marketing plans and programs at the international level, also the level from where the adaptation is required. How the company is addressing to that is the reflection of the global marketing strategy.

The typology of strategies used in international marketing are structured according to the mission and vision of the company, market conditions, international experience, company resources, content and size of the products portfolio (Florescu, 1987).

The important factors from an industry are represented by the actions that create the conditions to achieve the performance (Căpățînă and Drăghescu, 2015). At the rigorous elaboration of an external market strategy is taking into account two groups of factors: endogenous – related to the company – and exogenous – related the environment in which it operates. In the category of exogenous factors are involve the characteristics of market segment targeted by the company, the ways of demand manifestation for products company, the components of demographic, technological, natural, social, political and cultural environment in which company conducted its activities. Given the interdependence between them, the knowledge, the utilization and the appropriate combination of this factors influence directly and indirectly the company activity, underpinning the establishment of strategic connections between firm and market, and the implementation of the most appropriate strategies (Balaure, et al. 2002).

The decision to export is based on several drivers: internal – the domestic market is saturated, the company has a specialized product, and the diversification of customers' portfolio – and external – the existence of a competitive advantage, on other markets can be achieved better profitability, a favourable external environment.

There are both advantages and disadvantages arising from the decision to export. The advantages of the export include: increasing competitiveness in the domestic market, sales growth, reducing dependence on initial customers' portfolio, reducing seasonal fluctuations, increasing productivity. The disadvantages facing the companies that undertake export activities are additional costs for personnel, administrative, financial,

promotion, longer payment terms and higher risk of default, the subordination of short-term profit through taking of long-term gains.

In elaboration of international strategy, the company is based on three essential steps: initial market penetration, expansion on penetrated markets, and global rationalization (Douglas and Craig, 1989).

## 2.2 The flat glass industry at global level and in Romania

We estimate the glass market with a production of 125 million tons per year, which represents a value of approximately 150 billion globally. Europe, China, and North America produce about 75% of global production (http://ec.europa.eu/, 2015; Is Investment Report, 2013; Pilkington Report, 2010; FEVE, 2015; Glass for Europe, 2014). The glass production from Romania is estimated at 150 million, of which €70 million flat glass, €40 million glass packaging, €20 million household glass, and €20 million fibres glass (estimation based on figures published by manufacturers on www.mfinance.com).

At international level the main players in the flat industry are Asahi Glass, Saint Gobain, Nippon Sheet, Trakya Cam, and PPG (Table 1).

Table 1. The main manufacturers of flat glass at global level

| Manufacturer | Country of origin | Production units | Capacity million Tons/annual | Overlay |
|---|---|---|---|---|
| Asahi Glass | Japan | 13 | 8.6 | America, Europe and Asia |
| Saint Gobain | France | 17 | 7.6 | Europe, North America, Asia |
| Nippon Sheet | Japan | 12 | 7.5 | Europe, Japan, America and Russia |
| Trakya Cam | Turkey | 7 | 1.7 | Europe, Russia, Asia |
| PPG | USA | 2 | 1.4 | Europe |

Source: Is Investment Report, 2013

The French from Saint Gobain represent the sole manufacturer of flat glass from Romania through production unit from Calarasi. The production value is €70 million, of which 60% is exported to foreign markets. The local market is estimated at approximately €55-60 million, and Saint Gobain has a market share of 40%. The rest of market share from Romania is divided by the AGC, Guardian and Sisecam.

Table 2. The Romanian export for flat glass – 7005 code – during the 2006 -2014

| Export countries | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|---|---|
| At global level | 10535 | 54814 | 49782 | 32612 | 41370 | 29791 | 35217 | 43709 |
| Bulgaria | 2178 | 5215 | 7813 | 4079 | 3600 | 1226 | 5519 | 7764 |
| Hungary | 129 | 754 | 798 | 557 | 660 | 989 | 1034 | 4408 |
| Poland | 295 | 9767 | 12395 | 1035 | 4443 | 2668 | 848 | 567 |
| Italy | 2268 | 3693 | 3578 | 3599 | 4994 | 4911 | 2791 | 2146 |
| Ukraine | 218 | 109 | 10 | 0 | 87 | 1606 | 2961 | 6765 |
| Turkey | 987 | 5792 | 8195 | 11243 | 17398 | 8751 | 11240 | 9937 |

| Greece | 635 | 4495 | 4734 | 3117 | 2580 | 330 | 1469 | 2131 |
| Moldova | 822 | 929 | 1331 | 1253 | 1822 | 2028 | 2445 | 2024 |
| Mexico | 0 | 0 | 0 | 0 | 0 | 0 | 414 | 1227 |
| Croatia | 0 | 158 | 232 | 424 | 118 | 40 | 80 | 267 |
| Serbia | 650 | 1461 | 2639 | 1562 | 1841 | 1470 | 902 | 923 |
| Germany | 49 | 10592 | 120 | 1045 | 145 | 673 | 302 | 364 |
| Macedonia | 238 | 440 | 462 | 522 | 298 | 438 | 655 | 893 |

Source: http://www.intracen.org/itc/market-info-tools/trade-statistics/, accessed on March 28, 2015

The proximity countries remain the main export countries of Romania, but our attention is drawn in a positive way on by the exports to Mexico and Germany.

### 3. The gravity model of flat glass export for Romania

### 3.1 Model overview
The gravity model in terms of bilateral trade between countries was used for the first time by Nobel laureate in economics J. Tinbergen (1962), who was interested to understand the trade flows in the absence of trade barriers, arguing that free trade is the solution to maximize the welfare in the world. He proposed the simplified version and basic gravity model that explains today to a large extent the bilateral trade.

$$\log E_{ij} = \beta_0 + \beta_1 \log Y_i + \beta_2 \log Y_j + \beta_3 \log D_{ij}$$

Where:

$E_{ij}$ = the export from country i to country j

$Y_i$ = GDP in country i

$Y_j$ = GDP in country j

$D_{ij}$ = the distance between country i and country j

The gravity model is extended by Linnemann (1966) which adds the population size as variable analyzing the correlation between the quantity of exported products by country i and the gross domestic product, the population size from destination country j, with the effect that the distance between this countries has on commercial volume (Kristjansdattir, 2005). The Gross Domestic Product is a measure of national income, while the distance approximate the transport costs. The population expresses the size of each economy, considering that a large country has generally an economy characterized by a high degree of self-sufficiency, compared to an economy of reduced scale (Zaman et al., 2010).
For a more exquisite approach, in addition to the basic variable of the gravity model, it is used additional variables that can stimulate or block the activity of international trade. In the model can be added dummy variable – binary variable 0 or 1 – as common border with the analyzed country, preferential trade agreements, language and religion compatibilities (Popa et al., 2009).

### 3.2 Data and methodology
The application of gravity model has considered the selection of countries based on the importance of commercial partnership with Romania in glassware area, assessing the impact of trade arrangements on flat glass exports of our country through several determined factors.

Given the availability of statistical data, the analysis includes 12 countries – Hungary, Germany, Bulgaria, Italy, Greece, Ukraine, Poland, Moldova, Turkey, Croatia, Serbia, and Macedonia – that import flat glass from Romania.

The timeframe for analysis is from 2001 to 2013, considering that from 1990 to 2000 Romania has been in a continuous process of transition and structural-economic repositioning, and then has experienced a significant economic growth, subsequently affected by the global economic crisis from 2008.

The article aims to determine the essential factors of flat glass export from Romania to the countries with which has commercial partnerships using both a static and a dynamic gravity model.

Information required to model elaboration during the analysis period includes annual data retrieved from:

- World Development Indicators of World Bank, the database including information on GDP, GDP per capita, implicitly of Romania;
- Trade Map, data on flat glass exports (7005 code) of analyzed countries.

In order to shape and implementation the gravity model for flat glass exports of Romania were involved in the model the following variables:

- The GDP of countries from analysis, which is expressed in US $ million at constant prices (base year: 2005 = 100);
- The GDP per capita in US $ at constant prices (base year: 2005 = 100/inhabitant);
- The distances (in kilometres) between Bucharest and other capitals of countries j are obtained using Google maps.

In the study the models will be estimated with the methodology based on panel-models data with fixed effects (FEM) or models with random effects (REM). In order to determine the model type, it will be applied the Hausman test.

Considering that classical gravity models has used data in section for more countries, for a single time period, the model design – that expresses the best possible flat glass export of Romania – has created the premise of applying a model based on panel data.

The version of gravity models started from the components that have become linear through logarithms.

*Static gravity model has the following form:*

$$\log\left(\exp_{ijt}\right) = \beta_0 + \beta_1 \log\left(Y_{it}\right) + \beta_2 \log\left(Y_{jt}\right) + \beta_3 \log\left(D_{ijt}\right) + \sum_h \delta_h P_{ijht} + u_{ijt}$$

Where:

$exp_{ij}$ - the export of glass between Romania (country i) to country j;

Yi (Yj) – GDP of country i (j);

$D_{ij}$ - the road distance between country i and country j;

$u_{ij}$ - the residual variable;

$\beta_i$ - the model parameters;

$P_{ij}$ - the dummy variables included in the model in addition to the basic variables of the gravity model representing the facilities or barriers in international trade:

- Border – a binary variable, which established 1 as value for countries i and j that have common border and 0 as value in other countries that do not have a common border;
- BSEC – a binary variable with 1 as value for the members states of the Organization of the Black Sea Economic Cooperation in year t and 0 as value for countries that are not members of that organization;
- Language – a binary variable which can take the value 1 for linguistic interconnected economies and the value 0 for the other countries with economies that are not linguistic interconnected.

Considering the specific dummy variables, the statistical gravity model can be written as:

$$\log\left(\exp_{ijt}\right) = \beta_0 + \beta_1 \log\left(Y_{it}\right) + \beta_2 \log\left(Y_{jt}\right) + \beta_3 \log\left(D_{ijt}\right) + \delta_1 Border_{ijt} + \delta_2 Language_{ijt} + \delta_3 BSEC_{ijt} + u_{ijt}$$

Static gravity model is complemented with dynamic gravity model because the exports could be persistent. In fact, the initial investment or stranded costs incurred by exporters in order to establish new distribution and service networks often generate persistence in exported goods through consumption patterns and distribution channels recently established on foreign markets. Therefore, the exports performance of the previous year provides a basis for activities from the current year.

*Dynamic gravity model has the following form:*

$$\log\left(\exp_{ijt}\right) = \beta_0 + \beta_1 \log\left(Y_{it}\right) + \beta_2 \log\left(Y_{jt}\right) + \beta_3 \log\left(D_{ijt}\right) + \beta_4 \log\left(\exp_{ijt-1}\right) + \sum_h \delta_h P_{ijht} + u_{ijt}$$

In relation with detailed dummy variables, dynamic gravity model will be written as:

$$\log\left(\exp_{ijt}\right) = \beta_0 + \beta_1 \log\left(Y_{it}\right) + \beta_2 \log\left(Y_{jt}\right) + \beta_3 \log\left(D_{ijt}\right) + \beta_4 \log\left(\exp_{ijt-1}\right) + \delta_1 Border_{ijt} + \delta_2 Language_{ijt} + \delta_3 BSEC_{ijt} + u_{ijt}$$

This dynamic gravity model involves the same variables as in previous model, so appear the influences of the same factors to which is added $\log\left(exp_{ijt-1}\right)$ representing the flat glass exports of Romania to partners' countries (j) in previous year (t-1).
From a theoretical perspective, in terms of variables signs from both models, is expected a positive sign of regression coefficients for both exports from previous year – involved in equation to determine the trend of economic relationships and assess the impact of historical commercial relationships on exports – and also for GDP of partners countries – as a direct economic measure of the given countries.
Romania tends to trade more with a country where transport cost are low. In the model the proxy variable for transport cost is the geographical distance between the capital of two countries and their common border. Therefore, it is assumed a negative sign for regression coefficient corresponding to this variable. Also, it is expected a positive sign of regression coefficient representing the language influence, as well as the membership in the BSEC.
Using the panel model has the advantage of capturing the important relationships between variables over the time and to monitor the unobserved individual effects of countries pairs,

allowing a generalized gravity model of trade. The econometrics models estimates were made using Eviews 7.0.

### 3.3 The empirical results of gravity model

The results of Hausman test indicates that for both static and dynamic gravity model, it cannot reject the null hypothesis (Table 1 - Annex), therefore is recommended the utilisation of REM model for both gravity models using the PLS (Panel Least Squares) method.

As a result of data introduction and Eviews program application, the static gravity model of flat glass export of Romania (Table 2 - Annex) was estimated as:

$$\log\left(\exp_{ijt}\right) = -34,38 + 3,88\log\left(Y_{it}\right) + 0,74\log\left(Y_{jt}\right) - 2,90\log\left(D_{ijt}\right) - 1,01\,border_{ijt}$$
$$+ 1,72\,Language_{ijt} + 0,91\,BSEC_{ijt} + u_{ijt}$$

The coefficients signs of static model indicate that countries GDP – Romania, and also partners countries –, the language, and the BSEC belonging has a positive impact on exports, while the distance and common border as proxy variables for transports costs have a negative impact on transport.

The regression coefficient corresponding to the GDP influence of Romania is positive (+3.88), being statistically significant (prob=0.00 is lower than 0.05), and show that the glass export of Romania will increase by approximately 3.88% due to the increased economy by 1%, while maintaining constant the variation of other factors of influence.

The next regression coefficient corresponding to the GDP of country j is positive (+0.74) and statistically significant (prob=0.00 lower than 0.05), which presents that Romania tends to commercialize with greater savings. The more the country destination economy grows, the more larger will be the glass exports of Romania, this having as explanation the growth foreign revenues that will lead to higher demands from abroad for flat glass. The glass export of Romania with country j increases by approximately 0.74% due to the fact that GDP of country j increases by about 1%, in the context of constant variation of other influence factors.

Regarding the dummy variables influence, it coud be observed from static model that both the distance coefficient, and also the common border coefficient present the estimated sign – negative –, thus the transport costs have an negative effect on Romanian exports; on average, an increased of 1% in transport costs – distance and common border – leads to a descrease of 2.9%, and 1.01% in flat glass exports of Romania, keeping constant the other factors. This aspect of correlation between export and distance can be presented as elasticity of export at distance as being -2.9.

The language interconnectivity between countries leads to an increase in flat glass export of Romania, as well as the countries membreship to the Organization of the Black Sea Economic Cooperation (BSEC), fact notified by the positive results of the regression coefficients corresponding to two variables 1.72 and 0.91.

Simultaneous action of explanatory variable of static gravitymodel explains about 49% of flat glass variation of Romanian exports through the value of determination coefficient R Square.

Similar results are obtained also in case of elaboration a dynamic gravitymodel through the data introduction and Eviews program application (Table 3 - Annex).

$$\log\left(\exp_{ijt}\right) = -22,00 + 2,37\log\left(Y_{it}\right) + 0,301\log\left(Y_{jt}\right) - 1,36\log\left(D_{ijt}\right) +$$
$$0,458\log\left(\exp_{ijt-1}\right) - 0,6\,border_{ijt} + 0,81\,Language_{ijt} + 0,576\,BSEC_{ijt} + u_{ijt}$$

As in the case of static model, all coefficients of dynamic model are statistically significant at the 5% threshold and present the estimated signs, but with other values close to those presented above.

By adding the endogenous variable lag, with role of exogenous variables in the dynamic model has led to an increased of determination degree of the model to 59% (R Square), revealing that dynamic model adjusts better the data.

Positive coefficients of GDPs of Romania and partners countries indicate a positive effect on flat glass export, representing a measure of the saving size.

The distance coefficients and common border coefficients have expected negative signs. In other words, transport costs have a negative effect on Romanian export; on average, an increase of 1% of transport cost (distance and lack of common border) lead to a decrease of 1.36% and 0.6% in flat glass exports, keeping the other variables unchanged.

A positive sign in the flat glass exports from previous year indicates an positive impact on export performance from current year. This result seems to be acceptable in the real world because the achievements in the previous year, such as new business relationships with foreign importers provide a basis for Romanian companies to expand their export activities in the next year. Similarly, as economic growth leads to an increase in export supply, a positive sign seems reasonable.

Also, the language interconnectivity and belonging to BSEC has a positive effect on dynamics flat glass export of Romania with partner countries.

## 4. Conclusions

The various strategies and trade policies of the countries included in the analyses along with Romania, together with other factors established significantly for country export – distance, lack of common border, language interconnectivity, and belonging to BSEC – have favoured the drawing of a static gravity model previously completed with a dynamic model.

Establishing the two gravity models – static and dynamic – is due to the application of panel model. This type of model highlights the significant interdependencies between variables used in time – 2001-2013 – and monitors the unobservable individual effects of countries pairs.

The estimation process of econometrics models was done using Eviews 7.0. Result the significant positive impact of Romania and other countries GDP, and a positive impact of the flat glass export from previous year on increasing flat glass export of Romania. However, the results of the two models highlights the fact that between flat glass export of Romania and distance, existence or inexistence of common borders with Romania, language interconnectivity, and belonging or not belonging to the BSEC there is an indirect interdependence. This type of connection is natural and positive regarding the future perspectives of the export development, as main component of trade.

Competitive activity and oscillating rhythms of evolution in the process of economic growth require to the companies from manufacturing flat glass industry of Romania the application of dynamic and appropriate strategies to address internal and external market.

Context requires, on the one hand, adopting a rather aggressive attitude to maintain tradition in glassware sector, on the other hand a strategic action of integration into the global flows through improving the quality of glass at high quality standards, comparable to those from international level.

## 5. Acknowledgements

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**Annex**

### Table 1. The results of Hausman test for gravity model of Romanian export

Correlated Random Effects - Hausman Test
Equation: MODEL GRAVITATIONAL
Test cross-section random effects

| Test Summary | Chi-Sq. Statistic | Chi-Sq. d.f. | Prob. |
|---|---|---|---|
| Cross-section random | | | |
| Static gravity model | 1.52 | 3 | 0.6767 |
| Dynamic Gravity Model | 1.57 | 3 | 0.8127 |

### Table 2. Static gravity model of Romania, 2001-2013

Dependent Variable: LN_EXP_IJ
Method: Panel EGLS (Cross-section random effects)
Date: 04/17/15   Time: 17:07
Sample: 2001 2013
Periods included: 13
Cross-sections included: 12
Total panel (unbalanced) observations: 145
Swamy and Arora estimator of component variances
White cross-section standard errors & covariance (d.f. corrected)

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | -34.38798 | 8.185484 | -4.201094 | 0.0000 |
| LN_GDP_J | 0.744629 | 0.203894 | 3.652048 | 0.0004 |
| LN_GDP_I | 3.881603 | 0.604504 | 6.421137 | 0.0000 |
| LN_DISTANCE | -2.908328 | 0.602912 | -4.823805 | 0.0000 |
| BORDER_IJ | -1.013269 | 0.615456 | -1.646371 | 0.1020 |
| OCEMN | 0.919525 | 0.453013 | 2.029799 | 0.0443 |
| LIMBA | 1.727675 | 0.397681 | 4.344369 | 0.0000 |

| | | |
|---|---|---|
| R-squared | 0.490020 | |
| Adjusted R-squared | 0.470890 | |

## Table 3. Dynamic gravity model of Romania, 2001-2013

Dependent Variable: LN_EXP_IJ
Method: Panel EGLS (Cross-section random effects)
Date: 04/17/15   Time: 17:08
Sample (adjusted): 2002 2013
Periods included: 12
Cross-sections included: 12
Total panel (unbalanced) observations: 131
Swamy and Arora estimator of component variances
White cross-section standard errors & covariance (d.f. corrected)

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | -22.00957 | 8.981077 | -2.450660 | 0.0157 |
| LN_GDP_J | 0.303574 | 0.133510 | 2.273795 | 0.0247 |
| LN_GDP_I | 2.375516 | 0.815205 | 2.914009 | 0.0042 |
| LN_DISTANCE | -1.361796 | 0.479789 | -2.838325 | 0.0053 |
| BORDER_IJ | -0.600729 | 0.294009 | -2.043234 | 0.0432 |
| OCEMN | 0.576198 | 0.170111 | 3.387194 | 0.0009 |
| LIMBA | 0.817657 | 0.217742 | 3.755167 | 0.0003 |
| LN_EXP_IJ(-1) | 0.458390 | 0.110535 | 4.146998 | 0.0001 |

| | | | |
|---|---|---|
| R-squared | 0.597774 | |
| Adjusted R-squared | 0.574883 | |

# A LITERATURE REVIEW ON CAUSE-RELATED MARKETING STRATEGIC ORIENTATION IN BUSINESS RESEARCH

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**Abstract:** *A long time economic and social objectives have been seen as competing, but academic researchers underline that this two directions may converge in certain situations. Companies belong to communities where they develop their activities. When the social goals of the communities are related to the main objectives of the company, sustaining a social cause could produce economic benefits, in this case corporate philanthropy and shareholders interest take the same direction. Cause-related marketing is a marketing concept that gained more interest in the last three decades and exemplifies how social and economic objectives are achieved in a strategic manner in promoting campaigns. Researches in business and non-profit organizations reveal that cause-related marketing campaigns sustain the growth of market share and sales, and help at improving brands image. More and more companies and non-profit organizations find cause-related marketing as a strategic tool suitable for building long term relations to the customers, for increasing brand awareness, for gaining a social responsible corporative image, for supporting local community or for producing transformation in sustaining causes at global or international level. The study analyses the definitions of cause-related marketing the presence and evolution of the concept in the academic literature, and marketing terms that are connected more often to this concept. Comparative to non-profit marketing concept, cause-related marketing gained a larger interest in literature. On the other side, corporate philanthropy is still a concept that gains more interest than cause-related marketing in academic literature, being a more commune way used by companies in collaboration to non-profit organizations. Tided to cause-related marketing concept literature review reveals concepts as: consumer behaviour, brand image and corporate social responsibility being more often analysed. The salience of the consumer perspective, in academic research underlines the strategic and tactic role of cause-related marketing that has to be considered in building relations to the customers for companies.*

**Introduction**

Literature review reveals that cause-related marketing has gain increasingly interest in the last years as a form of corporate philanthropy based on increasing profits and sustaining a cause through giving (Varadarajan and Menon, 1988). Cause-related marketing started in 1983 with the campaign of American Airlines in renovating Liberty Statue to an estimated $922 million in 2003. Companies invested approximately $991 million in cause campaigns in 2004, a rise of 57% since 1999 (Gard, 2004 cited by Golkar and Sina, 2013).

The practice of cause-related marketing gained increasingly interest, but the definitions of the concept still vary. Cause marketing is defined as an action between a non-profit organization and a company, of marketing an image, a message, or delivering a service for mutual benefit (Marconi, 2002). Other authors consider it is a marketing activity in which company donations to a cause are based on the sales of specified goods or services (Larson et al. 2008)

Adkins (2003) presents a definition of cause-related marketing as being "a commercial activity by which businesses and charities or good causes form a partnership with each other to market an image, product or service for mutual benefit" (p. 670). The main concepts used in this definition are commercial, partnership, marketing and mutual benefit. Cause-related marketing is also seen as a promotional strategy (Tangari et al. 2010). Adkins (2003) considers that cause-related marketing is a marketing-driven activity, that businesses, charities or good causes, develop cause-related marketing programs for achieving their objectives. Organizations and companies are also interested to receive a return on their investment, even if that investment is cash, time or other resources.

In a cause-related marketing campaign, part of the revenue of every purchase can be donated to a certain cause by company to a non-profit organization. Cause-related marketing campaigns may differ from a company to another, regarding the cause type, non-profit organization profile or other aspects. Not all companies choose to donate money in cause-related marketing program, some choose to use corporate philanthropy and employers volunteerism as activities to improve their social responsible image. Researches in business and non-profit organizations reveal that cause-related marketing campaigns sustain the growth of market share and sales, and help at improving brands image (Marconi, 2002).

A long time economic and social objectives have been seen as competing, but academic researchers underline that they are not. Every company belongs to the community where it develops it's activity, and they are not isolated. When a social goal related to the main objectives of the company, sustaining a social cause could produce economic benefits, in this case corporate philanthropy and shareholders interest take the same direction (Porter and Kramer, 2004). According to Marconi (2002) companies choose to engage in partnerships with non-profit organizations for sustaining different causes may choose one of the following strategies or directions: strategic philanthropy, sponsorship social investment and value partnerships. All these directions assume a strategic orientation of the companies.

**2. Cause-related marketing concept evolution in the literature. An analyse using Google Ngram application**

The concepts of "cause-related marketing" and "cause marketing"  gained larger interest more after 1980 having an increasing evolution regarding its presence in the content of the books indexed by Google Books, shows Google Ngram application as it can be observed in figure 1. A visible interest in the analysed literature is obvious after 1990 since the presence of the concepts exponentially grew.

**Figure 1.**"Cause related marketing" and "cause marketing" terms in Google indexed books between 1900-2008 Source: https://books.google.com/ngrams, Quantitative analysis of culture using millions of digitized books. science (published online ahead of print: 12/16/2010). Science, 331, Michel et al. 2010.

Google Ngram application offers the possibility of analysing concepts evolution related through calculating the differences between the occurrences of the concepts in the literature in the mentioned period (Michel et al. 2010). A related analysis of the concepts "cause-related marketing", "cause marketing" and "non-profit marketing" as it can be seen in figure 2, shows that between 1970 till 1997 "non-profit marketing" concept experienced an increasing interest, "cause-related marketing" and "cause marketing" summed gaining more interest after 1997, eclipsing "non-profit marketing" concept presence in the literature.
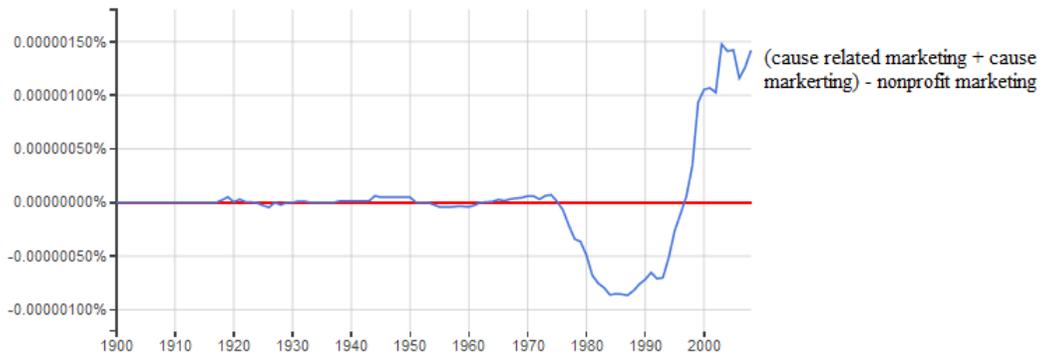


**Figure 2.**"Cause related marketing" and "cause marketing" terms trend related to "non-profit marketing" term trend in Google indexed books between 1900-2008.
Source: https://books.google.com/ngrams, Quantitative analysis of culture using millions of digitized books. science (published online ahead of print: 12/16/2010). Science, 331, Michel et al. 2010.

On the other side "corporate philanthropy" is still a concept of increasing interest in literature comparative to "cause-related marketing" and "cause marketing", having a much larger frequency in the analysed literature as it can be seen in figure 3.

**Figure 3.** "Cause related marketing" and "cause marketing" terms trend related to "corporate philanthropy" term trend in Google indexed books between 1900-2008.
Source: https://books.google.com/ngrams, Quantitative analysis of culture using millions of digitized books. science (published online ahead of print: 12/16/2010). Science, 331, Michel et al. 2010.

## 3. Cause Related Concept in Academic Research. A Content Analysis of Scholarly Literature

For observing the main subjects associated to cause-related marketing in recent academic research, a study of 109 abstracts of scholarly published articles, from ProQuest Central database was conducted. The analysed articles were published between 2007 and 2014. The research methodology was content analysis using Textalyser, an online text analysis tool that reveals details statistics of the text. The method used analyses the features of words groups, finding out the keyword density, analyse the prominence of word or expressions (www.textanalyser.net, 2004). The analysis revealed the most often related concepts related to cause-related marketing in abstract content of the analysed articles.

**Table 1.** Occurrences and frequencies of the most quoted words in the analysed articles

| Word | Occurrences | Frequencies |
|---|---|---|
| Cause | 336 | 2.8% |
| CRM | 291 | 2.4% |
| Consumers/ consumer | 290 | 1.2% |
| Brand | 151 | 1.2% |
| Product | 105 | 0.9% |
| Social | 99 | 0.8% |

Source: Author's results using Textalyser application.

Researches in business and non-profit organizations reveal that cause-related marketing campaigns sustain the growth of market share and sales, and help at improving brands image (Marconi, 2002). As it can be observed in the table 1, the most used words after the cause related marketing are consumer/consumers. The academic research regarding cause-related marketing orients firstly on the consumer satisfaction (Iadero and Mercedes, 2013), attitudes (Lafferty and Edmonson, 2014), behaviour (Bigné-Alcañiz, Currás-Pérez, Ruiz-Mafé and Sanz-Blas, 2012) and  scepticism (Kim and Lee 2009) towards the cause or towards the company and the products. The other subject that is studied in academic research is brand: brand image (Sheetal and Abhishek, 2013), brand equity (Harben and Forsythe, 2011), brand fit to the cause (Cheron, Kohlbacher and Kusuma, 2012).

Product is another element studied in the academic research regarding cause-related marketing approach. Issues as: product type and donation magnitude (Chang, 2011), the product cause fit (Chang, 2012b), the influence on a purchase of a product (Oloko and Balderjahn, 2009) are raised regarding in cause-related marketing campaigns.

The social aspect regarding company involvement is also raised in academic research related to cause-related marketing. Welfare, public goods, corporate social responsibility (Blomgren, 2011) are subjects of recent interest in academic literature.

**Table 2.** Frequencies and counts of the marketing concepts included in expressions used in the analysed articles

| Expressions including: | Count | Frequencies |
|---|---|---|
| Cause related marketing | 534 | 3.59% |
| Consumer | 118 | 0.79 |
| Brand | 108 | 0.72 |
| Social responsibility | 85 | 0.43% |
| Purchase intention | 48 | 0.32% |
| Product | 45 | 0.30% |
| Donation | 44 | 0.29% |
| Non-profit | 20 | 0.13% |

Source: Author's results using Textalyser application.

In table 2, are presented the counts for the expression that include marketing concepts, that are most used, related to cause-related marketing in the analysed articles. It can be observed the salience of the consumer focus in the research conducted (with 118 counts). Research regarding brand in cause-related marketing research occupy an important part too (with 108 counts). Purchase intention is another subject analysed in cause-related marketing research. Issues as: purchasing power of the customers, consumption (Hawkins, 2012) purchase intention regarding familiar and cause-related brands (Harben and Forsythe, 2011).

Partnership to non-profit sector is an important issue analysed in academic research. Donations have been analysed from different perspectives. From a negative perspective of the appeal to guilt of purchasing different products in cause-related marketing campaigns (Chang, 2011a) till to the altruistic motivation analysis of the consumer involvement in the cause-related campaigns (Bigné-Alcañiz, Curras-Perez and Sánchez-García, 2009).

A conclusion to the conducted study is that academic research underlines the strategic orientation of the cause-related marketing tool is firstly focused on consumers, then on branding strategies and corporative image of the firms. Cause-related marketing is more and more recognised as a reliable instrument of developing long term relations to the costumers and to influence consumer behaviour. As Kotler, Kartajaya and Setiawan (2010) emphasize in their book, companies' strategic orientation must have in the view the needs that are in the top of the Maslow's hierarchy of needs, to address customers. Getting involved in sustaining social causes and being part of the social change, individuals meet their need of self-actualization, the need from the top of Maslow's pyramid. Companies are able to get involve the customers in producing social change, through selling them their products in the same time using cause-related campaigns.

## 4. Conclusions

The concept of cause-related marketing grew exponentially after 1990 being more frequently used in the last decade comparative to non-profit marketing concept in the last decade but still less used that corporate philanthropy a term that still gains lots a popularity in business research.

Literature review reveals that cause-related marketing is considered to be a reliable strategic tool for improving company's brand for increasing customer participation and for gaining good partnerships in the community.

Consumer behaviour, attitude, perceptions are the main subject analysed in cause-related marketing research, followed by brand enhancing and corporate social responsibility. The salience of the consumer perspective in academic research underlines the strategic and tactic role of cause-related marketing that has to be considered in building relations to the customers.

## Acknowledgement

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# STUDY REGARDING THE CUSTOMERS' SATISFACTION DEGREE
## *QUALITATIVE RESEARCH AMONG THE MAN HEAVY COMMERCIAL VEHICLES BENEFICIARIES*

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***Abstract:*** *The main objective of the study is to establish the satisfaction degree of the heavy commercial vehicles market customers. This scientical endeavour is justified by the major importance given by the producers and distributors of such vehicles to the beneficiaries' satisfaction, a hich importance factor in the product development, customer relations inprovement and market share growth. After the 2008-2009 financial crisis, when the Romanian heavy commercial vehicles market collapsed, the growth trend was linear and moderat, but the market structure changed significantly.*
*Having on one hand high technological costs, generated by the European legislation on pllution reduction and road safety and, on the other hand, the beneficiaries' price pressure, the top producers from the deveoped countries focused on the optimization of the cutomers' satisfaction degree and the development of their loyalty towards the brand.*
*In order to achieve this, there has been developed a selective qualitative research, in the form of a questionnaire, among the most important customers of MHS Truck & Bus SRL – the importer of MAN trucks in Romania. The questions were directed towards obtaining informations regarding the customers' product perception, identifying the main acquisition motivations and finding the main issues in successfully implementing the main politics of the relational maketing. The obtained results generally showed a good satisfaction result, the main complaints regarding subjects indirectly linked to the distribution, like service performance or road assistance.*

## 1. Introduction

The heavy commercial vehicles are represented by all terrestrial means of transportation which have a mass over 7,5 tons and which are meant for general products transportation. The size and structure of the heavy commercial vehicles market are a direct indicator of a country's development. On a European scale, a growing trend in the renewal of the truck park can be whitnessed, due especially to the legal framework on pollution. The transportation sector and its connex activities play an important role in the European economy, by employing over 10mln people and, depending on the fuel price level, it can affect the final product prices by 15%. According to the European Comission's website, the transportation industry amounts to 4,6% of the GDP and the industry of transportation means production adds another 1,7% to the GDP.

Regarding the worldwide truck sales, an upward trend has been established for the emerging countries, as well as a continuous cyclicality in the developed markets, especially after the 2006 power pole shift. In order to counter the rapid growth of the Asian producers and to stregthen their worldwide position, the large heavy commercial vehicles producers from the developed countries adopted various measures al mergers or takeover of majority stock packages of competitors.

Andreas Renschler, the predident of the Daimler Trucks Division of Daimler AG - the most important Full-Line producer of commercial vehicles worldwide, states that from the truck constructor's point of view, in order to determine a market's growth potential, one

has to take into consideration the GDP: *A growing economy always goes hand-in-hand with increasing freight transport volumes – boosting the demand for trucks (KPMG report, 2013).*

In Romania, the truck market dynamics is registering a prudent growth during the last years, as shown in the chart no.1. The local market, as well as the European, is divided among 7 large producers: MAN, Mercedes-Benz, Volvo, Scania, DAF, Renault and Iveco. MAN's direct competitors are only Mercedes-Benz and the two Swedish producers, which form together the market's premium segment.

**Chart No. 1. The Romanian heavy commercial vehicles market
in the timeframe 2008-2014, new trucks over 7,5 t**

| Brand | 2014 | 2013 | 2012 | 2011 | 2010 | 2009 | 2008 |
|---|---|---|---|---|---|---|---|
| MAN | 955 | 748 | 713 | 815 | 525 | 477 | 1825 |
| Mercedes | 1198 | 791 | 379 | 569 | 317 | 204 | 1109 |
| DAF | 766 | 678 | 448 | 676 | 438 | 313 | 1236 |
| Renault | 236 | 220 | 180 | 261 | 210 | 151 | 1015 |
| Scania | 366 | 297 | 358 | 306 | 186 | 66 | 392 |
| Volvo | 943 | 860 | 475 | 491 | 136 | 183 | 1378 |
| Iveco | 572 | 412 | 253 | 559 | 549 | 390 | 2274 |
| Others | 56 | 33 | 33 | 50 | 94 | 96 | 296 |

Source: internal MHS Truck & Bus SRL documents

As we may deduce from chart no.1, MAN registered a 12,7% YOY growth in 2014, but, unfortunately, the distance to the the leading position of Mercedes grew. The total truck market grew by 12,6% and, although there usually exists a link between a country's economy and the commercial vehicles sales, this fact does not apply in this particular case. It is difficult to estimate but probably over 50% of the new trucks registered in Romania are active troughout Western Europe.

## 2. Satisfaction research and its role in the customer's attachment to the supplier

In the market economy, the buyers can choose what, when and where to buy or even if to buy a product at all. Every business' key to success resides in the open orientation towards satisfying the customer's needs. The company's profit is directly linked to the customer's satisfaction degree, his preferences and wishes, so marketing can be regarded as the ability to create and retain profitable customers.

Customer satisfaction is vital to a company's success. It's been proven that it's in direct relation to the customer loyalty process, motivating rebuying and the profitability of the supplying company. It is presumed that a satisfied customer will buy the product again,

while a dissatisfied customer is hard to win back and can have a negative influence on other potential customers.

Customer retention represents a company's ability to avoid or significantly reduce the threats to its own clientele. Attracting new customers implies the constant monitoring of the business environment in order to indentify and quickly react to the changes in the potential customers' requirements.

The definition of customer satisfaction has been put together in time by many marketing experts and has taken simple and elaborate shapes. Even so, all these contain three common elements:

➢ Customer satisfaction is an emotional (affective) or cognitive reply;

➢ The reaction is focused on the expectations, the product's evaluation, the user experience and/or certain attributes linked to the acquisition process (e.g. distribution, sales force);

➢ The reply is manifesting at a certain moment in time (after the choice is made, after acquisition, after usage or after obtaining a cumulated experience).

The concept of marketing urges managers to regard the business from the consumer's point of view and consider his needs and aspirations. The most relevant example in this matter is Sam Walton, founder of Wal-Mart, the largest US detailing retailer with a yearly turnover of over 32 bn. $ (Blythe J., 1997). He considers that the business' success is owed to him acting as a representative of his own customers, by assimilating their needs and adapting the offer to these requirements.

*Customer satisfaction does not imply their loyalty but is an undisputable central premise of the forementioned* (Burmann 1991; Jones/Sasser, 1995). Analyzing the link between customer satisfaction and his layalty, Bloemer si Kasper (1995) add: *Also some other effects are found indicating that the relationship between consumer satisfaction and brand loyalty is not simple and straightforward.* Therefore, modeling the customer satisfaction as a cognitive and affective evaluation of the entire accumulated experience with an offerer and his product is highly recommended.

Successful brands like Coca-Cola, Nike, Levi's have demonstrated in the past that the brand's notoriety or popularity among consumers do not translate into significant sales by themselves. Selfsufficency regarding the own image is a trap for popular brands, the lack of an efficient marketing and a permanent contact to the consumers having as consequence sale decrease and even endangering the company's existence.

In analogy with Hirschmann's theory (1970), which identifies 3 customer behaviour types "Exit, Voice and Loyalty", dissatisfied customers always have the option of complaint. Most of the time, the unpleasant experience is shared with other persons, like friends and family members, so that the dissatisfaction acts as a multiplicating factor on the customers of a company. (Singh, 1988).

At the opposite end, the multiplying factor acting in satisfied customers generates a verbal propaganda, which can be regarded as free advertising by the respective company. A study conducted by the US Government (TARP 1979; 1986) reported that a satisfied customer shares his experiece with an average of three persons, while an unsatisfied one shares his complaint with nine others (Bruhn, M., Homburg, Ch., 2010).

In 2003 Kotler defined customer satisfaction as *"...the pleasure which someone experiences when he compares his impression regarding the performance (or the results) of a product to his expectations prior to its acquisiton" (*Kotler, P., 2003). This definition starte from the premise that satisfaction is a post-acquisiton phenomenon. There are however opinons according to which customer satisfaction or dissatisfaction can occur before the choice or acquisition, maybe even in the absence of the buying process (e.g. the dissatisfaction caused by locating retail parks on the city's outskirts).

As any abstract element, satisfaction raises the problem of developing proper means of measurement. *Defining a concept's theoretical significance and the conceptal domain represent the main steps in developing appropriate ways of measuring and obtaining valid results* (Churchill, G.A., 1979).

The lack of these adequate measuring methods entices the impossibility of interpreting and comparing empirical results, therefore the differences between the results of various studies are depending of the way in which satisfaction was operationalized (Peterson, R.A., Wilson, W.R., 1992).

*If you do not think about the customer, it means you're not thinking at all,* stated Tee Levitt of Harvard University. In the analysis of the relational marketing significations, the customer becomes the central figure of the marketing efforts and his value for the company receives a new quantitative dimension through two concepts: the customer lifetime value and customer profitability. (Pop, 2006).

## 3. Characteristics of the manifestation of the satisfaction level among the customers of the heavy commercial vehicles market

The degree of satisfaction of the customers of heavy commercial vehicles plays an important role in their acquisition decision. Depending on the development level of a country or region, the the determinant reasons in the acquisition vary from the product's price to the after-sales services. *After all, the number one purchase reason in mature markets is the total cost per kilometer, not – in contrast to emerging markets – the initial price of a truck* (KPMG report, 2013) stated Andreas Renschler.

In the study "European Truck Customer 2010", conducted among 2.300 truck customers from Western Europe, the conclusion was reached that the service and technical assistance service play the most impotant role in the customer satisfaction. As we can see in the graphic no.1 below, the truck's reliablilty and its maintenance form the main criteria for establishing the clients' satisfaction degree. The truck's standstill due to a deffect generates losses for the transporter, through the towing and repair costs, as well as through the lost turnover. The cost with recovering and repairing a truck in Western Europe vary from 615 to 1034 Euro (www.europenet24.com). Minimizing the standstill period is a decisive critierion of the satisfaction.

**Graphic no. 1 Specific indicators for the calculation of the customers'
satisfaction degree in the western commercial vehicles market**
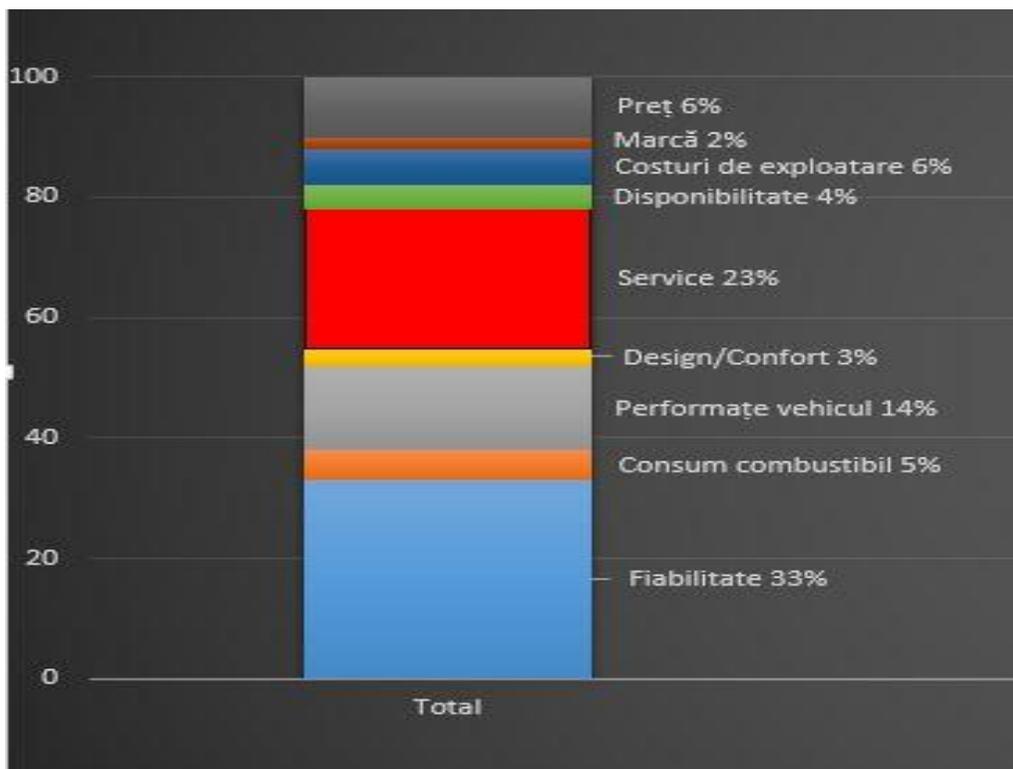
In another study, conducted in 2014 in Japan, Taku Kimoto - CEO of the
Automotive Division of J.D. Power Asia Pacific – was stating: "In 2014, key sales activities
– such as sales visits that include a bona fide proposal covering operational improvements,
after-slaes follow-up, and a provision of information on industry trends – have a greater
impact on satisfaction, compared with 2013". The same article brings two other general
conclusions, also applicable to the European market:

➢ the frequent visits of the sales representatives (at least once a month) increase
customer satisfaction. The forementioned may also increase if during the visit they
communicate valuable informations like: proposals for operational improvements,
follow-op of the after-sale activity or industry trends;

➢ the satisfaction degree is higher in the case of fleet owners (over 30 owned units)
as compared to medium companies (10-30 units) or small ones (less than 10
units). This fact reflects the increased focus of the producers towards the important
customers.

Another key element in determining the satisfaction degree of truck owners is the
age of the vehicles. In the analysis conducted by J.D. Power and Associates on the US
truck market, it's been determined that the satisfaction degree of the owners peaks in the

first 9 months of usage or in the first 80.000 km. This period coincides with the first major inspection, the first cost generated by the vehicle's maintenance. In the months 10–14 of usage, the satisfaction degree decreases with approximately 2,6%, and with an additional 3,25% after the 14th month.

The appearance of the latest legal regulations regarding the pollution norms and active safety systems have increased the technilogization degree of new trucks but, unfotunately, also the breakdowns. The issues, caused mainly by the fueling and gases recirculating systems on Euro6 models, have lowered the satisfaction levels during the last two years. The engine's reliability has the largest impact on the general satisfaction in a truck. The European built trucks have 22% lower rate of fueling and exhaust issues than their American counterparts.

In this field of commercial vehicles, the parts of the customer satisfaction upon usage can be splot up into two larger groups:
- ➤ six key factors generated by the product: cabin / overstructure, operating cost, engine, ride / maneuverability / brakes, tansmission and warranty;
- ➤ Six factors generated by the service performance: service consulting, maintenance ease, service points fitout, service related initiatives, maintenance and repairs operations price and their quality.


### 4. Research methodology

The B to B market research shows a series of characteristics compared to the B to C market research, especialy in the case of international research (Pop, N.Al., 2006).

The choosing process of methods, tehniques or instruments that are to be used in a research, has to be made taking into consideration:
- ➢ followed objectives in the investigation;
- ➢ available means at our disposal (human, material, financial);
- ➢ accesability degree of informations;
- ➢ their obtaining necessary time;
- ➢ establishing of research's methods (interview, observation, experiment);
- ➢ establishing of research's instrument (operator interview, questionnaire, projection test, observation card etc.);
- ➢ definition of contact method (via post, telephone, online, operator);
- ➢ global cost of the research.

This study's objective is to identify the satisfaction degree of the clients of MHS Truck & Bus SRL. The company MHS Truck & Bus SRL is the official importer of MAN heavy commercial vehicles in Romania. In order to achieve this goal, a qualitative selective research has been conducted as an exploratory study among the main customers during the last three years. It focused on identifying the main factors which can influence customer satisfaction an also on cerating the necessary premise for a comparative analysis of the results.

The exploratory research has taken place in the timeframe March - April 2015 and was based on the *inqiury method,* using the *interview technique* and used the *instrument* represented by the questionnaire.

The interviewed subjects were identified based on the company's database, according to their attractiveness level to the company's sales department. Although all customers are important to a company, the criteria on which the selection of the subjects was made are the following:
- ➤ the acquisition of at least five MAN trucks (potential fleet customer);

➢ customer with large acquisition potrntial or market inluencer, but which acquired at least one MAN truck.

Given the extemely variate customer types, une of the main concerns was to have a wide coverage of the activity ranges of the respondents. Therefore we identified the following major segments:

➢ haul companies and transport companies (general products, fuel);
➢ building and road building companies;
➢ companies which have an activity necessitating specialized transportation (oil extraction , scrap metal collection, waste collection, oversized transportation);
➢ city halls, public transportation authorities, emergency situations authorities.

Another criterion which was taken into consideration was of the uniformity of the interviewees' selection area according to the geographical distribution, but this was difficult due to the unequal distribution of the national sales numbers. We discovered geographical areas with great potential, way above the national average, which correspond to important ligistics hubs: Cluj, Timisoara, Pitesti, Craiova, Suceava and, of course, Bucuresti. The most important increse of the last years was registered in the North-West area, especially due to foreign investments.

The questioning of the subjects was mainly done by email. Only in isolated cases, where the customer's access to an internet connection was impossible, did we choose the telephone option. We amounted to 37 respondents, occupying various positions management positions in theie companies: owner, administrator, technical manager, car park administrator etc.


## 5. Research's results

The research started with an accomodation question which targeted the classification of the customers according to the length of their collaboration with the MAN company in Romania. The MHS Truck & Bus SRL company was founded in 2007 but functioned previously as a trucks dedicated division of the Automobile Bavaria since 2001. This is the reason why approximately half of the interviewees had contact with the MAN brand before the founding of MHS Truck & Bus SRL. A third of the interviewed persons first had contact to MAN in the timeframe 2012-2015.

The way in which the respondent has made his first contact to MHS T&B returned interesting answers regarding the active and passive promotion. Two fifths of the customers fist visited the company offices where they contacted a sales person. This segment almost perfectly overlapped the one collaborating with MAN since before 2007. A quarter of the beneficiaries had their first contact with the company by offer request through email or telephone. Only one in six were contacted by the MHS T&B personnel. Other situations were the following:

➢ public tendering on which MHS T&B participated and was afterwards declared winner;
➢ acquisitions requested by the foreign mother company directly at MAN, the local companies being linked by their international partners;
➢ delivery of special vehicles by a third company usually through the overstructure producer who fitted the trucks, contact being established at delivery or at the trainings;
➢ maintenance and repairs of used MAN vehicles purchased from outside Romania.

The main answer to the question regarding the decisive argument on buying the first MAN truck, was the brand's notoriety, which amounted to two fifths of the answers. The same percentage was obtained by the good price-to-quality ratio of the MAN products.

Approximately a third of the respondents mentioned the short delivery time or the availability from stock as being decisive. Only one tenth of the respondents considered the technical characteristics of the MAN trucks as a decisive factor.

Given the fact that the inquiry was conducted exclusively among customers who acquired a MAN truck, their assessment of the sale-related aspect was good (a quarter) and excellent (three quarters). A sigle customer rated it as satisfactory. On the other hand, regarding the after-sales aspect, less than half of the customers were pleased, many rating it "bad".

Listing the main sources of satisfaction on the last direct acquisition from MHS T&B showed following proportions: upholding the contract conditions (one third of te respondents), product and sevice quality (a quarter), the quick availability of the truck (one third) and, last but not least, the professional reactions and technical knowledge of the MHS personnel (one half).

There has been of course required the main reasons which induced a state of dissatisfaction on the last transaction. Two thirds declared that there is no complaints, and, from the ones who had objections, approximately one half underlined the rigidity during negotiations or the high acquisition price. Approximately one in six respondents were displeased with the technical detailing prior to the acquisition or the lack of warranty for the used vehicles.

A quarter of the interviewees were not able to respond to the question regarding a comparison between the last two acquisitions, as they were first time customers of MAN. From the total number of customers who were at least at their second purchase, three fifths considered that the relationship with MHS was the same and the rest of two fifths recorded an improvement. There were no cases of decreasing satisfaction in time.

One of the most interesting questions of the inquiry was linked to the customers' suggestions in order to increase their long term loyalty. One third stated that the lowering of the price level would help. The expansion of the service network was considered helpful by a quarter of the respondents, while a third mentioned the improvement of the service offers (longer payment terms, promotions on inspections or major repairs, a more efficient dissemination of the service campaigns) as a factor for keeping the MAN brand as their first option. There were also scattered mentionings of the following citeria: keeping the sales team constant, diversifying the stock products, warranty introduction for used vehicles, the introduction of free-of-charge campaigns on trick diagnostics.

More than half of the interviewed partners did not wish to make any recommendations of brand image improvement of MHS T&B on the heavy commercial vehicles market. The answers obtained from the rest were difficult to categorize due to their variety. Here are just a couple of examples:

➢ changing the statute from official importer to Romanian Representative office;
➢ promoting the image of MAN in magazines and TV shows (e.g.: Paris-Dakar Rallye);
➢ a quicker supplying of spare parts and the correct calculation of the service workmanship hours;
➢ the improvement of the price / quality ratio.

Subsequently, the customers' opinion regarding the advantages and disadvantages of MHS T&B compared to its main competitors in the heavy commercial vehicles market was requested. A quarter did not answer this question. The common deniminator of this category is that they represent multinational transport companies or large transporters, who's fleet is comprised of several truck brands and who did not wish to express their opinion, even under the cover of confidetiality. Among the clients who gave an answer, we identified the following mentions regarding MHS T&B's advantages:

➢ a good price / quality ratio (half)
➢ the MAN brand notoriety (a quarter)

> ➤ professionalism, seriousness and experience of the MHS T&B personnel (a quarter)

The customers' opinions regarding MHS T&B's disadvantages compared to the competition focused mainly on the service area. Out of the total number of interviewees, three fifths did not mention any disadvantages. The rest focused their opinion on:

> ➤ service – high prices, low stock of spare parts, low quality of the spare parts (three quarters)
> ➤ underdeveloped service network (a quarter)
> ➤ price level of trucks (a quarter)
> ➤ other issues as the long delivery term, the low frequency of driver trainings (a quarter)

Another interesting aspect was the relationship between the positon of the interviewee in his company and the area his answers were focused on. Therefore, owners and general managers were preoccupied by aspects regarding tendering, negotiation and purchasing. Technical managers and car park managers on the other hand leaned towards after-sales services, like the national service network, quality and maintenance and repairs costs, as well as driver trainings.


## 6.    Research's conclusions

The undertaken research has proven its usefulness in improving MHS Truck & Bus SRL's activity. The variety of the revealed aspects was crystalized in a series of future activity directions meant to improve the Romanian distributors performance.

a) By corelating yhe answers of different categories of respondents, one can identify a prioritary preocupation of the owners and general managers towards the contractual negotiation mechanism and of the technical managers and car park managers towards the technical aspects (sale + after-sale services), fact justified by each category's positioning in the decision chain.

b) A clear conclusion of the research is the need of significantly improving the *after-sales activities* and, primarily, *the service activities.* This requires a higher degree of responsibility from the service providers of MHS Truck & Bus SRL. This could be achieved by a contractual clause stating that the company would have the right to periodically investigate the quality of the partner's performance.

c) Another major direction resulted from the study is regarding the CRM (Customer Relationship Management) policy, which has to be integrated in the sales activity and should develop into a long term collaboration with the customers. In order to achieve this, the improvement of the *customer database structure* and *the complaints and reclamations management* is necessary.

d) A final conclusion relates to the necessity of periodical annual researches, focusing on *the satisfaction degree of the customers*. The content of these investigations may be transfered upon a user panel, by profits resulted from the usage of the vehicles, fleet size and geographical area of the owners.

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# BENEFITS AND DRAWBACKS OF ONLINE TRADING VERSUS TRADITIONAL TRADING. EDUCATIONAL FACTORS IN ONLINE TRADING

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**Abstract:** *In terms of marketing, online trading is a new distribution channel and trading platforms are products of Investment and Financial Services Companies. Internet shortens the connection between the investor and the products they wish to purchase (shares, futures, CFDs, government securities, bonds, etc.), and in some cases it no longer needs a security broker. Increasing use of the Internet and increasing competitiveness between Investment and Financial Services Companies do the latter, to seek new distribution channels to specific products. The purpose of this paper is to examine to what extent the investor education level affects the decision to move from traditional trading to online trading and the benefits and disadvantages of these types of transactions. To whom should the Investment and Financial Services Companies guide their marketing campaign to attract more investors for online platforms? The work presented is part of a larger project that will be part of author thesis, studying other factors that influence the decision to move from traditional to online trading: cost factor, time factor, psychological and social attributes of investors, yield portfolios and technological capacities of Investment and Financial Services Companies. Starting from the idea that with the increase of experience in stock investments the investors will want to make their own decisions, Investment and Financial Services Companies should provide new products. Compared to competitors, an Investment and Financial Services Company must innovate, and information technology currently offers the tools for innovation facilities. At the same time, the existence and development of the Internet has made the transaction without assistance or with minimal human intervention possible (Voss, 2000). The difference is in the knowledge about stock market, the speed the transaction orders arrive in the stock market, direct access to multiple markets, transaction costs and the level of interaction between the client and his stock broker. To analyze the extent to which the investor education level affects the decision to move from traditional to online trading trading, author started from the literature review, a questionnaire-based survey available on internet and personal experience. The study shows that investors will switch to online trading when they have a high level of knowledge in the stock market, higher education and knowledge of internet.*

**Keywords:** online trading; traditional trading; stock market; educational factor;

**JEL classification: G24**

## Introduction

Many analysts discuss the influence of the Internet development over the consumer behavior of financial services (Gordon, 1998) and the spread of online trading volatility and volume of transactions (Choi, 2000; D'Avolio et al., 2001; Barber and Odean, 2000 ; Oh et al., 2007; Davis et al., 1999). Online transactions are important in the development of financial markets (Barber and Odean, 2008) and it is surprising that there are very few studies about their impact on investors in Romania.

Information Technology (IT) plays an important role in attracting and retaining customers (Wayland and Cole, 1997) and has revolutionized the concept of distribution, redefining the way the companies relates with its customers (Jones and Sasser, 1995; Roth and Jakson, 1995; Prahalad and Krishnan, 1999).

C.J. George, in his work called "Taking Stock of Online Trading", argues that online transactions with IT can bring major benefits in increasing the speed of trading, market information transparency and low operating costs. Talking specifically, the development of Internet and IT made possible the distribution of products and services provided by Investment and Financial Services Companies with minimal or no human intervention (Voss, 2000), and provides a new communication channel with customers (Hoffman et al., 1997).

In Korea, for example, the country where most transactions are done online (Kang, 2003), increased interest in this type of investment is closely related to the low cost of fees and the fierce competition between Investment and Financial Services Companies (Oh et al., 2007). However, Jobman, Salcedo and Depilla (2003) demonstrate that the most important element is the efficiency and speed with which it executes and mentions that when the client decides to trade online, you must consider the capabilities of back- up and good trading systems. There are studies showing the existence of links between the investor's education and attitude toward risk (Donkers et al., 2001). Berhein and Garnett (1996) stated that a campaign to promote savings through education could have a tremendous impact on the financial behavior.


**Advantages and disadvantages of online trading compared to traditional trading**
Following the literature and professional experience, we can highlight the strengths and drawbacks of online versus traditional trading.
Some of the *benefits* of trading online are:
- Costs related fees to online trading are lower than those in traditional trading. Whether we are talking in terms of the investment firm's, which remove the human factor from the equation placing market orders, or investor who pays a lower fee, online trading is winning (Voss, 2000). The amount of commissions on online trading is different from an intermediary to another, but the average is 16% lower than the fees charged in the same company on transactions by broker (http://www.monitorulcj.ro/cms/site/m_cj/news/73174-comisioanele-mici-magnet-pentru-investitori#sthash.2XSvZGbW.dpbs).
- Speed of response, in a stock market with high volatility is best for online trading (Jobman et al., 2003). The explanation comes from the fact that it is difficult for a broker, managing hundreds of accounts, to discuss and place orders coming from several investors in the same time.
- Transparency is promoted through the online trading platform and the users can see the market depth on certain symbols, the number of orders (bid and ask), volume traded in real time and other data relevant to trading. Madhavan (1996) indicates that the greater the transparency in the market, the price volatility is lower.
- Studies show that in some cases (see South Korea), market liquidity increased with the number of investors who trade online. Market liquidity and the existence of a large volume of market instruments is essential in discovering the real price of shares (Balling et al., 2003).
- Through online trading, the broker indiscretion is avoid.
- Brokers have not always acted in the interests of customers, resulting in increased fees for excess transactions (Bakos et al. 2005).

Some of the *disadvantages* of online trading are:

- The profits from the online portfolio administration is lower than when given by a broker (Barber and Odean, 2000; , 2002)
- Lack of information that a stock broker provides: "If you are an online investor, you have low fees, but there is just you, your computer and the tools we provide. You need to stay connected all the time, because nobody calls you..." says Rares Nilas, former manager at BT Securities SA (http://www.monitorulcj.ro/cms/site/m_cj/news/73174-comisioanele-mici-magnet-pentru-investitori#sthash.2XSvZGbW.dpbs).
- Increasing "information noise" due to discussion groups dominated by unskilled investors (Madhavan, 2000)
- Due to the facilities offered by the Internet and the comparison between fees, the investor can make the decision in choosing an Investment and Financial Services Company based on price only, neglecting other variables and creating the illusion of efficiency (Bakos et al. 2005).
- No operations can be done without money. In traditional trading you can buy or sell financial instruments without any money in the account as payments will be necessary within 2 working days.
- Brokers can discover hidden orders, that can change the overall picture of a symbol. For example, a large investor decides to liquidate a portfolio but placing a large order sale might scare some investors. There is the possibility of placing such "hidden order" which does not reveal the whole quantity to trade, but only a part (at least 20% of the total amount). Investors who trade online are unable to see these special orders.

**Research Methodology**

Questionnaire based survey was posted on the internet at: www.isondaje.ro/sondaj/339299588/ and related information were sent by e-mail to 280 contacts and were promoted on one social network. Brokers from different companies of Cluj-Napoca helped to promote the questionnaire. As the author lacked direct connection with most of those questioned, she could not control the number of respondents. Since the survey addressed to a particular category of stock investors, the number of respondents was small.

The method chosen to investigate the investor's decision to switch from traditional trading, assisted by a broker to online trading, was a survey sent non-randomly, based on accessibility and reasoning.

The sample of subjects who answered the questionnaire was 50. It is estimated from data from third parties, the number of people who trade online and were reached by the questionnaire was 2,500. As observed, the response rate was low, around 2%. It should be noted that the results are specific only to the sample of investors investigated.

The answers reflected the view of investors in stock market on the degree of importance of various factors in the decision to trade online, training and experience in the stock market, the confidence of investors in their own methods and information for decision making.

In Romania there are 32 Financial Investment Services Companies (BSE, http://www.bvb.ro/Intermediaries/SSIFuri.aspx) but only 20 offer the possibility to trade online.

**Results and Discussion**

To track how education influences the investors who trade online, people were asked to answer questions related to level of education, knowledge of internet and knowledge of technical and fundamental analysis of financial instruments.

Our data shows that most investors who trade online have at least a university degree, and are more drawn to online trading on the stock market than those with no education.

Distribution of the sample investigated about the level of education, (Table 1) shows that half (50%) of investors are postgraduate, while a close share of 46% is made up of investors who graduated. Thus, 96% of those investigated are at least university graduates, and the remaining 4% of the 50 respondents are high school graduates.

Table 1: Sample of respondents structured by level of education

|  |  | Frequency | Percent | Valid Percent | Cumulative |
|---|---|---|---|---|---|
| Valid | High School | 2 | 4.0 | 4.0 | 4.0 |
|  | Graduates | 23 | 46.0 | 46.0 | 50.0 |
|  | Postgraduates | 25 | 50.0 | 50.0 | 100.0 |
|  | Total | 50 | 100.0 | 100.0 |  |

Investors consider that is important (46% of all respondents) and very important (42%) to have Internet use knowledge of when shift from traditional to online trading is desired (Table 2). Altogether, only 12% of subjects assigned a medium or low importance knowledge to Internet related knowledge use in general. Given that online trading is primarily related to Internet use, it was logical that this idea is confirmed.

Table 2: Structure of the sample according to the importance attributed to personal knowledge related to Internet use in general

|  |  | Frequency | Percent | Valid Percent | Cumulative |
|---|---|---|---|---|---|
| Valid | Low | 2 | 4.0 | 4.0 | 4.0 |
|  | Neutral | 4 | 8.0 | 8.0 | 12.0 |
|  | High | 23 | 46.0 | 46.0 | 58.0 |
|  | Very High | 21 | 42.0 | 42.0 | 100.0 |
|  | Total | 50 | 100.0 | 100.0 |  |

To make informed choices, the customer must be able to read and create their own analyses. More than half of respondents felt that it is very important (22%) and important (32%) to have knowledge of analyzing companies (Table 3). However, most of the respondents, representing about one third of the total investigated (34%) believe that having personal knowledge on technical and fundamental analysis of shares is only of average importance in online trading decision.

Table 3: Structure of the sample according to the importance attributed to personal knowledge related to technical and fundamental analysis of shares

| | | Frequency | Percent | Valid Percent | Cumulative |
|---|---|---|---|---|---|
| Valid | Very Low | 2 | 4.0 | 4.0 | 4.0 |
| | Low | 4 | 8.0 | 8.0 | 12.0 |
| | Neutral | 17 | 34.0 | 34.0 | 46.0 |
| | High | 16 | 32.0 | 32.0 | 78.0 |
| | Very High | 11 | 22.0 | 22.0 | 100.0 |
| | Total | 50 | 100.0 | 100.0 | |

Distribution of respondents according to the importance given to their experience in stock transactions indicates that almost half (48%) of the investors investigated, attached great importance to this criterion when deciding to trade online, and another 36% of respondents assigned very high importants to personal experience in share market transactions. Other respondents, representing 14% of the total, have the opinion that this criterion is only of average importance in online trading decision.

Table 4: Structure of the sample according to the importance attributed to personal experience in share trading

| | | Frequency | Percent | Valid Percent | Cumulative |
|---|---|---|---|---|---|
| Valid | Low | 1 | 2.0 | 2.0 | 2.0 |
| | Neutral | 7 | 14.0 | 14.0 | 16.0 |
| | High | 24 | 48.0 | 48.0 | 64.0 |
| | Very High | 18 | 36.0 | 36.0 | 100.0 |
| | Total | 50 | 100.0 | 100.0 | |

It highlights that, according to the respondents (Table 5), the most important factor when deciding educational online trading lies in personal knowledge related to Internet use in general (88%), followed closely by personal experience in share transactions (84%). A less important educational factor appears to be the personal knowledge about technical and fundamental analysis (54%).

Table 5: Importance of educational factors in online trading

| Educational Factors | Cumulative percentage of respondent who expressed a very high importance and high importance to educational factors |
|---|---|
| Personal knowledge of technical and fundamental analysis of shares | 54% |
| Personal knowledge related to Internet use in general | 88% |
| Personal experience in share transactions | 84% |

**Conclusions**
As shown, investors will trade online when they have a high level of knowledge in the field of stock market and higher Internet knowledge.

Based on survey results, it appears that, according to the respondents, the most important educational   factor when deciding to move to online trading, consists of personal knowledge related to Internet use in general, closely followed by personal experience in stock transactions; a less important educational factor appears to be the personal knowledge on technical and fundamental analysis.

Most investors who trade online have at least a university degree, so the logical conclusion is that if the Investment and Financial Services Companies want to attract more investors on this market place due to low costs, they should guide their marketing campaign to educated people.


**Limitations and future research**

Due to legislation, limited resources and staff, the refusal of investors to cooperate, the small number of investors who trade online, the study experienced some difficulties.

Surprisingly, not even BSE (Bucharest Stock Exchange) employees are willing to give more information about online trading.

Although it was promoted through numerous channels, the number of respondents was very small. The author could not get access to any online investors database, because their identification data are confidential. The natural consequence is that the information in these questionnaires can not be proved.

Another drawback would be the lack of official information related to online trading of securities. If on the other stock markets (see the case of South Korea) there is a clear division of reporting online an traditional transactions.

A future research could show the position of Romanian online investors compared to those from European Union.

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# THE MARKETING MENTALITY WITHIN THE ORGANIZATION - A COMPARATIVE STUDY BETWEEN COMPANIES AND NON-PROFIT ORGANIZATIONS IN ROMANIA

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**Abstract:** *In contemporary Marketing theory and practice, debates regarding the role and place of the homonymous activity within the company are frequent. The development of a marketing mentality, as specialists state, allows the implementation of a marketing vision in all the organization's departments, regardless of the activities performed. The economic theory enunciates all the more the existence of a marketing doctrine urged to ensure the methodological frame of the organization regarding market and consumer orientation. Based upon two selective exploratory market research performed among the major distributors of electro-technical materials and electro-technical solutions integrators, respectively among some public faculties' management the authors want to examine the existence and the decision makers' responsiveness regarding the implementation of a marketing mentality in one's organization. The conclusions concern both business environment and academic non-profit organizations' activity. The connection between the marketing mentality as an essential premise for the development of the entrepreneurial university concept is also emphasized.*

**Keywords:** marketing mentality; empathic thinking; qualitative research; marketing doctrine; entrepreneurial university.

**JEL classification: M 31**

## 1. Introduction

Contemporary Marketing results in a multitude of facets, which gives the characteristic of a multidimensional concept. In this context the Marketing represents: a *modern management concept* for guiding organizations which practice it towards the market and the consumer; suggestive in this regard is the definition attributed to the famous German professor Heribert Meffert, which is also the title of one of his works of reference: "Marketing = market - oriented business management" [Meffert, 2000];

a) *A set of methods and techniques* of research and action on the market, such as to maximize the results of the company which uses them;

b) *A function of the company*, which has its location in a separate department of the organization [Pop, 2008, pp.57-66];

c) *A management science*, which features a conceptual and structural framework, a research methodology and its own language [Florescu, 1987, p. 65].

Consequently, approaching the domain's issues, both theoretical and of practical use, requires a comprehensive approach to all mechanisms which characterize the marketing decision.

## 2. Theoretical Considerations

The theory and practice of marketing are in a perpetual confrontation with the major processes of the contemporary world, like: globalization, hyper competition or the effects of "digital" revolution. Under the conditions imposed by the imperative of sustainable development of the society, the marketers' interest turn to inter- and trans-disciplinary oriented domains. Among them (without claiming an exhaustive list) we note:

- *The customer relationship management* in the intensive development of business opportunities [Kumar, Shah, 2009, pp.119-136; Irit, Barak, 2011,pp. 24-38; Schulze, Schiera, Wiesel, 2012, pp. 17-32; Homburg, Wilcek, Hahn, 2014, pp. 58-77; Gonzales, Claro, Palmatier, 2014, pp. 76-94];
- *Fostering creativity in the research - development - innovation (RDI) of new products in a partnership system* [Tellis, Prabhn, Chandy, 2009, pp. 3-23; Roberts, 2011, pp. 23-25; Troye, Supphellen, 2012, pp.33-46; Coviello, Joseph, 2012, pp. 87-104; Rubera, Kirca, 2012, pp. 130-147];
- The development of the *brand's capitalized value* - as a synthesizer element of the organization's performances [Keller et al., 2008, pp. 42-56; Mizik, Jacobson, 2009, pp. 137-153; Krasmikov, Mishra, Orozco, 2009, pp. 154-166; Strizhakova, Coutler, Price, 2011, pp. 342-35; Torelli et al., 2012, pp. 92-108];
- *The Marketing developed in computer mediated electronic media* [Trusov, Bucklin, Panwels, 2009, pp. 90-102; Friedrich et al., 2009, pp. 54-61; Kozinets et al., 2010, pp. 71-89; Yadav, Pavlou, 2014, pp. 20-40];
- *The extension of specific marketing activity in non-profit areas and at macro and world-economics* [Kotler, Gertner, 2002, pp. 249-261; Humphreys, 2010, pp. 1-19; Gertner, 2011, pp. 91-106];
- *The use of marketing-controlling and the development of early warning systems* in grounding the decision making process in the field [Zerres, Zerres (editors), 2006, pp. 91-108; Wufka, 2007, pp. 91-116; Homburg, Artz, Wieseke, 2012, pp. 56-77].

With the implementation of strategic thinking in marketing, theoreticians and practitioners of the field are facing new challenges. This requires a rethinking of the phenomena and processes occurring in the market in a *holistic view* [Kotler, Dipak, Maesincee, 2002, 50-53]. Consequently, the marketing action must be projected on medium and long term in a systematic approach, in order to involve in the activities' exchange process all the stakeholders involved in the business. This generates, on the one hand, the direct involvement of an increasing number of actors in the exchange process, and on the other, enhaces the relationships between them.

## 3. The Marketing Mentality - key concept for market success of the company

For the marketing practitioner – the marketer – it has become essential to clarify the marketing's position in the company [Verhoef, Leeflang, 2009, pp. 14-37] and thus to prove and strengthen his role in the decision making process, whether we are talking about a corporation or a small or medium sized company. This imperative arises acutely, because as early as the first decade of the XXI century an increasing number of studies [McGoven et al., 2004, pp. 70-80; Malter, Webster, Ganesan, 2005, pp. 35-43; Nath, Mahajan, 2008, pp.65-81] indicate a weakening of the role of the marketing function within companies, especially in the case of corporations, where the position of other heads of departments (accounting, finance, etc.) became much stronger than the one of the marketing director, and marketing and management issues enjoy much less attention in the board. Regaining the *integrating function* position by marketing among all the other enterprise's functions [Weis, 2001, p. 31] cannot be achieved without much clearer demarcation of functions and duties, of responsibilities and tasks assigned to marketers in the company. Such an

approach is required to start with the underlining of *the main features of the marketer*. In our opinion the three most important characteristics would be the following [Schebesch, Pop, 2013, pp. 389-394]:

1⁰ *empathic thinking and action*, capable of directing marketing decisions towards the requirements, tastes and *actual* preferences of the demand's carriers;

2⁰ *rational creativity* in conducting research – development - innovation (RDI) for benefits (goods, materials, services, ideas, rights), which respond to market demand also in terms of socio-economic sustainable development;

3⁰ *partnership spirit* for all carried out marketing activities, both internally - in collaboration with other departments of the company - and especially outside it, in relation to business stakeholders and, firstly, consumers.

The live implementation of such traits of the marketing specialist implies a more direct and responsible collaboration between the industry's theorists and practitioners. In the Romanian economy such a goal situates itself as a first order necessity in order to directly support the effort of economic recovery. Both academics and practitioners must understand the marketing activity's significance as an *investment and not a cost* [Pop, 2008, pp. 57-66]. The result of such a change of position translates into *promoting mid and long term strategic marketing thinking and action* in the company. On the other hand, the domain's decision makers must suffer a mentality change related to the marketing action's significance in the company. As early as the last decades of the twentieth century, the *Romanian school of marketing* initiated and led by Professor C. Florescu [Pop, 2011, pp. 322-330] supported the idea of *disseminating the marketing mentality* in all functional and technical departments of the enterprise [Florescu, 1987, pp .34-35; 54]. The claiming of this development direction was encouraged by the fact that the marketing theory has materialized as an "open, dynamic ..., structural, organizational type" theory [Florescu, 1997, p.29].

The best recent marketing literature resumes this idea and endorses even the existence of a *marketing doctrine,* which starts to be defined in the company [Challagalla, Murtha, Jaworski, 2014, pp. 4-20; Kumar, 2015, pp. 1-9].

Based on the exponential growth of the information resources which a company has available in the "digital" economy, the problem of shaping common principles at company level arises more urgent, regarding the development and maintenance of relations with the market to which all the company's departments relate to. These principles should provide both *decisional flexibility* at functional level for the department, in relation to the specific circumstances of each market, but which is based on *common values and norms*, as a result of experience gained in time by the company. Such a *marketing mentality* does not refer to the department's specific activities, but to a certain *way of thinking and action,* common to all departments in the company, through which - taking advantage of past performances – are prepared and occur all the company's actions (whether they occur in the RDI, organizational, human resources, accounting or controlling department) in order to fully capitalize it for the company's market success. In order to transfer the marketing mentality into action the enterprise needs specific transforming mechanisms of past experiences, regarding its relation with the market, into knowledge and tools usable in practice. If, for example, the financial and accounting department will assume the marketing mentality, when assessing the financial resources required for a future participation of the company at an international fair, it will be regarded as an *investment* and not as a cost. The direct consequence would rebound on the higher time period for the return on investment. Likewise, if the market's preparation for receiving a new product, before launching, would also be considered also an investment, that expense could be recovered over the entire life cycle of the goods in question. Such a marketing mentality should attach to the calculation sheet not only net profit for the new product, but also the qualitative gains for the company's overall activity (increased brand awareness under

which the product is launched, improving the company's image, increasing of customer's attachment to the company, etc.).

## 4. Research Methodology

To test how the *marketing activity in Romania* is perceived there have been conducted two exploratory selective market research studies. The *objectives* of these direct investigations were to capture the *meaning*, *the role and the place* of the marketing activity within the organization and the existence/ absence of a shared vision on it. The main focus of the researchers was on identifying the premises likely to lead to the *creation and development of a marketing mentality* among the managers of the investigated organizations. For the proper progress of the two studies, the necessary steps for designing a specific marketing research were followed [Lefter, 2004, pp. 20-32; Plăiaș (eds.), 2008, pp.76-83; Cătoiu (eds.), 2009, pp. 117-139; Schebesch, 2009, pp. 165-169; Wilson, 2012, pp. 18-47].

The first exploratory research was conducted among managers in the industry and trade of electrical products, which operate in Romania. The second exploratory research was performed among senior management (deans, vice-deans) of some public faculties in our country. The purpose of these two selective market researches studies, conducted by *survey method* using *in-depth face to face interview technique* and having the *conversation guide as a tool*, was to capture the elements set as objectives of the research, and – also – to ensure the conditions for a *comparative analysis* of the results. The research was conducted during March and April 2015.

Both research studies set about validating the following hypotheses:

H1 = Most organizations' senior management give multiple meanings to the marketing concept;

H2 = Most interviewees appreciate the importance of marketing for the organization as very important or important.

H3 = There is no focus of the marketing activity in a specific department of the researched institutions, as most interviewees claim.

H4 = The subordination of the marketing activity is attributed to various decision makers in the organization, without a precise focus on one in particular

H5 = The meaning assigned to the concept of marketing mentality is unclear to most interviewees

H6 = The representatives of the faculties have a clearer understanding of the concept of marketing doctrine than those of companies' management in the electrical field.

The results are reflected synthetic by:

### 4.1. Study 1

Performed among 25 senior managers in the electrical field, the study has brought together the main electric materials distributors and the electric solutions integrators in Romania, with an annual turnover between 10 and 150 Mil. Euro. The geographical division of the investigated companies (eleven from Transylvania, seven from Muntenia, four from Moldavia, two from Banat and one from Dobrogea) has ensured an adequate representativeness at a national profile.

The meaning attributed to the concept of marketing has allowed a wide range of answers. The option "a domain activity" and, respectively "a managerial science" were formulated by all respondents: the majority of the interviewees have included in the answer options as "a function of the organization", respectively "a set of tools and techniques". The first reaction that comes to mind for the respondents when confronted with this concept lead them towards the "spectacular" side of the marketing activity, as given by the publicity,

public relations, image or company's notoriety. The various response choices lead us to the idea of versatility given to the marketing concept's meaning, which allows us to state that *Hypotheses H1 is confirmed.*

Two thirds of the respondents claim that marketing is "very important" and a quarter consider it "important" for the whole activity of the company they manage. The declarative character of this affirmation *confirms hypothesis H2*, although the in depth discussion reveals serious deficiencies regarding respondents' knowledge of the regional market's (south-eastern) coordinates and a low attention granted to the marketing promotion of companies' performances represented in the research on the adjacent markets in Romania.

The location of the marketing activity is placed by two thirds of the interviewees in the commercial or marketing department, but only a half of them consider that it should be subordinated to the general manager, which *confirms hypotheses H3.* The opinion of a third of the respondents is very interesting, who claim that the marketing activity should have a *trans-departmental character.* We do not share – based on the domain's theory and on the international experience [Malter, Webster, Ganesan, 2005, pp. 35-43; Verhoef, Leeflang, 2009, pp. 14-37; Homburg, Wilczek, Hahn, 2014, pp. 58-77] – this opinion, nevertheless it is very important if it were to influence the thinking manner of the decision makers from the field. *A trans-departmental marketing thinking* is the only premise for the development of the *marketing mentality* among the entire company's staff. Based upon these views we appreciate that *hypothesis H4 is not confirmed¸* there are though prerequisites for a correct approach for the hypotheses at the top management level, and the *marketing department's location* as a *leading department* in the company's organization chart Pop (coord.), 2011, p. 423] would correspond to this aspiration.

Regarding the meaning given by the interviewees to the concept of "marketing mentality", most answers defining it as "attitude towards the market", "positioning of the company on the marketing", "strategic thinking and planning", "a philosophy of the company regarding the market", "the complexity of the company's relation with the marketing", indicate a correct theoretical understanding of the concept. There have also been answers which assimilate the marketing mentality with its promotional communication side. Thus, we appreciate that *hypothesis H5 is confirmed.* Simultaneously, the respondents are rejecting though, entirely, the existence of a marketing doctrine in their field of work.

## 4.2. Study 2

The second research study, carried out among faculty management in the technical and economic field, veterinary sciences and communication, had as respondent deans and vice-deans in universities rated with high confidence degree. In these faculties there is at most one marketing discipline taught, and the respondent were mentioned the fact that the research does not focus on marketing as a study domain. Performed as a face to face interview, the research allowed an extensive dialogue with the management regarding the way they perceive the capitalization of the *marketing vision i*n the process of leading a non-profit organization. Mindful of satisfying their own clients (the students), the interviewees have first emphasized the role given to the concept of marketing as a "managerial function", but also options such as "a study domain", "a philosophy", "an art" or "a certain behavior". They have connected one or more components of the marketing mix or concepts such as "strategy" or "SWOT analysis" to the discussed term. This second research study thus *confirms hypothesis H1.*

With reference to the recurrence of marketing activities performed by the faculties, we can state that the percentage between the proactive marketing activities and the ones which are rather a reaction to the market's evolution is rather equal. The main marketing activity in which the faculties engage is the attraction of potential candidates. Other

important domains mentioned by the respondents were the development of the relationship with the business environment, in the sense of sponsorship attraction, but also in offering the students' employment possibilities, the development of the relationship with the alumni, and also the developing of the research field as an activity domain for the faculty, as well for the students, but mainly for the staff. The majority of the interviewees considered marketing as "important" for the organization (faculty) they are leading, and only a small part as "very important". Although the answers were declarative, they have been accompanied by examples of the specific marketing activities performed among pupils, students and business environment (the main beneficiary of the university's service), which demonstrates a continuity of the preoccupations in this domain. Based on this element we also consider *hypothesis H2 confirmed.*

Concerning the potential *location* of the *marketing department* in the university, all the respondents considered there should exist such an independent department, subordinated to the rectory. This claim is motivated by the fact that the management confirms the existence of such a marketing or public relations office in the university, and also the opinion that an organization (university) can be strong on basis of its components (faculties), and in order to do so there is the need of a supported effort of promotion. The respondents consider that this activity should be performed by specialists in the marketing field, but never externalized. The main reason would be that the academic environment is rather regarded as difficult to understand at a functioning level by an outsider. These argument *do not confirm hypothesis H3.* The multitude of viewpoints regarding the delimitation of the marketing activities between the faculty and a specialized department in the university proves that each decision makers' levels of engagement have not yet been entirely settled in this regard. In addition, there have been no mentions regarding the intern marketing [Kotler, Keller, 2012, p. 387], designed to develop the relation between the organization's management and staff (professors and administrative staff). The marketing activity is assigned by the respondents to various decision makers from the organization also because it is *not included in their norm* – only in a small amount (in the professional counseling and school environment relations department). Thus, we consider *hypothesis H4 confirmed.*

In regards to a potential definition of the *marketing mentality,* this could be „a behavior carried out to ensure others' needs", „the image which you want to present as an organization", „a development strategy for the faculty". Thus the activity performed in order to satisfy the clients' needs and the organizations' positioning on the market is indicated. During the semi-structured discussions, when questioned whether there are certain principles or values which guide their marketing activity, the majority of the respondents have answered affirmatively. However, they mentioned that these principles and values are not written, nor regarded more than the organization's mission and vision, being rather personal. From the mentioned ones we note: ethics, availability for students, dynamism, modernity or compliance with the quality standards. We can thus conclude that, in the development and implementation of the marketing mentality in an organization, the management's personal impact if very important. In regards to the evolution of the marketing mentality in the Romanian academic environment, all the respondents have acknowledged its importance, mainly due to the raising competition for the attraction of candidates. In spite of this, the majority of the respondents consider that the marketing activity should not exceed, nor in volume or importance, the general mission of a faculty – the one of generating and transmitting knowledge – otherwise risking to become a false image. Likewise, the conclusion that university in Romania must learn to sell an integrated service package to their potential clients emerged. Thus, they should include beside the educational experience, other aspects regarding the cost of life, the possibilities of spending free time or even employment. Another element emphasized by the management was the internalization tendency, as a response to the lowering number of school population in Romania. We can thus state that although there is a high knowledge level of

marketing among the managers of the interviewed faculties, this is *not integrated* in a marketing mentality. Furthermore, in the absence of funds to support the marketing activity, the efforts in this area do not always reflect a strategic planning and orientation in accordance to the faculty's long term vision. All these elements lead us to the claim that *hypothesis H5 is not confirmed.* Although we noticed a relatively clear acknowledgement of the concept of marketing mentality, its practical implementation method in the day to day organization's activity from the higher education environment is not completely made operational. On the whole, by comparing the responses from *study 1* with the ones from *study 2*, the *hypothesis H6 is confirmed,* which claims that the representatives of the non-profit organizations from the academic environment have a better understanding of the concept of *marketing doctrine.* Both groups of respondents do not engage though in assuming and implementing in their management activity this latter concept.

## 5. Conclusions

While the research has revealed a notable level of knowledge for the marketing concept, we cannot yet (with few exceptions) talk about a *marketing mentality,* integrated in the daily activity of all the functioning departments of the researched organizations. The development of an *empathic manner* of treating the client constitutes the essential premise for the implementation of the marketing mentality in the organization.

In the academic environment the implementation of a marketing mentality would represent the basic premise for the advancement of the *entrepreneurial university* [Păunescu, 2007, pp. 54-62; Stanciu, 2013, pp. 21-67; Fluture (Mahalache), 2014, pp. 61-103]. Such an aspiration would change the philosophy of the public university system's financing process. Certainly, this course of action requires a clear knowledge of the concept, dimensions and functioning of the entrepreneurial university. At the same time, it would be necessary that the public educational policies raise awareness among the business environment – the main beneficiary of the universities' product – for their direct involvement in supporting the educational process. This action claims for a clearer and more incentive legal frame for the engagement of the business environment in education, through fiscal facilities, and not only. The finality of this development would contribute to the ending of the low financing of the Romanian higher education. [Miroiu, Țeca, 2013, pp. 18-30].

The various disagreements reported in the literature regarding the decline and dispersion of marketing's competencies at the organizational level [Malter, Webster, Ganesan, 2005, pp. 35-43], and also the signals towards academic marketing's loss of ground [Reibstein, Day, Wind, 2009, pp.1-3] should be addressed by the academic marketing community through a coherent approach to strengthen new theoretical paradigms, advocated by the newest knowledge arguments. At the same time with the development of a better collaboration between academia and practitioners, the consolidation of the marketer's position and stability in the organization [Challagalla, Murtha, Jawaroski, 2014, pp.4-20] as a principle based concept, in order to guide the marketing decision making in the company.

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# A CLASSIC FRAMEWORK OF ONLINE MARKETING TOOLS

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**Abstract:** *The present paper starts from the assumption that there is a tendency, especially among practitioners, to largely overlap concepts of online marketing and online advertising, thus considering that most online marketing tools aim at the aspect of value communication and promotion. This observation prompted us to try to delineate the categories of online marketing tools according to the traditional areas of marketing activity. Therefore, the paper aims to present the online marketing tools based on a different vision than the literature identified so far. Thus, it was intended to group the online marketing tools on the key components of the marketing activity and the presentation, for each, of certain software tools that support that. The way in which the analysis of online marketing tools was addressed is new and could be useful for defining a structured vision on the field. The paper aims both to analyze concepts specific to online marketing, and especially to carry out a delineation of categories of online marketing tools based on the key areas of marketing such as value creation, value delivery, value communication / promotion, customer relationship management and marketing research. To achieve the goal set for this paper we considered useful to address the issue from a dual perspective: from the perspective of the academic literature - books, studies found in scientific databases - which deal with the topic of online marketing and online marketing tools; and from the perspective of practitioners - studies posted on the Internet by the specialists in the field, respectively the analysis of websites of companies providing online marketing services. The intention was to combine the vision specific to theorists to that of practitioners in tackling the field specific to online marketing and online marketing tools. In order to synthesize the information presented in this paper, we also conducted a visual representation of the categories of online marketing tools.*

## 1. Premises. Essential Concepts

There are some clear premises considered essential to substantiate the basis of this work. First, it is clear that the Internet has a major impact on all areas related to marketing activity (Schibrowsky et al., 2007: 730). The concept of online marketing is a highly fashionable concept at the moment. It is, however, a concept which is defined in different ways in the literature - relatively similar concepts on the field are not yet clearly defined and delimited (including Internet marketing, digital marketing, e-marketing, web marketing, etc.). Online marketing is also a new concept emerged in the debate in the academic literature, as evidenced by the fact that 68.5% of the studies dealing with topics ranging from online marketing have been published in the last 8 years (Pomirleanu et al., 2013), and the specific topic of online marketing tools and their effectiveness is less debated in the academic literature (Teo, 2005: 204). Another premise from which we start in this work is the fact that the online marketing concept is not intended to alter in any way the intrinsic essence of the classical concept of marketing.

In one of the definitions released by the prestigious American Marketing Association (AMA, 2008) marketing is presented as a set of processes for creating, communicating and delivering value to customers and for managing customer relationships in ways that benefit both the organization and the groups interested in its functioning. Therefore, we believe that online marketing has the role to enrich the classic marketing concept by identifying and implementing new ways for organizations to create, deliver and communicate value to customers and manage, in beneficial ways, relationships with them and other business partners.

The idea of this paper starts from the observation that often those who are not familiar with the essence of the marketing concept tend to overlap this concept on only one of its dimensions – the communication of value, in particular the promotion. The concept of online marketing also seems to be subject to this incomplete interpretation, often the concept of online marketing being considered synonymous with online promotion. This is probably because the part targeting value communication / promotion is more easily visible. Indeed most of the and the most sophisticated online marketing tools revolve around the dimension specific to value communication, however, this paper aims to describe the overview of the concept of online marketing and tries to define several categories of online marketing tools specific to the classical vision of the concept.

To create the prerequisites for a better understanding of the concepts, we begin by analyzing them in detail. Therefore, the first question is: *What does online mean?* According to Gay, Charlesworth and Esen (2007: 528), online is "the term for when a computer is connected to the Internet. Commonly used generically to describe any internet related function, i.e. online marketing". Therefore, the online term makes us think of the Internet. Being connected to the Internet means being online and not being connected to the Internet means to be offline. Hence the synonymy of online marketing and Internet marketing concepts. The fact that an Internet connection requires the use of electronic devices has led to the concept of electronic marketing or e-marketing, yet, according to El-Gohary (2010: p. 216) it is a broader concept than that of Internet marketing, including this one. And so a multitude of other concepts came out that have the same common core (web marketing, digital marketing, etc.).

Another way in which we tried capturing how the use of concepts *online marketing, Internet marketing and digital marketing* evolved over time has been made by using the online application Google Trends. The results are shown in the image below:
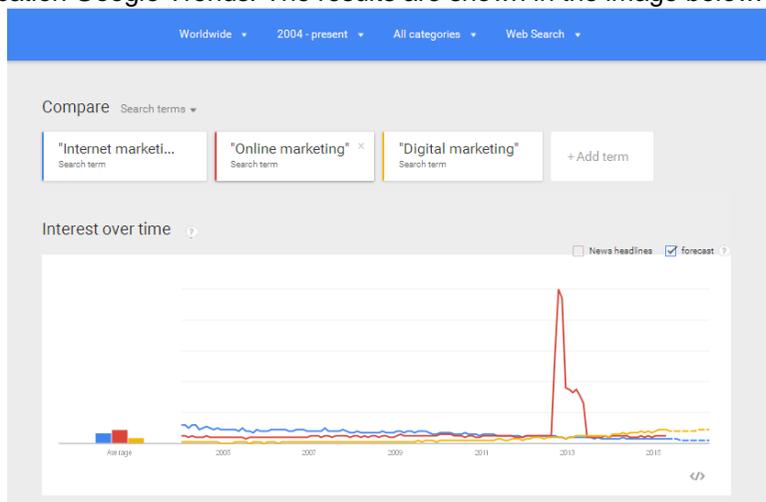


**Figure 1:** The evolution of the use of the terms Internet marketing, Online Marketing, Digital Marketing, worldwide, in the period 2004-2015
Source: own representation using Google Trends

The situation remains the same in terms of trends when performing the same search for locations such as the US, UK or Japan.

On the other hand, performing a search in several scientific databases, for the three aforementioned terms, the search results are as follows (Table 1):

**Table 1:** Situation showing the number of items found in scientific databases designed according to the concept sought (April 2015)

| Name of scientific database | Term sought | Number of items found |
|---|---|---|
| ScienceDirect | Online marketing | 888 |
| | **Internet marketing** | **1322** |
| | Digital marketing | 337 |
| JSTOR (Journals) | Online marketing | 356 |
| | **Internet marketing** | **605** |
| | Digital marketing | 105 |
| ProQuest (Conference Papers & Proceedings; Dissertations & Theses) | Online marketing | 393 |
| | **Internet marketing** | **599** |
| | Digital marketing | 86 |
| Emerald | Online marketing | 473 |
| | **Internet marketing** | **667** |
| | Digital marketing | 156 |
| Scopus | Online marketing | 556 |
| | **Internet marketing** | **3470** |
| | Digital marketing | 168 |

Source: own research

It can be noted that whatever the scientific database searched, the concept that enjoys the greatest popularity among theorists, of the three, is "Internet Marketing", the second being "online marketing". Correlating these data with the data mentioned above, we can say that, if among the practitioners the concept of "online marketing" is the most popular of the three, the most popular concept among the theorists is "Internet Marketing".

## 2. Categories of online marketing tools based on key marketing areas

Correlating, on one hand, the issues outlined above and, on the other hand, a classical definition of marketing offered by the American Marketing Association, we propose to define categories of online marketing tools based on the idea that they are all online tools designed to contribute to the achievement of marketing objectives aiming to create, deliver, and communicate/promote value to customers, and also to manage relationships with them.

### 2.1. Contributions of online tools to value creation in marketing

From a strategic perspective, the main focus of the marketing activity is to create superior value for customers in a more effective way than the competitors. From an operational perspective, this goal translates into developing components of the marketing mix. The literature provides numerous ways in which the product is viewed from the perspective of specific marketing thinking. One of the most interesting is that offered by Philip Kotler and Gary Armstrong (2012: 225-226) that describe the product having in view 3 levels, as follows:

- *Core customer value* - "What does the client really buy?"
- *Actual product* - elements that directly affect the basic advantage, being directly associated with it (quality, attributes / features, brand, packaging, design etc.) - cannot be separated from the basic product
- *Augmented product* - additional benefits added to the core value and the actual product, but which can be separated by them (delivery terms, guarantee, installation and after-sales service).

It should be noted that regarding *value* in terms of the thinking presented above, it is more than the basic advantage. Therefore, depending on the nature of the product / service, we believe that online tools can help create value in any of the 3 levels. For example, a video file posted on the company's website, a video showing the installation of a device, is part of the value offered to the customer, in terms of the levels presented above being part of the augmented product.

The Internet and new information technologies associated to it came to help marketers in their desire to turn consumers into active partners in the process of value creation (Fuciu, Luncean and Dumitrescu, 2011: 129). Between the online marketing tools we also find categories of instruments making contributions in creating value in marketing, among which we may include *certain functional aspects of websites* as well as *content marketing* specific activities. Due to the complexity of Web pages and multitude of functions they can perform, at this point they can no longer be treated as a whole in terms of marketing activity. According to Gabriel Nechita (2013) content marketing *is the creation of valuable content and its dissemination (distribution) for marketing purposes*. The same author identifies the following possible objectives content marketing might target: educating customers/prospects regarding the product or service provided, product positioning, dissemination of information relevant to the field, entertainment, guides / tutorials, consulting, and as examples of contents the author identifies: whitepapers, video files, articles, webinars, presentations, infographics, eBooks, blog posts, etc. A more complex definition of this concept is provided by Joe Pulizzi (2014: 5-6), whereby content marketing is a marketing and business process that aims at creating and distributing valuable and compelling content to attract, retain and engage a well known and defined market segment, in order to generate profitable customer actions. Applications like Infogr.am, Scoop.it or those used to organize webinars can be useful in content marketing.

## 2.2. Delivering value online

The scale recorded by the use of the Internet and its effect on the business field has its mark on the way in which the marketing strategy addresses the delivery of value by finding new distribution channels. The handiest examples in this view are the numerous *online stores*. In addition, the concept of *affiliate marketing* has become increasingly popular among professionals. Affiliate marketing is an arrangement where a website redirects clients to another website charging a fee or a percentage of any subsequent sales (Gay, Charlesworth and Esen, 2007, p. 519). An important advantage that the system specific to affiliate marketing gives is that the affiliates are paid the commission only when the product/service has been purchased by the customer (Chaffey et al., 2006).

## 2.3. Communicating and promoting value online

Communicating and promoting value is the most visible component of the marketing activity. According to the observations made, in this area of marketing activity there are the most and the most discussed online marketing tools.

*Social media marketing*. One of the biggest changes aimed at human interaction was generated by the dynamics, in terms of interest and usability, recorded by online social networks - they succeeded to significantly change the nature of human activities, the context in which they are carried out, respectively the interaction between people (Tiago

and Verissimo, 2013). Constantinides (2014, p. 40) suggests two possible marketing strategies specific to social media: a passive approach in which social networks are seen as a means of analyzing customer reactions, namely of marketing environment analysis, and a second active approach, where social media is used as a direct marketing and public relations channel, as a tool for customizing the products offered and, not in the least, as a platform facilitating the cooperation with clients to create value and generate new ideas for the development and improvement of products provided. From this approach we can draw the conclusion that social media, as a marketing tool, can be used both for the communication and promotion of value, as well as the creation of value, respectively in the marketing research.

*Email marketing* - is one of the most popular online marketing techniques - a study carried out by the DMA in 2011 showed that 79% of direct marketing campaigns use electronic mail (e-mail) (Kotler and Armstrong, 2012, p. 517). However, due to the large number of unsolicited emails (spam), email marketing lies on the border between providing value to customers and being annoying, which is why the concept of permission-based email marketing appeared (Kotler and Armstrong, 2012, p. 517). Specialists in the field believe that an efficient and coherent email marketing program is that which is able to help create relationships between the organization and the clients or potential clients (Chaffey and Smith, 2013, p. 454; Ellis-Chadwick and Doherty, 2012, p. 843). MailChimp, Aweber, Exact Target, Campaign Monitor offer useful applications for developing efficient email marketing campaigns.

*Search engine marketing (SEM).* Search engine marketing is defined as the organization's efforts materialized in two main directions: search engine optimization (SEO) and pay per click advertising (PPC) (Nabout et al., 2012, p. 68), efforts intended to improve the site classification in the organic list (using SEO), or by purchasing paid listings (using PPC) - or a combination of both. The importance the identification of the best keywords and their use in the search engine marketing activity is highlighted by a research of Yahoo and OMD (Optimum Media Direction) in the United States (Lerma, 2006 cited by Fuciu, Luncean and Dumitrescu, 2011, p. 131). Targeting the consumer behavior, this research showed that the most important influence of the Internet is manifested in activities like *searching for information* and *identification of alternatives*. Useful applications for this field could be: Google Keyword Planner, Keyword Multiplier Tool, Wordstream Free Keyword Tool, Google AdWords, SEM Rush, WordStream and many more.

Viral marketing. The new context created with the advent of the Internet and associated information technologies have created an environment conducive to the emergence of a specific form of marketing communication, known as viral marketing (Ho and Dempsey, 2010, p. 1000). Viral marketing is defined as a marketing strategy through which customers are motivated to deliver a marketing message to friends and colleagues (Gay, Charlesworth and Esen, 2009, p. 527). Regarding this area of marketing, it is interesting to note that although viral marketing has taken a large spread lately, the critical factors that determine the effectiveness of viral marketing campaigns remain largely unknown for both academics and practitioners (Ho and Dempsey, 2010, p. 1000).

Other online marketing tools included in this category are those regarding *online PR*. Useful tools for these activities are those aiming to manage and monitor online press releases.

## 2.4. Online marketing tools for customer relationship management
In this category of online marketing tools we try to identify those tools which, used in the online environment, can contribute to creating, maintaining and developing beneficial

relationships between the organization and customers/prospects. Any organization that recognizes the superiority of the business philosophy that places the customer at the center of its activities is aware that it is not sufficient to get punctual successes, but understands the importance of creating, maintaining and developing long-term customer relationships. In this way it is created the framework in which the customers have the potential to become active partners in achieving the primary objective of marketing, to create value for customers. According to some experts, customer relationship management has three main components underlying its essence (Buttle, 2004: 3-9): *the strategic component* - the "top-down" perspective of the MRC, aiming at the implementation of customer-oriented business philosophy; *the operational component* - allows the operationalization in terms of interaction with customers; *the analytical component* – the "bottom-up" perspective of the MRC, which focuses on achieving depth analysis of customer data. Whether we refer the analytical or operational component of the concept, the online environment provided the context for the design and use of certain tools meant to improve the operationalization of CRM specific processes. Here we included tools aimed at: providing online assistance to customers (ex. TeamSupport, eAssistance Pro live chat tool, Live2Support), online CRM application type (Zoho CRM), web pages customized for clients and user accounts, etc.

### 2.5. Online marketing research
Online Marketing research has significantly grown in recent years, the Internet having a remarkable potential as a tool in marketing research (Proctor and Jamieson, 2012, p. 25). Starting from the classical definitions of marketing research, we can say that online marketing research involves the use of Internet and online information technology, both as a medium for conducting research and as a toolkit used in every stage of the research process. Alvin Burns and Ronald Bush (2010: 77) define online research as being the process in which are used the computer networks, including the Internet, to assist in any phase of the marketing research process, including here also problem definition, research design, data collection, data analysis and reporting.

Another interesting definition which has the merit of indicating research methods influenced by online tools is that provided by Philip Kotler and Gary Armstrong (2012: 112): online marketing research is to collect primary data online through Internet surveys, focus groups conducted online, Web-based experiments, or monitoring the online behavior of consumers. Therefore, an important benefit of the Internet and information technology in the context of marketing activity of organizations is the one targeting the marketing research activity. Whether we refer to exploratory, descriptive or causal, each of these types of research benefits from the advantages of online tools that allow both the possibility of conducting research in the virtual environment, as well as new and spectacular opportunities of data collection and analysis. In this category we included tools concerning: online surveys (Google Forms, clicktools, SurveyMonkey), online focus groups/interviews (Google Hangout), website activity analysis (Google Analytics, KISSmetrics, Heatmaps - www.crazyegg.com, www.clicktale.com, Alexa.com), content analysis conducted in the online environment (Google Alerts, Google Trends, permanent monitoring of talks on the social networks – Radian6), *competitor's website monitoring (Compete.com*, Alexa.com), etc.


### 3. CONCLUSIONS
Undoubtedly, the Internet and its associated information technology have the merit to substantially improve the activity of marketing specialists by offering a variety of new tools that allow them to achieve their objectives in a more creative and efficient manner. This paper aims to present the online marketing tools based on a different vision than the literature identified so far. Thus, it was intended to group the online marketing tools on the

key components of the marketing activity and the presentation, for each, of certain software tools that support that. In carrying out the work, it was aimed to combine the vision of the theorists with that of practitioners in treating the field specific to online marketing and online marketing tools. It is interesting to note that one of the results of research conducted shows that, if among the theorists the "Internet marketing" concept is more popular, more practitioners use the concept of "online marketing". As we assumed, the online marketing tools theme is a much more debated topic among practitioners than in the academic world, the number of studies written by practitioners on "online marketing tools" is much higher than the number of studies written on this subject found in the international scientific databases.

The way in which the analysis of online marketing tools was addressed is new and could be useful for defining a structured vision on the field. The research carried out has resulted in achieving a classification of online marketing tools according to key areas of marketing activity. Undoubtedly, this classification can be developed and improved, yet we consider it is a starting point to conduct further research, able to deal with each of these categories of tools in a more complete manner. To synthesize the information presented in this paper, we also conducted a visual representation of the categories of online marketing tools in Figure 2.



**Figure 2:** A classic framework of online marketing tools
Source: own representation

## 4. Acknowledgements

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# UNDERSTANDING STUDENTS' NEEDS FOR A MORE EFFECTIVE ONLINE MARKETING IN THE HIGHER EDUCATION SYSTEM

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**Abstract:** *Considering that the results of previously conducted research revealed that higher education institutions (HEIs) of Romania consider their own websites as rather a communication tool with current students than a marketing tool by which to communicate and attract potential students, the aim of the research presented in this paper is to analyze and verify whether the approach of higher education institutions is consistent with the expectations of potential students. Moreover, it is trying to evaluate whether they expect that the information from the official websites of these institutions address them. The research also seeks to capture which were the different search methods and the importance of online information sources for admission to university/faculty, which are the devices used in the search, what information the students consider that would be needed to make the right choice on university, faculty and specialization, the importance given to activities ranging from email marketing and search engine marketing etc. Finally, based on primary data resulted from research conducted and the analysis of secondary data resulted from other research, we identify the main pillars that the online marketing strategy of a higher education institution should be built on according to the needs of potential students: the official Internet pages designed so as to meet the needs of the prospective students (and even parents thereof), activities specific to email marketing and Pay Per Click campaigns meant to attract the prospective students to the pages that have a potential interest to them. The results of the study confirm the results of previous research according to which higher education institutions should attach great importance to the way they think their online presence.*

**Keywords:** online marketing; higher education marketing; search engine marketing; email marketing; content marketing; social media marketing.

**JEL classification: M30;** M31.

## 1. Introduction

The importance of online presence of any organization is no longer debated, being universally accepted and recognized. In addition, it is highly topical the developing of strategies by which the online presence of the organizations to be readily accessible and especially visible for those interested in the products or services offered by it. According to Kritzinger and Weideman (2013), the search engines are the key to achieving the objective of being found by the right people at the right time. The results of previous research (Popa, Ţarcă and Tarcza, 2014) which analyzed the aspects of the online presence of higher education institutions (HEIs) of Romania have revealed that these institutions tend to be largely a communication tool with the current students and to a very small extent a tool to attract potential students. Based on this conclusion, the study presented in this paper aims to analyze and verify whether the approach of higher education institutions is consistent with the expectations of potential students.

## 2. Literature Review

The online presence of a large number of companies (http://www.higher-education-marketing.com, Circa Interactive - http://circainteractiveseo.com, Eduvantis Digital - http://digital.eduvantis.com/about/ etc.) offering services regarding online marketing in general and AdWords campaigns for higher education institutions in particular demonstrates the interest in this kind of services. Also, according to the information posted on the websites of these companies, worldwide, higher education institutions have a growing interest to resort to these services in order to attract potential students. A considerable number of organizations (including Google, Top Universities - http://www.topuniversities.com, Ruffalo Noel Levitz - www.noellevitz.com) periodically conduct a series of research aimed at the online search behaviour for a variety of industries, including education.

According to a study conducted by Google and Compete in 2012 in the USA (Howard, 2013), 9 out of 10 students used the Internet to analyze higher education institutions prior to admission, and 1 in 10 students used exclusively online sources to get information on universities/colleges; half of the prospective students use mobile devices to request information about higher education institutions. Another global study of Top Universities, having as theme the analysis of how potential students use digital resources to search for information on higher education institutions shows that (Top Universities, 2014): approximately 64% of the respondents consider the online and offline resources equally important in the search for information on the purpose of admission to the university; 30% considered more important the online resources and only 6% considered more important the offline resources; the device used the most in the search for information on universities and admission was the laptop (47%), followed by smartphone (22%), desktop (17%) and tablet (14%). According to the same study (Top Universities, 2014), although the contact forms on websites of universities / colleges and social media are the most used ways to contact the university / college, the study shows that, in fact, these are not the contact ways preferred by the respondents, the modality preferred by them being the email. Extremely useful and interesting information for HEIs is offered by Noel-Levitz, OmniUpdate, CollegeWeekLive and NRCCUA and published by Noel-Levitz (2014): parents have an important influence in the choice of the future students of the university / college; both students and their parents indicated the official websites of higher education institutions as the most influential resource in the choice, followed by the information received by email; both the prospective students and their parents consider the websites of higher education institutions more useful to the detriment of Facebook pages; the study confirms an upward trend in the use of mobile phones to search for information about higher education institutions for admission; about 67% of the potential students and 59% of the parents said that the website of the higher education institution they are visiting affects how they perceive the institution; the most popular information for the prospective students on the websites of universities is that relating to academic programs offered by the institution, the cost and details of the scholarships; the communication via electronic mail (activities regarding the topic of email marketing) are popular both for the prospective students and their parents; regarding paid search campaigns or paid social media campaigns, the results show that nearly one in three students have accessed a promoted message (of the messages accessed so, about 40% came from a search using the Google search engine and about 30% from the ads posted on the Facebook page).

## 3. The objectives of the research

To achieve the goal of this research, we have established the following objectives necessary to clarify the issues considered:

- to assess the extent to which the students have turned to the online environment

to get information for admission to college;

- ■ to identify the main sources of information used in the online environment that contributed to the decision on admission;
- ■ to analyze the extent to which the quality of information found raised to the expectations and how this information contributed to the choice of the college;
- ■ to analyze the way in which information sources were used.

## 4. The Research Methodology

To achieve the objectives of the research, based on the results of previous research and the analysis of secondary data resulted from this research, we aimed to design and conduct a research of descriptive transversal type meant to analyze the image, at a certain time, of the phenomenon studied (Popa, 2013: 118). To implement this research, the survey was chosen as the research method. The research focused on the students of a faculty of economic sciences and took place during March-April 2015. The sampling method was the stratified sampling, it was applied to a total of 120 questionnaires of which 89 have been validated. To conduct the survey a questionnaire with 25 questions and a total of 12 statements evaluated on Likert scale with five levels was designed and tested. 7 of the questions are open questions, the rest being closed or mixed questions. In developing the questionnaire, the technique of free association as a variant of projective research methods was considered. This was capitalized in the request to students to associate the major with a color and an object, the aim being to obtain information from the respondents regarding their beliefs, their thoughts and feelings in a way that seeks to dissimulate the investigated element (Balaciu et al., 2014).

## 5. Results

For start, the scores on a Likert scale with five levels for a set of statements are presented (Table 1). It is noted that the students consider that the Internet has played an important role in making the admission decision, the highest score of choice of the university, college and major being obtained by the choice of college. Yet, they do not consider that the information found on the Internet has greatly influenced their choice. The highest score (3.88) was obtained by the statement: *For admission to college I got informed by visiting the websites of the college*. A high score (3.76) also had the information that highlights *the importance of searching for information using the Google search engine*. These results demonstrate that higher education institutions should pay great importance to the way in which they think their online presence, especially to the information posted on the official website. A low score was obtained by the use of the Yahoo search engine in the search for information. Perhaps surprisingly, yet consistent with other research, social media (Facebook pages of higher education institutions) achieved a low score as a source of important information for deciding on admission. However, the respondents consider that visiting the Facebook pages of those institutions would have been useful.

**Table 1**

| Afirmaţii | Scoruri |
|---|---|
| 1. In choosing the university I applied for, using the Internet to inform me had a very important role. | **3,20** |
| 2. In choosing the college/faculty I applied for, using the Internet to inform me had a very important role. | **3.40** |

| | |
|---|---|
| 3. In choosing the major I applied for, using the Internet to inform me had a very important role. | **3.06** |
| 4. The information I have found on the Internet regarding the colleges and majors greatly influenced me in my choice. | **2.64** |
| 5. All the information I needed to inform myself for admission to college was available online. | **3.73** |
| 6. I believe that visiting the Facebook pages of the college and / or departments within the faculty would have been useful in making the best decision for admission to college. | **3,24** |
| 7. For admission to college I was informed by visiting the websites of the colleges. | **3,88** |
| 8. For admission to college I was informed by visiting the Facebook pages of the colleges.. | **2,39** |
| 9. For admission to college I was informed by searching for information using the Google search engine. | **3,76** |
| 10. For admission to college I was informed by searching for information using the Yahoo search engine. | **1,48** |
| 11. For admission to college I highly trusted the information found on the Internet. | **3,37** |
| 12. For admission to college I had more confidence in information found on the Internet than in other sources like booklets, opinions of friends or teachers etc. | **2,67** |

Source: own research

Regarding the devices used to get informed on the admission, the results show that the main devices used are the laptops and smartphones (Figure 1). This result demonstrates the importance given to adapt the web pages of higher education institutions for viewing on smartphones. The results confirm the results of previous research achieved at international level, the results presented in the literature review section of this paper.
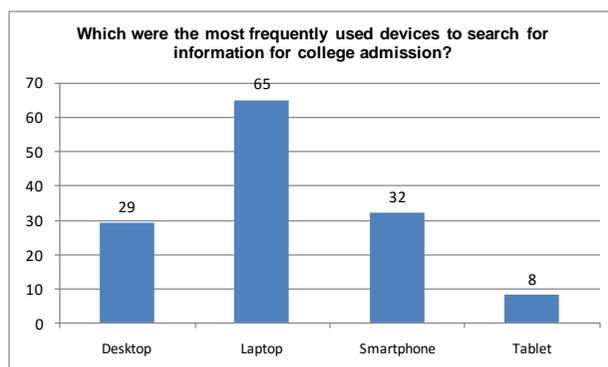


**Figure 1:** Which were the most frequently used devices to search for information for college/faculty admission?
Source: own representation

Regarding the ranking of sources of information used for admission, this time, too, the results show that the websites of the higher education institutions are the main source of

information (with a score of 7.77 on a scale from 1 to 10), followed by visits to the college or booklets or leaflets received from institutions of higher education (Figure 2). The information received from the family is on the fourth position and that obtained from friends and colleagues on the fifth position. The official social media pages obtained in this case a relatively low score. Also, a low score was obtained by the blogs and discussion groups as sources of information.
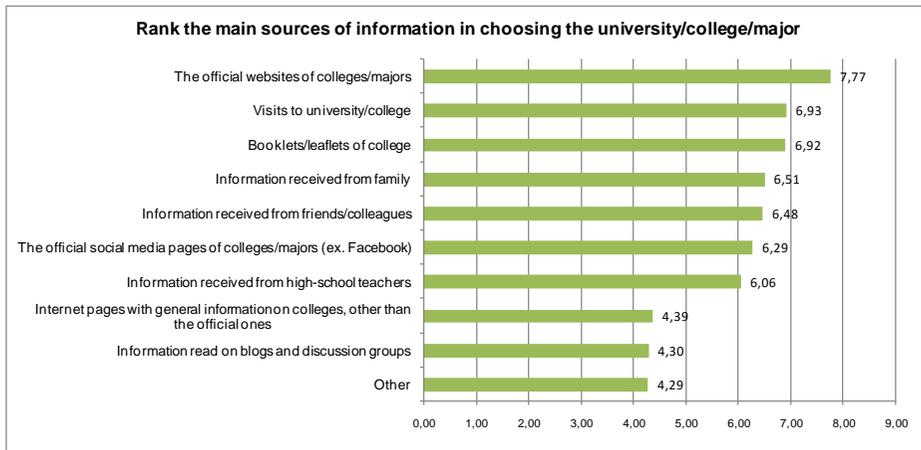


**Figure 2:** Rank the main sources of information in choosing the university/ college/major
Source: own representation

Another aspect analyzed is the identification of the information that the prospective students considered necessary for the college and major choice. The results reflected in Figure 3 show that the most frequently sought information is that related to the curriculum, followed by that related to school tuition and the possibility of getting a scholarship.
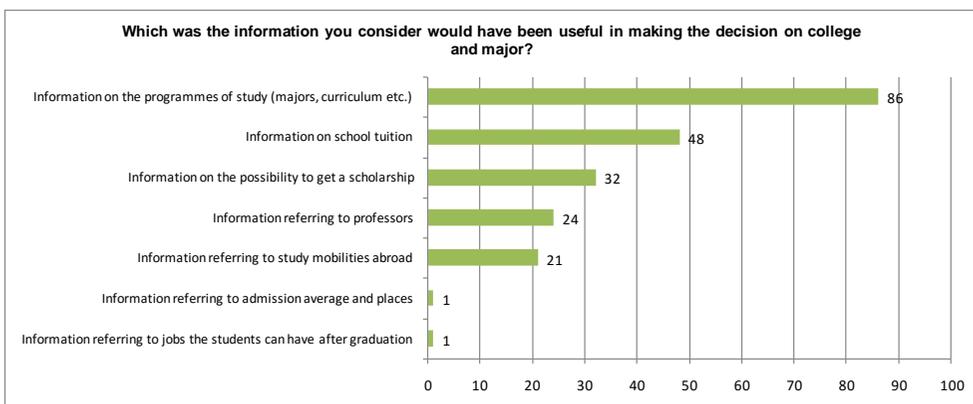


**Figure 3:** Which was the information you consider would have been useful in making the decision on college and major?
Source: own representation

According to the research, 46% of the students say they have started to look for information on admission just one month before admission, while 34% said they had sought information 6 months before admission (Figure 4). However, an estimated number of 17% sought information about one or more than one year before admission. This can be useful for identifying the most suitable period to conduct the promotion campaigns.
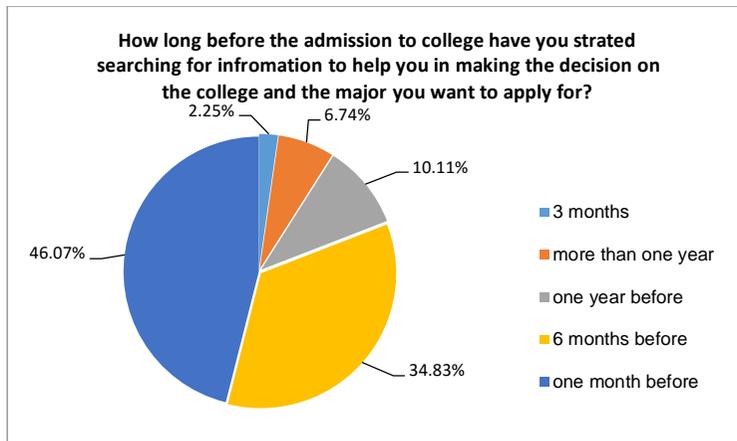
**Figure 4:** How long before the admission to college have you strated searching for infromation to help you in making the decision on the college and the major you want to apply for?
Source: own representation

To analyze the importance that higher education institutions should give to activities in the email marketing category, the respondents were asked to assess on a scale of 1 to 5 how useful would have been to receive, from the higher education institutions, email messages describing the college and the majors. The score to this question is 4.1 and we believe that this value demonstrates that the activities in the email marketing category should be taken into serious consideration by higher education institutions to communicate with the prospective students, and even more, to build relationships with them before the admission period. Unfortunately, as other previous research shows, these activities are not considered largely by higher education institutions in Romania.

Other issues analyzed relate to the evaluation of the extent to which the students consider that the university, the college and the major they have chosen is suitable for them. The scores calculated on a scale from 1 to 5 are almost equal, having values of 4.04 for the university, 4.00 for the college and 4.04 for the major.

Asked to evaluate on a scale from 1 to 5 (1 - less important, 5 - very important) the importance they consider that the advice from their parents had for friends and colleagues, the score is 3.40, which demonstrates that the parents are considered as an important factor in choosing the college or the major. When they were asked to associate the major with a color and an object, the color with the highest frequency was blue (38%), followed by red (22.5%) and green (12%) and the objects specified with the highest frequency have been book / pen (29%), PC / laptop (11%) and money (9%), with no significant differences between students from different majors. It is worth noting that blue is a color that reflects the need for communication, the desire to develop relationships, red is associated to the need for action, the desire to achieve results, and green is associated to the need for knowledge (Balaciu et al., 2014). Deepening such an analysis could lead to the creation of the profile of students' interests and their expectations about the services offered by the higher education institution.

## 3. Conclusions

The information analyzed in the study, both that obtained from secondary sources (previous research conducted by various organizations) and the primary information resulting from the research conducted, highlights, in particular, the importance the students attach to information posted on the official websites of higher education

institutions, and also to the communication via electronic mail. This latter aspect should emphasize the importance that these institutions should pay to activities specific to email marketing. Previous research (Popa, Ţarcă and Tarcza, 2014) however shows that higher education institutions in Romania are not currently aware of the benefits these activities could bring.

The research also identifies which are the fundamental pillars on which the online marketing strategy of higher education institutions should be built at the moment: *the official Internet pages designed so as to meet the needs of the prospective students (and even parents thereof)*, *activities specific to email marketing* and *Pay Per Click campaigns meant to attract the prospective students to the pages that have a potential interest to them.*

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# ANTECEDENTS OF CUSTOMER RELATIONSHIP MANAGEMENT CAPABILITIES

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**Abstract:** *Customer relationship management, as a process to manage customer relationship initiation, maintenance and termination to maximize the value of the relationship portfolio, is an evolving process. In recent years, the development of interactive technologies (social media) have revolutionized the interaction between firms and their customers and between customers. The impact of technology on CRM is improving ways of collecting and processing customer information and transforming communication with customers. In the context of the development of social networks, the introduction of social media applications in customer relationship management activities bring important changes in this area. Thus, managers need to pay attention to the interaction management as an important process of CRM and enhance the customer relationship management capabilities. The study propose a conceptual research model of several antecedents of customer relationship managements capabilities and provide the linkage between this antecedents and CRM capabilities. First, following review of existing research literature related to customer relationship management, there are some conceptual clarification on customer relationship management. Second, are presented the working concepts: the adoption of interactive technologies, customer concept, customer empowerment, customer relationship orientation and customer-centric management system. Then, it is proposed the conceptual model and finally are presented conclusions, managerial implications, limitations and research directions. From a theoretical perspective, this paper highlights the importance of marketing actions at the individual customer level and reveal the impact of adoption by companies of interactive technologies so that organizations have the opportunity to engage in conversations with customers and respond in real time the requirements that they launched the online environment. Nowadays, customers feel empowered and play an active role in the relationship with companies. The business must enhance existing capabilities or develop new capabilities in order to meet this challenge. If confirmation of the hypotheses specified relations, the development level of customer relationship management capabilities, managers should invest in interactive technology and human resources to facilitate the adoption of interactive technologies within the organization and customer relationship.*

**Keywords**: customer relationship management (CRM); customer concept; customer empowerment; customer relationship orientation; customer-centric management system; interactive technologies.

**JEL classification: M31**

## 1. Introduction

Customer Relationship Management (CRM) is an evolving concept that has attracted interest of both researchers and practitioners. In recent years, researchers have focused on identifying antecedents and consequences on CRM performance, while increasing interest practitioners to implement CRM technology. Interactive technologies (social media) open new perspectives in the development of CRM along with the integration of these in customer relationship management (Boulding, Staelin, Ehret, Johnston, 2005). Technology influences CRM activities by improving procedures for collecting and processing customer information and interaction and communication

processes with customers. Digital communication has led to effective communication management, both within the organization and between the organization and its customers. Social networks, the latest interactive technology exponent induce significant changes in the activities of customer relationship management, facilitating obtaining customer information, both from direct interactions with them, and the interactions that take place between customers in the virtual environment. This article proposes an analysis of certain antecedents of CRM capabilities and complementary effect of these capabilities with interactive technologies (social media) on firm performance.

In the first part of the paper there are conceptual clarification on customer relationship management. Then, identified several antecedents of CRM capabilities (adoption of interactive technologies, the customer concept, customer empowerment, customer relationship orientation and customer-centric management system) and is presented a research conceptual model about the effects of this antecedents on CRM capabilities. Finally, conclusions are presented, managerial implications, limitations and research directions.

## 2. Customer Relationship Management

The concept of customer relationship management was introduced in the 80's by Leonard Berry, defined as attracting, maintaining and developing relationships with customers (Berry, 2002). These lasting relationships need to be profitable for the firm (Kotler, 1999). Zablah, Bellenger and Johnston (2004) identified five major perspectives of conceptualization and operationalization of CRM: process perspective (Reinartz, Krafft and Hoyer, 2004; Payne and Frow, 2005); strategy perspective (Zablah, 2004); capability perspective (Zablah et al., 2004; Wang and Feng, 2012); philosophical perspective (Zablah et al., 2004) and technological perspective (Chang, Park, Chaiy, 2010; Reinartz et al. 2004).

In terms of process, CRM incorporates several sub processes, including activities undertaken in their firms trying to build lasting relationship with customers profitable and mutually beneficial (e.g. identifying potential customers, customer knowledge creation, building relationships with customers, shaping perceptions them about the company and its products) (Srivastava et al., 1999; Reinartz et al., 2003). Reinartz (2004) defines CRM process, on the customer-facing level, as a "systematic process to manage customer initiation, maintenance and termination across all customer contact points to maximize the value of the relationships portfolio" (p. 294). From the management point of view, it is necessary to identify CRM processes and sub processes with major effect on performance to that focuses the resources and capabilities of the firm. Payne and Frow (2005) analyzed several definitions and descriptions of CRM and they conceptualized CRM as a cross-functional process focuses on establishing, maintaining and strengthening long-term relationships with attractive customers. The two researchers have identified five key generic CRM processes: the strategy development process, the value creation process, the multichannel integration process, the information management process and the performance evaluation process. Kohli et al. (2001) have focused on defining the management interactions with customers in order to establish and maintain long-term, profitable relationships.

From the strategic perspective, CRM refers to develop appropriate relationships with key customers in order to create a portfolio of profitable customers for the organization (Payne and Frow, 2005; Zablah et al., 2004). Boulding et al. (2005) consider CRM as a management of the dual creation of value, the intelligent use of data and technology, the acquisition of customer knowledge and the diffusion of this knowledge to the appropriate stakeholders, the development of appropriate relationships with specific customers or customer groups and the integration of processes across the many areas of the firm and across the network of firms that collaborate to generate customer value. In terms of

capability, CRM is the company's ability to anticipate customer needs and adopt strategies according to their requirements (Zablah et al., 2004), identify attractive customers, to initiate and maintain relationships with them and turn them into profitable relationships (Boulding et al., 2005; Srivastava et al., 1999). Wang and Feng (2012) have conceptualized CRM capabilities as business knowledge and skills within the work setting, maintaining, developing and regain attractive customers, developing a measurement model of them. From a philosophical perspective (Zablah et al., 2004), CRM reveals the importance of focusing on understanding customer needs, continuously evolving needs in the process of building profitable relationships, long term with them. A loyal customer base can be constructed by tracking and evaluating company-customer interactions during the course of relations. In terms of technology, customer relationship management was approached as an investment in software technology (Chang, Park, Chaiy, 2010), equated with CRM technology and emphasizing the extent to which firms use information technology to support the effective management of customer relationships (Reinartz et al., 2004).

Customer relationship management increased the opportunities to use data and information in order to understand customers and create value with them, and this requires a cross-functional integration of processes, people, operations and marketing capabilities enabled through information, technology and applications (Payne and Frow, 2005). This latter approach shows that CRM is not just a technology, which is consistent with the research of Zablah, Bellenger and Johnston (2004). Information technologies are, however, necessary resources that lead to a significant increase in performance (Bharadwaj, 2000; Chang et al., 2010; Coltman, 2007). They should be implemented but with other important organizational resources so as to create distinctive capabilities of the company (Day, 1994). Definitions and conceptualizations of CRM reveals that customer relationship management "is the result of continuous development and integration of marketing ideas with the latest available information, technologies and forms of organization" (Boulding, Staenlin, Ehret and Johnston, 2005, p. 156). Given the dramatic changes induced by technology in individual and organizational behaviour, should be paid special attention to customer relationship management processes whose effectiveness can be improved by using these technologies. In this context, information management and customer interactions management are key processes in customer relationship management. The management of customer information refers to „the collection, collation and use of customer data and information from all customer contact points to generate customer insight and appropriate marketing responses" (Payne and Frow, p. 173). CRM tools and technologies that facilitate interactions with customers (Zablah et al., 2004), the firm orientation towards interaction are important resources that can cause superior capabilities of customers relationships.

Ramani and Kumar (2008) defined the interaction orientation as "the firm's ability to interact with individual customers and to take advantage of the information obtained from them through successive interactions and thus obtain profitable customer relationships" (p. 27). Companies interaction oriented differs from others in the ability to anticipate customer responses, this orientation being a source of competitive advantage (Ramani and Kumar, 2008; Day, 2000). Technology and IT applications facilitate interaction between customers and companies (Varadarajan et al., 2010), interactive technologies (e.g. social media applications) having the potential to facilitate the interaction and implementation of these applications in the business of customer relationship management can be a competitive advantage for firms that adopt such a strategy in the activities of customer relationship management.

From the perspective of resource-based theory, CRM is part of cross-functional capabilities as one of the most important marketing capabilities that allow companies to use customers relationships resources to build a competitive advantage (Day, 2000). The role of capabilities in enhancing business performance and building a sustainable

competitive advantage has been documented in the literature on resource-based theory (Barney, 1991) and dynamic capabilities theory (Morgan, 2012). According to Jayachandran, firms have superior marketing capabilities, such as capabilities related to customer relationships (Day and Van den Bulte, 2002), have superior financial performance. Idea supported by Coltman (2007) which states that a high level of CRM capabilities can create a positional advantage and therefore can improve firm performance.

## 3. Antecedents of CRM capabilities

The antecedents that can positively influence customer relationship management capabilities studied in this research are: the uptake of interactive technologies; customer concept; customer empowerment; customer relationship orientation and customer-centric management system.

### 3.1. Interactive technologies

Varadarajan (2010) defines interactive technologies as methods, tools or devices that allow various entities (individuals, machines or organizations) to engage in mediated communication to facilitate the planning and achievement of exchanges between them. Interactive technologies (social media) have the potential to enable organizations to be more responsive to market demands in comparison to the competition. Interactivity is characterized by bi-directionality, timeliness, mutual controllability and responsiveness (Varadarajan et al., 2010). Social networks have the ability to complete and/or increase the value of each customer interaction, present or future (Andzulis, Panagopoulos, Rapp, 2012).

The information management, as a process of CRM, is important to collect and select information about customers for market intelligence. Market knowledge can be exploited by firms to build and support a portfolio of clients to maximize their profits. Based on this information, companies can select the right customers, prioritizing relationships and manage the interactions with them. The impact of technology on CRM is not just about improving ways of collecting and processing customer information, but the content itself transforming communication with customers. In the context of the development of social networks, the introduction of social media applications in customer relationship management activities bring important changes in this area.

Kaplan and Haenlin (2010) define social media as a group of applications built on the ideological and technological Web 2.0 that allow the creation and exchange of user-generated content. Social media and the internet using mobile technologies to create interactive platform through which individuals and communities distributed, co-create, discuss and modify user generated content (Kietzmann et al., 2011). Social media applications are communication systems that allow stakeholders to communicate over a dyadic ties (Peters et al., 2013). Social media is a technology that enhances social interaction, facilitating co-creation of value. Social media applications allow companies access to customer information deriving from the interactions between customers and the firm, and the interactions that take place between customers in the virtual environment (Trainor et al., 2014), which is important for the companies concerned to reach as many customers. Social media applications enable users to issue, distribute opinions, complaints about companies, brands etc. not controlled by the firms. We see, therefore, a so-called "democratization of corporate communication" (Kietzmann et al., 2011). To access this information, companies should integrate social media applications in their relationships with current and potential customers. Social media applications introduce new tools that facilitate customer interaction in their networks, as well as companies that are members of the same network (Kietzmann et al., 2011). Social networks such as LinkedIn, Facebook, Twitter are tools by which organizations can engage in interactions between members of a network (Trainor, 2012). Thus, companies have access to information about their

customers directly from them or indirectly from interactions between customers on the same network. Real-time communication and public nature of social media offers businesses the opportunity to collect information about the competition and its customers (social media guide - www.coastdigital.co.uk), generating new marketing knowledge. Companies can improve their products, services and offerings based on the information obtained from social media, direct from the current and potential customers. Through social networks, companies can respond to customers in real time conversation in a language that no other means of communication does not provide. Thus, an important goal in the work of companies that use social media applications is to monitor interactions in social networks. Organizations can monitor conversations and interactions that include a specific company, brand or product, using social tools like Facebook, Google Analytics, TwitterDeck, Google Alerts. Specific social media tools are useful in managing information about customers, competitors and/or customers of the competition.

### 3.2. The concept of client

Orientation interaction implies the existence of values and business practices of companies that put the customer at the heart of marketing. The customer concept and customer empowerment are key constructs of interaction orientation. Online social media applications allow interaction between millions of people, directly or through social groups themed around ideas or interests (Varadarajan et al., 2010). Information exchanges between them are among the most varied, from information and practical knowledge, intellectual speeches, acts of commerce, emotional support, organization of actions or events. The customer concept, according to the definition given by Ramani and Kumar (2008), is defined as the belief that unit of analysis of marketing actions and reactions are based on the individual customer approach. This concept is part of the trend developing customer-centric marketing that seeks to meet the needs and requirements of each client individually assessed (Sheth, Sisodia, Sharma, 2000).

### 3.3. Customer empowerment

Customer empowerment reflects the extent to which the firm offers clients opportunities to connect with the firm and collaborate by exchanging information, suggestions, complaints and ideas about products, services and business practices (Ramani and Kumar, 2008). Interactive technologies enhances support and customer empowerment (Varadarajan et al. 2010), which positively influence the customer relationships management capabilities and implicitly firm performance. Interactive technology transfer more power to customers (Vardarajan et. al, 2010), because, through them, customers have the opportunity to share their views about the organization, its products and services, both with the company and with other clients of the firm. Customers using social media applications are aware of the power their relationships with suppliers of products and services and want to be actively involved in business processes (Trainor, 2012). Customers have higher requirements in dealing with companies, they want to interact with them on their terms and using the tools of their choice. The level of customer empowerment is amplified through social media applications.

### 3.4. Customer relationship orientation

Customer relationship orientation is reflected in the mentality, values and norms of an organization and affects all interactions with customers (Day, 2000). The company's ability to create and maintain relationships with its most valuable customers is a source of competitive advantage for the firm (Day, 2000). A firm has a competitive advantage in the market, when implementing a strategy that creates value and is not used while racing or can generate higher economic value than competitors in the same market (Barney, 1991). Loyalty relations are among the most sustainable benefits because they are difficult to understand, copying or acquired by competition. Communication and information sharing

are essential antecedents of trust and development of relationship (Morgan and Hunt, 1994). Interactive technologies enable addressability and interactivity (Day, 2000) in dealing with customers, and continuing communication with them, which creates prerequisites closer relationship between the company and its customers. Interactive technologies (social media applications) provide, on the other hand, greater access to customer information (Trainor, 2012) obtained both from direct interactions with them, and the interactions that take place between customers in the virtual environment, information difficult obtain or inaccessible otherwise.

### 3.5. Customer-centric management system

Management system are formal and informal ways to create and control knowledge (Day, 1994). A customer-centric management system is a system in which the organizational structure and processes are focused on customers, not the company's functional departments (Day, 2000). A customer-centric management system helps to keep the focus on the organization's interactions with customers and ensure that the expertise of various functional departments is implemented to promote quality customer experience. Firms whose management system is centred on client have an organizational structure that allows action to be driven by the needs of the organization to customers, not by domestic concerns times of various departments (Jayachandran, Sharma, Kaufman and Raman, 2005). On the other hand, evaluation and incentives granted to employees by the company are such that encourage behaviour consistent with a culture oriented relationship with customers by increasing the capability of the organization to focus on interactions with customers before, during and after sale (Day, 2000). A customer-centric organizational system enables a firms to initiate customer information sharing (Wang and Feng, 2012), improves the ability of the company to focus on customer interactions, influencing the development of information processes and is likely to influence the success of initiatives CRM (Jayachandran, 2005; Trainor, 2012).

### 4. The conceptual research model of antecedents of CRM

Conceptual research model (see Fig. 1) is based on existing links between the adoption of interactive technologies (Jayachandran, 2005; Hennig and Thurau, 2010), the level of adopting the customer concept (Ramani and Kumar, 2008), the level of customer empowerment (Ramani and Kumar, 2008), the level of the customer relationship orientation (Jayachandran, 2005), the level of centricity towards the customer of management system (Jayachandran, 2005) and the capabilities of customer relationship management. Developing customer relationship management capabilities result in increased customer relationship performance.
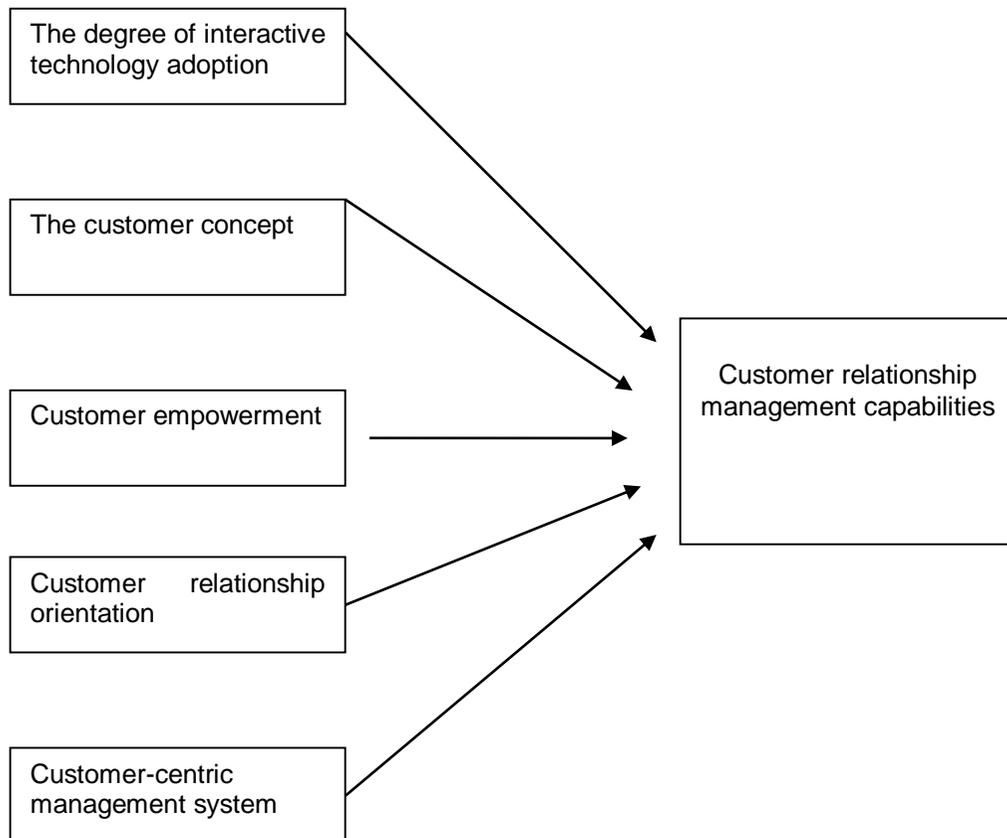
**Figure 1:** Conceptual research model of antecedents of CRM

Interactive technologies provide opportunities for companies to react quickly (Varadarajan et al., 2010) the references, in the online customer reviews. In this context, social media applications have become an area of interest for business, being recognized as methods of maintaining lasting relationships with customers (Trainor, 2012). Based on the arguments presented, we formulate the following hypothesis:

Hypothesis 1: The level of adoption of interactive technologies directly influence significantly and positively the customer relationship management capabilities.

Customer centric organizations focus on integrating all customer-oriented activities, so as to create added value for their customers (Sheth, Sisodia, Sharma, 2000). Customer-centric marketing firm improves productivity by focusing on profitable customers. CRM, analyzed as a process on the customer-facing level (Reinartz et al., 2004), focuses on the relationship with the customer. As a result, the adoption of customer concept is expected that it will have a positive influence on CRM capabilities. Consequently, we formulate the hypothesis:

Hypothesis 2: Level of adoption of the customer concept directly influence significantly and positively the customer relationship management capabilities.
Customer empowerment is a practice that enables two-way interactive communication between the company and its customers. Empowering the customer by the firm, supported by the use of social media applications offers organizations the opportunity to re-establishing the relationship with inactive customers, but also to interact with them in real time. Therefore, we formulated the following hypothesis:

Hypothesis 3: Level of empowering customers directly influence significantly and positively the customer relationship management capabilities.

CRM is an interactive process of transformation customer information in beneficial relationships with them. The focus on customer relationship orientation determines the attitude towards customer relationship management and processes necessary to implement this type of management (Day, 2000). Consequently, we formulate the following hypothesis:

Hypothesis 4: Level firm orientation towards customer relationship orientation directly influences significantly and positively the customer relationship management capabilities.

A customer-centric management system enhances the ability of the company to focus on customer interactions influence the development of information processes and is likely to influence the success of initiatives CRM (Jayachandran, 2005; Trainor, 2012). Customer-centric management system support coordination of activities with customers in an organization, enabling the firm understanding of their customers, working with them and providing timely, answers the needs of customers. In conclusion, it is likely that an organization where business processes are designed to enhance the quality of customer interactions, interact systematic with lost customers, to re-establishing, through a systematic process, the relationships with valued inactive customers, to develop a system for interacting with inactive customers. Based on these arguments, we formulate the following hypothesis:

Hypothesis 5: Level of centricity towards the customer of management system directly influences significantly and positively the customer relationship management capabilities.

## 5. Conclusions and future research

In research conducted are identified and analyzed several antecedents of customer relationship management capabilities (the adoption of interactive technologies, customer concept, customer empowerment, customer relationship orientation and customer-centric management system). The linkages between the interactive technology adoption, the adoption of customer concept, the empowering of the client, the firm orientation towards customer relationship, the customer-centric management system and the customer relationship management capabilities are important arguments for managers in decision making for adoption and/or development of values and practices that contribute to improving CRM capabilities. Interactive technologies (social media applications) introduce new tools that facilitate client-centred interactions in the virtual environment (Kietzmann et. al, 2011) and the management of interactions between customers and companies acquire new meanings as a result of interactions developed in social networks. Level of adoption by companies of interactive technologies in specific processes of CRM influence the customer relationship management capabilities. Using social media applications is a living, dynamic process in the firm (Kaplan, Haenlin, 2012) that facilitate access to customer information and identifying their current and future needs. This research highlights the importance of adoption by companies of interactive technologies so that organizations have the opportunity to engage in conversations with customers and respond in real time the requirements that they launched the online environment. Users online involves increasingly more content creation through distribution of videos, stories, pictures and even by posting comments on websites of companies (Trainor et al., 2014). Turning customers passive consumers into active participants in creating online content and its distribution in the virtual environment can benefit companies but at the same time, represent a potential risk to them. The new interactive technologies have revolutionized communication between companies and customers and between customers on the company/product/service firms so that organizations from the sidelines regarding this development, without being part of it, is likely to lose a category customers online environment is the primary means of communication and networking. If confirmation of the hypotheses specified relations, the

development level of customer relationship management capabilities, managers should invest in interactive technology and human resources to facilitate the adoption of interactive technologies within the organization and customer relationship.

Research Directions pursuing empirical studies to test and validate the model and to extend this model to integrate the effects of CRM capabilities on business performance.

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*SUB-SECTION: ECONOMIC INFORMATICS AND CYBERNETICS*

# 5S IN QUALITY MANAGEMENT

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**Abstract:** *The fundamental principles of organization are customer satisfaction, eliminating waste, achieving a continuous flow in production and continuous improvement. The 5S method is a structured program for implementation the standardization and organization, simplifies the environment of the workplace (Gemba), reduce losses and unnecessary activities, and improve quality efficiency and safety.* ***Keeping the workplace clean, providing a good working environment and promote productivity, reducing costs, ensure security and removes all types of losses. The case study present the 5S method as a tool which can be used efficiently to keep those things necessary for the proper conduct of the organization and the elimination of unless things.***

**Keywords:** 5S, Kaizen, quality, waste, Gemba, management change

**JEL classification:** M11, M12, M14

## 1. Introduction
**The 5S is an advance management technique, which is applied to reduce waste, pointless activities environment of workplace and under the international standards also assurance of safety work place.**
**The purpose of implementation of 5S is to identify and remove dirt and disorder into the area of employee's workplace.**
The organization management principles are: customer satisfaction, to eliminate wastes, to achieve a continuous flow in production and a continuous improvement.
New ways of achieving the organization objectives in the easiest manner with the lowest costs are a provocation for any organization.
The 5S's method increase production, maintenance costs, also contribute to labor motivation and improve organizations image in the eyes of economical agents and and the customers.
It is known that at the moment the organization decide to implement the Kaizen concept for quality improvement. The 5S's practice is a technique used to establish and maintain quality environment in an organisation.
The name 5S's stands from Jananese words (Osada, 1991):
1.SEIRI -setting, elimination of unnecessary things, sorting;
2.SEITON-order, arrangement methodical appoach;
3.SEISO - inspection control, cleaning , disturbance detection the working areas, equipment will be clean;
4.SEIKETSU-standardizing the extension of the cleaning concept;
5.SHITHSUKE-discipline, moral education, respect for others and sustain the entire activity of organization.
5S is one of the most widely adopted techniques from the Lean Manufacturing toolbox (Titu, Oprean and Grecu, 2010).
The Kaizen umbrella protect the continouse improvement of quality including here the manufacturing management process where: K- represent knowledge, A-achivement, I-innovation, Z-zero defects, E-employeers, N-nonconformity (Figure.1).
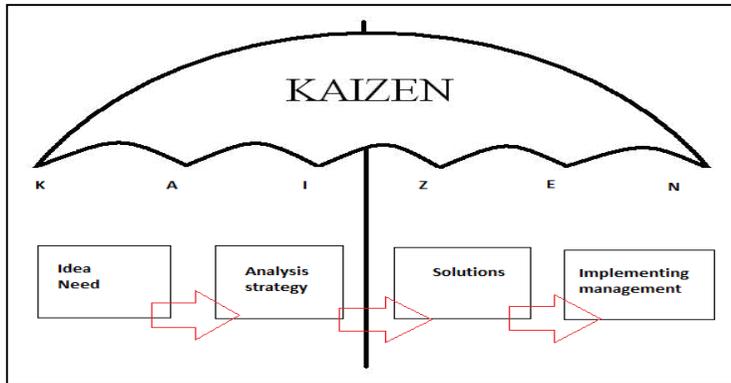
**Figure 1:** Step by step method to improve quality in organization
Source: By the author

Bungău, Blaga and Gherghea (2011) used 5S's Audit method to implement 5S in operational management and observed that organization is receiving multiple subscriptions of the same  problems:

- no program to consolidate and to make information available;
- untrained in using central document filling system;
- unaware of duplicate subscription;
- no method to centralize subscription of information's;
- no space for common storage.

The management has been translate to organization departments and become a tactic activity of the organization.

The implementation concept of continuouse improvement using 5S's method involves the following objective:

1. Increase the storing place;
2. Create a nonconformity report procedure;
3. Create and preserved the membership;
4. Reduce the unproductive times;
5. Redefine the access, working and storing place;
6. Readjust the location.

## 2.  Case study

In January 2015, a survey was conducted to find out the suitability importance, difficulties and benefits of 5S implementation.

In order to be able to comment the 5S practice, a  5S Audit Worksheet developed by Ho (1999)  was used in the study.

According to obtained a positive response to each S, the propose target for each S was 5, so each S must obtain a minimum of 5 and a total score of 25, for all 5S's.

A Likert scale for 5S's rating was used to obtain the results, in function of respondent perception the score was 0= poor-unacceptable, 1= marginal, 2=  satisfactory, 3= good, 4= excellent and 5=for strongly agree.

According to the survey for each S it was possible to identify the baseline of 5S's Audit from the first and from the second implementation of 5S's method.

It is important to define the structure of 5S's terms in order to ensure the good working of organization and prevent the wastes.

Also the entire staff was involved in organization activity according to possibilities.

Using computerized management system 5S Audit was presented in association with each S.

## 3. Results

According to the values score obtain for each S, the organization has reached or not the proposed target.

The 5S's method was applied to present the results of the 5S Audit after the second implementation of the method.

The 5S interface used the following steps: preparation, initial audit, education quality culture and the 5S's principles. If analyze each S, based on specific questions, qualification of 5S is achieved by specific score for question:

For- **S1-SEIRI- SORT**- making the difference between necessary and unless things, giving up the unless ones (Table 1).

**Table 1:** S1-SEIRI-Sort before 5S Audit

| | | Check Item | Description | Score | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 0 | 1 | 2 | 3 | 4 | 5 |
| **1 S** | 1 | Materials or part | Does the inventory or in-process inventory include any unneeded materials or parts? | | | x | | | |
| | 2 | Machines or equipment | Are there any unused machines or other equipment around? | | | | x | | |
| | 3 | Jigs, tools, or dies | Are there any unused jobs, tools, dies or similar items around? | | | | x | | |
| **SORT** | 4 | Visual control | Is it obvious which items have been marked as unnecessary? | | | | | x | |
| | 5 | Written standards | Has establishing the 5S's left behind any useless standard? | | | | x | | |
| | | | Sub Total | | | 2 | 9 | 4 | |
| | | | Sort Average | | | | | | 3 |

Source: By the author

Total score achieved is:
- red labels have been applied to all marks, which were not necessary during the activity;
- all the useless things have been stored and eliminated;
- rules specific to this activity have been stated and are to be implemented.

For- **S2-SEITON-ORDER**-ordering and arrangement. The ordering of all items the results are presented in Table 2.

**Table 2:** S2-SEITON- Order before 5S Audit

<table>
<tr><th rowspan="2"></th><th rowspan="2" colspan="2">Check item</th><th rowspan="2">Description</th><th colspan="6">Score</th></tr>
<tr><th>0</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th></tr>
<tr><td rowspan="7">2 S<br><br>STRAIGHTEN</td><td>1</td><td>Location Indicators</td><td>Are shelves and other storage areas marked with location indicators and addresses?</td><td></td><td></td><td>x</td><td></td><td></td><td></td></tr>
<tr><td>2</td><td>Location indicators. Item Indicators</td><td>Do the shelves have signboards showing which items go where?</td><td></td><td></td><td>x</td><td></td><td></td><td></td></tr>
<tr><td>3</td><td>Quantity Indicators</td><td>Are the maximum and minimum allowable quantities indicated?</td><td></td><td></td><td>x</td><td></td><td></td><td></td></tr>
<tr><td>4</td><td>Demarcation of walk ways and in-process inventory areas</td><td>Are white lines or other markers used to clearly indicate walkways and storage areas?</td><td></td><td></td><td></td><td>x</td><td></td><td></td></tr>
<tr><td>5</td><td>Jigs and tools</td><td>Are jigs and tools arranged more rationally to facilitate picking them up and returning them?</td><td></td><td></td><td>x</td><td></td><td></td><td></td></tr>
<tr><td colspan="3" align="right">Sub Total</td><td></td><td></td><td>8</td><td>3</td><td></td><td></td></tr>
<tr><td colspan="3" align="right">Straighten Average</td><td colspan="6">2,5</td></tr>
</table>

Source: By the author

Total score is:
- All objects which were placed inappropriately have been taken inventory of;
- The locations of al objects necessary in the workplace have been define;
- The access, storing areas have been established.

For- **S3-SEISO-CLEANING.** Directley the staff its encourage to suggest and make improvements in organization management in different departments ( Table 3).

**Table 3**. S3-SEISO-Cleaning before 5S audit

<table>
<tr><th rowspan="2"></th><th rowspan="2" colspan="2">Check item</th><th rowspan="2">Description</th><th colspan="6">Score</th></tr>
<tr><th>0</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th></tr>
<tr><td rowspan="7">3 S<br><br>SHINE</td><td>1</td><td>Floors</td><td>Are floors kept shiny clean and free of waste, water and oil?</td><td></td><td></td><td>x</td><td></td><td></td><td></td></tr>
<tr><td>2</td><td>Machines</td><td>Are the machine wiped clean often and kept free of shavings, chips and oil?</td><td></td><td></td><td></td><td>x</td><td></td><td></td></tr>
<tr><td>3</td><td>Cleaning and checking</td><td>Is equipment inspection combined with equipment maintenance?</td><td></td><td></td><td>x</td><td></td><td></td><td></td></tr>
<tr><td>4</td><td>Cleaning responsibilities</td><td>Is there a person responsible for overseeing cleaning operations?</td><td></td><td></td><td>x</td><td></td><td></td><td></td></tr>
<tr><td>5</td><td>Habitual cleanliness</td><td>Do operators habitually sweep floors, and wipe equipment without being told?</td><td></td><td></td><td></td><td>x</td><td></td><td></td></tr>
<tr><td colspan="3" align="right">Sub Total</td><td></td><td></td><td>6</td><td>6</td><td></td><td></td></tr>
<tr><td colspan="3" align="right">Shine Average</td><td colspan="6">2,4</td></tr>
</table>

Source : By the author

For–**S4-SEIKETSU –STANDARDIZATION.** After the interpretation of the results, 5S will confirm that the implementation, application of the method and method concepts, don't need any investment only more attention to details and practical work inteligently (Table 4).

**Table 4**: S4-SEIKETSU –Standardization –before 5S audit

| | | Check item | Description | Score | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 0 | 1 | 2 | 3 | 4 | 5 |
| **4 S** **STANDARDIZE** | 1 | Improvement memos | Are improvement memos regularly being generated? | | | | x | | |
| | 2 | Improvement ideas | Are improvement ideas being acted on? | | | x | | | |
| | 3 | Key procedures | Are standard procedures clear, documented and actively used? | | | | x | | |
| | 4 | Improvement plan | Are the future standards being considered with a clear improvement plan for the area? | | | | x | | |
| | 5 | The first 3 S's | Are the first 3 S's (sort, set locations and shine) being maintained? | | | x | | | |
| | | | Sub Total | | | 4 | 9 | | |
| | | | Standardize Average | | | | | 2.6 | |

Source: By the author

For-**S5-SHITSUKE-SUSTAIN.** A good organization, a well know role in team and the responsabilities, are the objectives of the organization which should be clearley define and accepted by all its members.
**The 5S's was implemented, but the results** are low **for S5, the score encourage and confirm that** some changes in organization are necessary (Table 5).

**Table 5:** S5-SHITSUKE –Sustain before 5S audit

| | | Check | Description | Score | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 0 | 1 | 2 | 3 | 4 | 5 |
| **5 S** **SUSTAIN** | 1 | Item Training | Is everyone adequately trained in standard procedure? | | | | | x | |
| | 2 | Tools and parts | Are tools and parts being stored correctly? | | | | | x | |
| | 3 | Stock controls | Are stock controls being adhered to? | | | | | x | |
| | 4 | Procedures | Are procedures up-to-date and regularly reviewed? | | | | x | | |
| | 5 | Activity boards | Are activity boards up-to-date and regularly reviewed? | | | | x | | |
| | | | Sub Total | | | | 6 | 12 | |
| | | | Sustain Average | | | | | 3,8 | |

Source : By the author

**The next application in organization is recycling cars specific components, using a computerized micro-program for implementation of 5S with positive effects in manufacturing and remanufacturing production (Daraba,** 2007**).**
After a detailed analysis, we can observed that even in the area where initially we consider they don't need changes, improvements are needed, with a lot of possibilities which don't need investments (Figure 2).

**Figure 2:** 5S's in organization before 5S's method and after 5S's Audit
Source: By the author

If 5S is not taken up seriously then it leads to 5D's: delays, defects, dissatisfied customers, declining profits and demoralized employee.
A new management concept of total productive maintenance has formulated, which together with other pillars of the company, preventive maintenance, maintenance-productive, 5S, auto-maintenance and continuous-improvement, give the answer to the link between quality and organization maintenance (Boca. G.D., 2012).


## 4. In conclusion

The 5S method is a structured program for implementation the standardization into organization, simplifies the environment of the workplace (Gemba), reduce losses and unnecessary activities, improve quality, efficiency and workplace safety a new S6.

The foundation of the Gemba house, is focus on wastes activities. 3M's –muda, mura and muri is understandable because pulling out wasteful activities is one of the foundation of continuouse improvement (Figure 3).

Another important component for the house foundation 5S is keeping the discipline in house quality of organization.
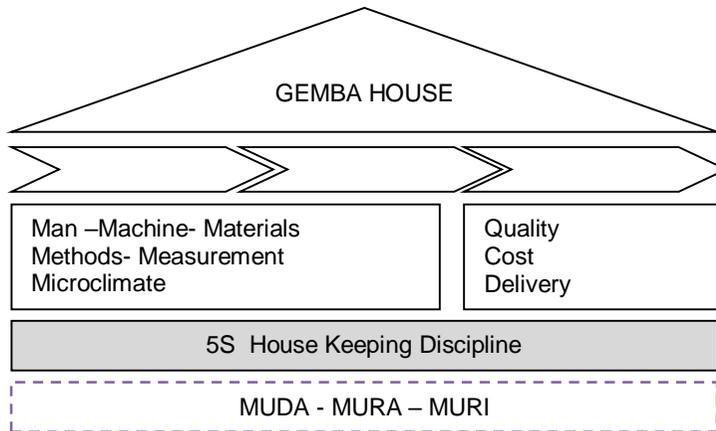


**Figure 3:** Gemba House in organization
Source: By the author

The six major sources of losses in that study which can lead and support the implementation of 5S's system are: stop-time accidental, time to change, adjustment and adaptation of equipment, micro-machine stops, slow-functioning equipment, defect quality and start-faults.

The 5S Audit was conducted using monthly schedule, but whenever is requiered by auditors from quality department, it is possible to establish specific objectives with different priorities like in Table 6.

**Table 6:** Specific objective

| Priority | Frequency of use | How to use |
|----------|------------------|------------|
| Low | Once per year | Throw away |
| | Less than once per year | Store away from the work place |
| Average | Once per month | Store together but offline |
| | Once per week | |
| High | Once per day | Locate at the workplace |

Source : By the author

The pillars of Gemba house are represented by the 5M's –man, machine, material, method of controls, quality measure and microclimate (work environment).

Manager as a leader can improve his qualities and capabilities through training and practice, and organization can move pushing for continuous training of employees.

Using the 5S's method was possible to identify also for leadership the 5S's keys.

The leadership keys can be structured in four categories primary understanding of S, secondary supervisory understanding of S, waiting progress review of S and auxiliary key with the specific elements of S impact in organization (see Table 7).

**Table 7**: The 5S for leadership

| 5S Understanding of Executives | Primary understanding | 1 |
|---|---|---|
| * General Awareness | | |
| * Executive Involvement | | |
| **5S Understanding of Supervisory & Front line** | **Secondary supervisory** | **2** |
| * General Awareness | | |
| * Executive Involvement | | |
| **5S is included as part of monthly progress review** | **Waiting progress review** | **3** |
| * Evidence of discussions (Agenda, minutes) | | |
| * Evidence to follow up | | |
| **Orderliness and cleanliness of gate/entrance/ lobby areas & first impressions to a visitor** | **Auxiliary** | **4** |
| * Entrance area | | |
| * Lobby area | | |

Source : By the author

In conclusion applying the 5S's Audit, the score before the implementation of 5S's was equal with 70 points and after the Audit the organization obtained a significant improvement to 88 score.

Each S who obtain low score, needs a new action, a plan aimed to increase the score and improve the organization conditions (Table 8).

**Table 8:** 5S Auditresults

| Category | Score before 5S | Score avarage | Score after 5S | Score avarage |
|---|---|---|---|---|
| **Sort** | 15 | 3 | 20 | 4 |
| **Straighten** | 11 | 2.5 | 15 | 3 |
| **Shine** | 12 | 2.4 | 15 | 3 |
| **Standardize** | 13 | 2.6 | 15 | 3 |
| **Sustain** | 19 | 3.8 | 23 | 4.7 |
| **Total Points** | 70 | 14.3 | 88 | 17.7 |

Source: By the author

Using the 5S's data was possible to influence S2, S3, S4 from low values to maximum values of 15 points after audit and improve the micro-environment organization conditions.
For S5=sustain, even the values before and after the 5S's implementation, are high, the organization has some problems between manager-subordinates relationship, regarding the staff training and communication.
Analyzing the results, according to the spider diagram for the first implementation of 5S's method (Figure 4), we can identify a good score for S3=shine from 12 to 15 maximum score, and for S4= standardization from 13 to 15 maximum score.
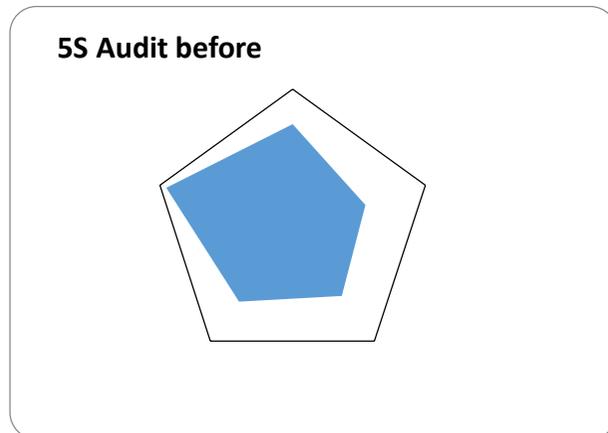
Figure 4:The Spider diagram after first implementation of 5S's
Source: By the author

We may establish also for each S, the values before and after the 5S's Audit method and encourage the organization to apply the method (Figure 5).
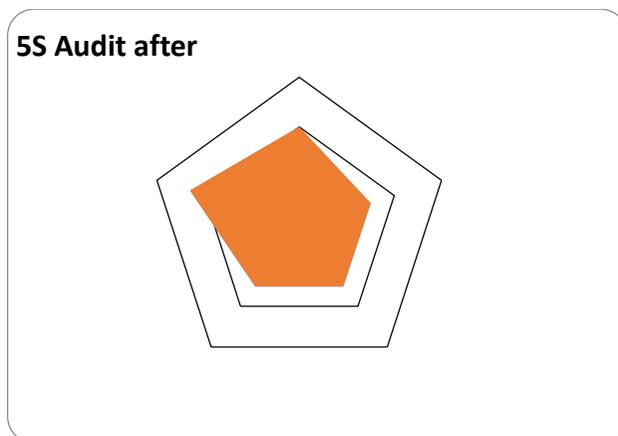


Figure 5:The Spider diagram after second 5S's Audit
Source: By the author

A new development direction has been defined and it is definitely one based on quality (Abrudan, 2012).
Quality standards have been promoted and production has experienced all necessary modification in order to suite them.
As a conclusion, when we are added the 5S element, the quality management, environmental management and safety management systems can be steered towards Total Quality Management (TQM), as shown in the flow diagram below:

**5-S » ISO 9000 / ISO14000 / OHSAS 1800 » TQM**

Quality management doesn't need to prove its importance anymore. In the new modern age quality has become a heraldic element inside every organization that participates to production and distribution of goods and services under the quality passport (Table 9).

**Table 9:** Quality management heraldic elements

| 5S | ISO 9000 | ISO 14000 | OHSAS 1800 |
|---|---|---|---|
| **improve efficiency** | Quality Management Standards | Environment Protection Standards | Security Safety Standards |
| **basis for improvement** | | | |
| **support positive motivation for operators** | | | |
| **built the company image** | = Quality Management | = Protection Management | = Human Resources Management |
| **identify quality problems** | | | |
| **TOTAL QUALITY MANAGEMENT** | | | |

Source: By the author

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# PERSPECTIVES OF THE UNCERTAINTY AVOIDANCE CULTURAL DIMENSION IN GALATI COUNTY ORGANIZATIONS

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**Abstract:** *Quantification of cultural dimensions is an innovative idea, comparing the scores obtained on the basis of the cultural dimensions makes it possible to analyze the organizational culture level. Based on data collected as part of the COMOR Project for the analysis of organizational culture in the Romanian business environment, developed by The Scientific Society of Management from Romania, we have initiated, using Business Intelligence tools, a scan of the characteristics of organizational culture for Galati County. The study is based on the views of a representative sample of respondents from the business element from Galati in order to assess the current situation and the desired one. The administration of the questionnaires was conducted with the support of the project team of the University "Dunărea de Jos". The proposed aim is, from the analysis of the determined statistical indicators based on the questionnaires from the Galati county, leaving behind the classical linear thinking, to identify new relationships, connections that can be revealed by analyzing the database, obtaining information about organizational culture that highlights the evolution of environmental trends Business in Galati, the practical goal of the research being to provide useful results and conclusions necessary to the local organizational development process. An important topic of the research is to identify the factors that influence managerial behaviour at the level of the Romanian organizations in order to promote and to guide the change at the level of the microeconomic structures.*

## 1. Perspectives of the cultural dimensions

Cultural dimensions represent common structural elements in cultural systems of the countries, based on fundamental questions that every society responds in a particular way.

In the study conducted at IBM subsidiaries in different national contexts, Hofstede has shown that from organizational point of view cultural differences consist more in practice, while at national level, the difference lies more in values (Hofstede, 1996).

The Globe project has identified the existing connections between the national culture and the one at the organizational level, and also the mutual influences, expanding the Hofstede model. (House, 2006)

The Hofstede model superimposed over the map of Europe highlights the differences between Western Europe, characterized by a reduced gap of power, orientation toward success, separation between the church and the state, respectively Eastern Europe, characterized by a strong social hierarchy, community orientation and a strong church. As expected, for Eastern Europe, traditions and customs of features borrowed from both the West and the East, while from the opposite direction we can say that acts of globalization trends.

The cultural differences are quite large between America and Europe and also between the islander Europe and the continental one, characterized by reduced bureaucracy, respectively through the organization and control, integration of the new comers, the defence of the national identity.

A low index of indulgence can be considered a feature of the countries with predisposition toward totalitarian regimes of dictatorship. Regarding the individualism index, analyzing the country scores for this dimension we find that the more a society has a higher individualism, the richer it is. (Hofstede, 2001)

The country scores determined by the Hofstede project does not represent a standard constant but a relative comparison tool, evolving according to the time of evaluation.

"The obtained results for each dimension, in conjunction, can be used for comparisons at international level, in order to develop the standard for the organizational culture and of the Romanian managerial behaviour pattern." (Marinescu, 2013)

## 2. The study of the dimensions of the cultural organizational characteristics
### 2.1 The model of the cultural dimensions developed by Geert Hofstede

The six dimensions are represented by particular values for each country that define the score and allow the comparison for respective dimension (CultureCompass, 2015):

1. Attitudes toward social inequality: Power Distance Index (PDI)
2. Attitudes toward community: Individualism vs. Collectivism (IDV)
3. Attitude toward success: Masculinity vs. Femininity (MAS)
4. Attitude towards unknown: Uncertainty Avoidance Index (UAI)
5. Attitude toward time passing: Long-Term Orientation (LTO)
6. Attitude towards prohibition and control: Indulgence vs. Restraint (IND)

The PDI dimension expresses the degree to which the less powerful members of a society accept and expect that power is distributed unequally. In countries showing great inequalities between members, one can see that even the principle of power separation is not appreciated.

Individualism vs. collectivism dimension is determined by the specific answer at the following questions:

- How do members of the same culture relate?
- Who are they loyal to?
- How is stimulated performance?
- How is encouraged freedom of opinion?
- Priority given to the company interests versus personal interests?

In our organizational culture, still feel the reminiscent of the pre-December era, e.g. working in a global agreement can be considered as a precursor of the teamwork today, so it can be explained the fact that the Romanian workers were relatively easily integrated in the work system of the developed countries, which offered a more flexible organizational system, but well organized in terms of the tasks. At the same time a very strict control of labour regarding the reporting activities can have negative effects on the work outcomes, limiting the decentralisation of the decisions, the initiative.

The relative collectivist orientation is considered an advantage by the multinational companies who came to Romania because they overlapped well-structured organization with clear work procedures over our rooted tradition of the teamwork.

In the collectivist cultures, individuals rely on other group members in exchange for loyalty, while in the individualistic cultures, individuals rely only on their own strength.

A low score of the IDV size explains a collective consciousness in which the relationships and the obligations to the group membership represent a priority. An increased score of the IDV represents a powerful self-awareness in which own interests prevail.

The orientation of a person to time, from cultural point of view, represents important information in management and negotiations, playing an important factor in motivation.

Knowing the orientation to time of their employees, the managers will be able to provide motivating adequate incentives with their orientations, such as a bonus - a short-term incentive - respective on long-term, an additional contribution to the pension fund of an employee. The long-term orientation reflects the need for stability, while the short-term orientation reflects the adaptability to change.

The human freedom and the high performance are related with the equality toward the power in the countries with liberal traditions.

The organizational culture influences the economic performance. For Romania to achieve a high level of economical growth it needs a change of the mentality, of the organizational culture through the development, at national level, of some excellence clusters to attract skilled specialists from within the country and from abroad, creating models of good practice.

## 2.2 Correlations between the six cultural dimensions

Noticing the six organizational dimensions analysed by the cultural model Hofstede which also adds the two dimensions identified by Michael Minkov in 2010, we find a series of correlations between indicators, which may constitute, without generalizing, a pattern. Thus the countries with a high degree of masculinity have an uncertainty avoidance lower index and a high individualism index corresponds to a lower long-term orientation. In general, the countries with low power distance are statistically correlated with a high index of indulgence.

Uncertainty avoidance is associated with Roman Catholicism and with the legal obligation in developed countries for citizens to carry identity cards. Individualism is correlated with national wealth and with mobility between social classes from one generation to the next. Masculinity is correlated negatively with the percent of women in democratically elected governments. Long-term orientation is correlated with school results in international comparisons. Indulgence is correlated with sexual freedom and a call for human rights like free expression of opinions.
(CultureCompass, 2015)

## 3. Manifestations of the uncertainty avoidance dimension

"Innovation is a bridge to the future" said Michael Minkov. "Uncertainty is one of the key points of the international businesses and plays a critical role in business decision" (Hofstede, 2001).

According to the results of the study conducted by Hofstede, from the cultural point of view, Romania shows a high aversion to risk. UAI expresses the degree in which the members of an organization are able to manage the uncertainties and the risks. In the questionnaire 25 questions make reference to the Avoiding uncertainty dimension that is expressed by:

**Table 1:** Forms of expression of the UAI dimension

| no | dim | Indicator | Forms | Items |
|----|-----|-----------|-------|-------|
| 1 | UAI | Novelty adopting | Organizational change | Q35, Q39, Q40 |
| | | | Professional Development | Q28 |
| 2 | UAI | Attitude | Maintaining a collaborative environment, based on trust | Q50, Q59, Q73, |
| | | | Proactive Behaviour | Q80 |
| 3 | UAI | Organizing | Work organization clearly defined | Q19, Q20 |

| | | | Work organization based on teamwork | Q52, Q29 |
|---|---|---|---|---|
| 4 | UAI | Planning | Future Plans | Q23, Q41, Q61 |
| | | | Change based on innovation | Q32 |
| 5 | UAI | Procedures and rules | Instructions for goals achievement | Q21, Q33, Q43 |
| | | | Motivation based on performance | Q63 |
| 6 | UAI | Problems solving | Procedures predetermined | Q70, Q71 |
| 7 | UAI | Strategies | Marketing & communication, and Human Resources Strategies | Q36, Q37, Q38 |

**Hypothesis**: Preference manifested for compliance with the laws and regulations at the expense of ambiguity and the risk within the business organizations element in Galati.

**Table 2:** Indicators of the dimension Uncertainty Avoidance Index, calculated for the Galati County:

| | UAI | | Score | No. respondents | Medium Score |
|---|---|---|---|---|---|
| 1 | Novelty adopting | Pa | 4156 | 1164 | 3,57 |
| | | Pd | 4788 | 1091 | 4,39 |
| 2 | Attitude | Pa | 4159 | 1150 | 3,62 |
| | | Pd | 4919 | 1080 | 4,55 |
| 3 | Organizing | Pa | 4746 | 1165 | 4,07 |
| | | Pd | 5006 | 1092 | 4,58 |
| 4 | Planning | Pa | 4075 | 1153 | 3,53 |
| | | Pd | 4812 | 1093 | 4,40 |
| 5 | Procedures | Pa | 4483 | 1159 | 3,87 |
| | | Pd | 5074 | 1100 | 4,61 |
| 6 | Problems solving | Pa | 6614 | 1744 | 3,79 |
| | | Pd | 7263 | 1637 | 4,44 |
| 7 | Strategies | Pa | 3208 | 875 | 3,67 |
| | | Pd | 3792 | 829 | 4,57 |
| 8 | TOTAL | Pa | 31441 | 8410 | **3,74** |
| | | Pd | 35654 | 7922 | **4,50** |

The research feedback is to collect the information about organization through questionnaires and their forwarding to the managers and the employees so they should be able to diagnose the problems and to be able to develop action plans for solving the problems.

The results obtained, respectively the 3.74 score for the current practice in organizations element analyzed in Galati county and 4.5 for the wanted practice, confirms the preference hypothesis for the safety and the increased adversity toward uncertainty and risk at the medium business level in Galati.

The specific indicators for the UAI dimension, calculated based on responses to the COMOR questionnaire for the 299 respondents from Galati County, are represented graphic on current practice in Figure 1, while on desired practice in Figure 2.
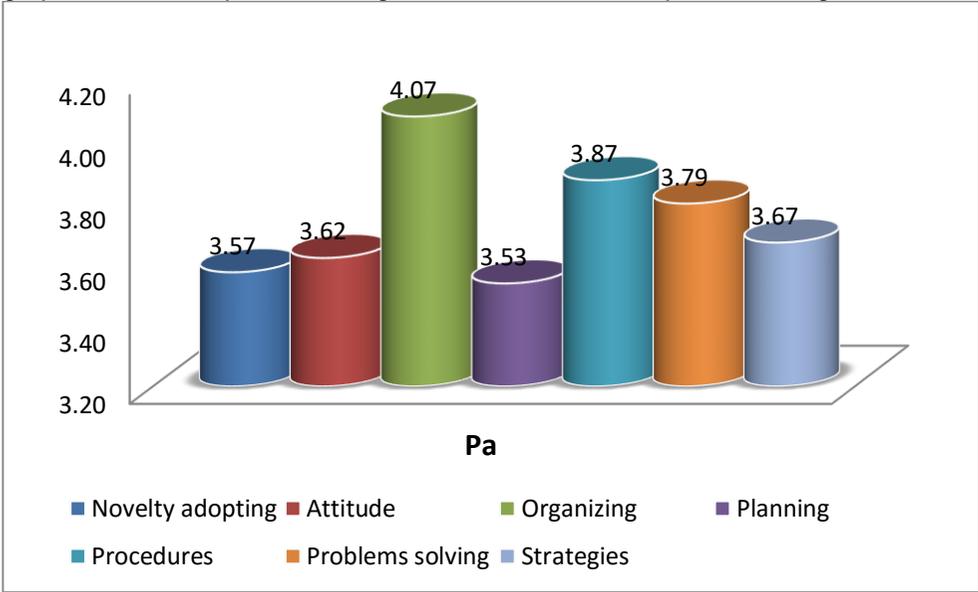


**Figure 1:** UAI indicators for current practice (Pa)

The questionnaire aims to identify the factors of maintaining the current level of performance and those that could cause a higher level of performance.
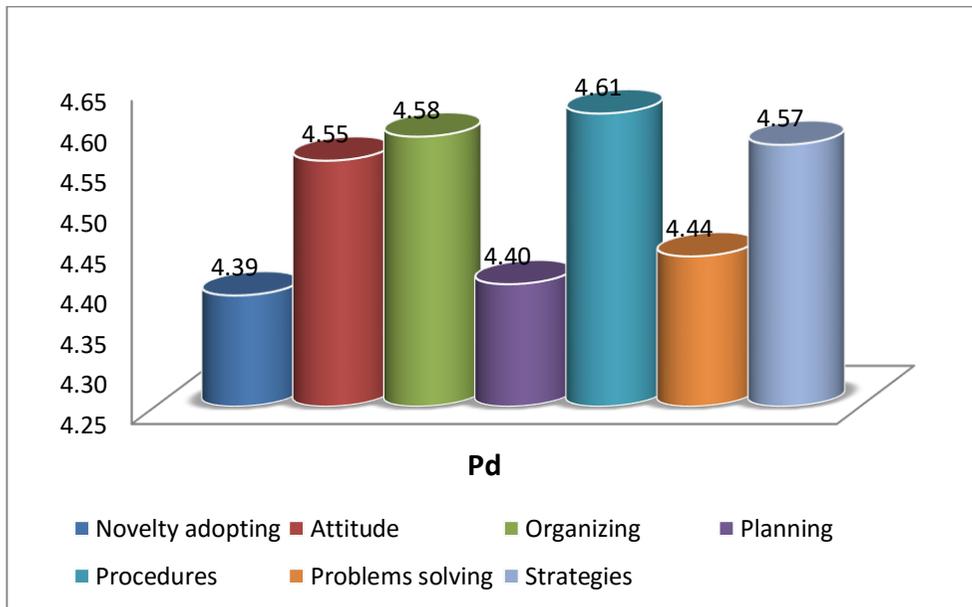
**Figure 2:** UAI indicators for desired practice (Pd)

## 4. In conclusion

We can make an analogy between organizational change and an innovation. In this matter the innovation can be defined as a technology, a product or a practice "first used by the members of an organization, regardless of the fact that was already used in other organizations" (Nord, Tucker, 1987, p.6) while its implementation is "the process to determine the appropriate and continuous use of an innovation by individual members of an organization" (Klein, Sorra, 1996, p. 1055), this idea applies equally to the organizational change. From this point of view, under the influence of developments occurring in IT the change can be understood as "an ongoing process of preparing the organization for the new system and its introduction so as to ensure its success" (Olson & Eoyang, 2001), the aim of the organizational change being a better interaction between the organization and the environment in which it evolves and a more efficient and effective method of work.

The need for change starts from the premise that the environment is changing rapidly, the organization being subjected to many pressures and challenges. Environmental actors have a great importance for the organization's work (partners, suppliers, customers, normative type organizations, legislative changes, etc.) as a result, the changes are major and rapid and the role of the management is changing, becomes an active one, the accent focusing on forecasting, commitment and resourcefulness.

The change initiation requires the leadership involvement - the top management. The problems diagnose requires a detailed analysis of the strengths and weaknesses of the organization, the obtained results constituting targets for the interventions to come.

The changes should be implemented bidirectional in order to have a successful change at the level of an organization must be superimposed the plan of change designed at the organizational level thought at individual level.

First it must be acted at the level of the organizational culture through interventions which include training programs, programs to improve the ability of solving the problems, critical analysis of current procedures and practices.

Burke-Litwin model premise is the following: the organizational development interventions on the structure, management styles and practices and the policies and upon the procedures leading to the "first order change"; interventions on the organization's mission, of the strategy and organizational culture leads to "second order changes" in the organizational system.

The organizational change must promote a dynamic organizational development of the organization's evolution, the organizational change success depending both on the quality of the solution found and the effectiveness of its implementation. (Tripon, Dodu, 2012)

If we will explore the organizational culture from Romania through the 6-D model, we can get an overview of the characteristic stimulus of Romanian culture, and, relating to other cultures of the world, an insight into how these mechanisms can become engines of society.

## 5. Acknowledgements

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# AN EMPIRICAL STUDY CONCERNING THE USE OF INTERNET BANKING IN ROMANIA

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**Abstract:** As the trend of ICT (Information and Communication Technology) development is gaining larger influence over countries' development and growth, Internet banking plays an important role in enhancing the growth of several developed and developing economies over the 21th century. Internet banking and other electronic payment systems are relatively new in Romania and is expected to result in a more efficient banking system. However, in this study we try to argue the fact that Internet banking is strategically important to the banking sectors in an emerging economy, such as Romania, by means of statistical-econometric methodology. For this I used statistical data from Eurostat and MSI for the period 2009-2013. I proposed two models to highlight the existence of a relationship between the variables. The results of the first model have pointed out the fact that the rise of number of Internet users leads to an increase of the number of Internet banking users. The results of the second model show how the indicators influence Internet Banking users and the number of transactions made by Internet Banking influences the value of transactions made by Internet Banking.

**Keywords**: Internet users, Internet banking, regression models, Romania.

**JEL classification**: C18, G21, L86

## 1. Introduction and literature review

As the trend of ICT (Information and Communication Technology) development is gaining larger influence over countries' development and growth, Internet banking plays an important role in enhancing the growth of several developed and developing economies over the 21th century.

Developments in information technology and the subsequent evolution of Internet banking have fundamentally changed the ways in which banks implement their business and consumers conduct their everyday banking activities (Eriksson et al., 2008; Sayar and Wolfe, 2007).

Many financial institutions have answered to the competitive business environment by implementing e-business as part of their business strategies. With the growth of the Internet, it is inevitable for banks to move towards providing online banking for their customers (Salari and Salajegheh, 2011). Although the current branch based retail banking remains the most common method for conducting banking transactions, Internet technologies has changed the way personal financial services are designed and delivered to customers (Wang et al., 2003).

Banks started to realize distribution as an alternative strategy for differentiation and further gaining competitive advantage (Thornton and White, 2001).

According to Saeidipour et al. (2013) the core of banks new strategic orientation currently consists of developing new alternative distribution channels. In Olteanu's opinion, the mobile phone, PC and Internet are regarded as an option that was taken into consideration (Olteanu, 2000). Despite of the development of alternative distribution channels, the branch is still the main contact source and it will continue to play an important role for many banks (Cetină and Odobescu, 2007). Its role will change by emphasizing the

personal banking services and letting the customers to make more routine transactions by means of electronic distribution channels.

There are massive opportunities that the Internet has brought to the banking industry in recent years including the rise of online banks (Alnsour and Al-Hyari, 2011).

According to Ozuru et al. (2010) the importance of electronic payment system in any country can never be over emphasized, due to the dramatic transformation in technological advancements that is being experienced by the global financial industry. Karjaluoto et al. (2002) showed that previous experience with computers and technologies and attitudes toward computers influence attitudes toward Internet banking, and also actual behaviors.

Many studies, focused on identifying the factors that may influence or affect the adoption of Internet banking, highlighted by the technology acceptance model (TAM) (Al-Somali et al., 2008; Safeena et al., 2010; Alnsour and Al-Hyari, 2011). It is important to take these factors into account when studying customer attitudes towards Internet banking, because many financial services organizations are rushing to become more customer focused. Among these factors we can mention the perceived usefulness, perceived ease of use, trust, compatibility, self-efficacy, technical resources, security, cost and time, consumer awareness, perceived risk, frequency of use.

## 2. The use of Internet banking
### 2.1 Internet banking: definitions and background

Internet banking was defined as "the provision of retail and small value banking products and services through electronic channels. Such products and services can include deposit-taking, lending, account management, the provision of financial advice, electronic bill payment, and the provision of other electronic payment products and services such as electronic money." (Basel Committee Report on Banking Supervision, 1998; Al-Somali et al., 2008)

The terms "PC banking", "online banking", "Internet banking" and "mobile banking" refer to a number of ways in which customers can access their banks without having to be physically present at a bank branch and permits the customer to conduct transactions from any terminal with access to the Internet (Deutsche Bundesbank Monthly Report December 2000).

Internet banking refers to the use of the Internet as a remote delivery channel for banking services. Such services include traditional ones, such as opening a deposit account or transferring funds among different accounts, and new banking services, such as electronic bill presentment and payment (allowing customers to receive and pay bills on a bank's Website) (Furst et al., 2000).

Attractiveness to Internet banking is enhanced by the ability to conduct a wide range of banking transactions electronically via the bank's web site - anytime and anywhere, faster and with lower fees compared to using traditional, real-world bank branches (Sonja and Rita, 2008). Internet banking allows for direct access to financial information and to undertake financial transactions with no need to go to the bank (Rotchanakitumnuai and Speece, 2003). Banking is no longer bound to time or geography. Customers are enjoying relatively easy access to their accounts 24/7. Internet banking is beneficial and advantageous for banks and their clients. The primary advantages to banks include cost savings, time savings, achieving new segments of the society, effectiveness, improvement of the bank's status and better customer service and client satisfaction (Goudarzi et al., 2013).

Moreover Internet banking offers an outstanding opportunity for selling banking services and products which increase banks competitive positions and fulfill customer's demands and provide new distribution channels and help to improves the business image and minimize cost (Currie, 2000; Lam and Burton, 2005).

Internet banking (IB) is the latest and most innovative service offered by the banks and has become the self-service delivery channel that allows banks to provide information and offer

services to their customers with more convenience via the web services technology (Safeena et al., 2010).

Internet banking is comprehensive and have a strong influence by changes in such technology, deregulation of many parts of finance, the appearance of new banking institutions, economic reformation, the environmental changing motivate banking industry to reestablish the banking structure which is more profitable and reducing expenditure cost and implement good command of control (You, et. al., 2007).

To summarize, Internet banking offers many benefits to both service providers and their customers.

## 2.2. The use of Internet banking in Romania

The increasing rate of Internet penetration has brought significant changes in the Romanian banking sector. Bank service providers have been constantly adapting to these changes and they complied with the consumers' demands with new services.

According to Roşu (2011) the development of E-banking in Romania depends on the following factors: strategic factors (new products and services, appropriate promotion, business integration, integrating different channels, expanding existing markets, building trust, costs), operational factors (good customer services, simplifying and integrating basic services, more convenient than the competitors, understanding customer purchase behavior) and technical factors (systems security, user-friendly web interface, personalization and customization capabilities, upgrading existing infrastructure).

Internet banking and other electronic payment systems are relatively new in Romania and it is expected to result in a more efficient banking system. The rapid development of Internet banking (IB) may make life easier in some ways, however, it must be remembered that the usage of the Internet is still in its infancy in some places in Romania as Enăchescu and Zaharia noticed in their research (2013). According to them, although Romania has made great strides in achieving technological parameters and taking economic and legislative measures for the development of the information society, it has a long way to recover.

As Kovacs (2014) stated in his research, the most common and preferred type of electronic banking in Romania is banking through the Internet, called Internet banking. The dates show both a tendency of increasing the number of Internet banking, but also an increase of the number of transaction in LEI by electronic banking services between 2009-2013. Further on we calculated the Population Index, Internet users Index, Internet Banking users Index to highlight the increase / decrease of the indicator against the previous year, as shown in Table 1.

**Table 1:** The dynamics of the population, Internet and Internet Banking users in Romania and its influence factors

| Year | Population Index | Internet users Index | Internet Banking users Index | Average number of transactions (in LEI) made by Internet Banking Index | Average value of transactions (in LEI) made by Internet Banking Index |
|------|------------------|----------------------|------------------------------|------------------------------------------------------------------------|-----------------------------------------------------------------------|
| 2009 | 100 | 100 | 100 | 100 | 100 |
| 2010 | 99.29 | 112.35 | 271.66 | 208.16 | 299.58 |
| 2011 | 99.53 | 106.47 | 143.23 | 134.43 | 192.88 |
| 2012 | 99.49 | 112.47 | 91.64 | 113.86 | 97.51 |
| 2013 | 99.62 | 111.12 | 120.05 | 121.31 | 119.53 |

Source: Eurostat and www.mcsi.ro data processed by the author

Even though the number of population is decreasing, the number of those who used the Internet and Internet Banking is increasing. The most spectacular growth can be noticed in

Internet Banking users, average number of transactions (in LEI) made by Internet Banking and average value of transactions (in LEI) analyzed by Internet Banking indicators studied in 2010 against the previous year. A setback can be noticed in 2012 both for the Internet Banking users and the average value of transactions (in LEI) analyzed by Internet Banking indicators even though the indicators of Internet users and Average number of transactions (in LEI) made by Internet Banking had an increasing trend.

Due to the Regulation of the Romanian National Bank concerning the transactions made through the instruments of electronic payment and the relations between the participants to these transactions, the payment instrument with distance access is the one that allowed the owner to have access to the funds existing in his/her bank account and through it having the opportunity to make payments to a beneficiary or other type of operations of funds transfer (Buhociu et al., 2009). According to the authors, in Romania, even if the banks have implemented different systems of electronic bank services, the clearing part still suffer, as long as it does not have an electronically system base.

In Romania, 28 out of the 30 commercial banks and 7 out of the 9 subsidiaries of the foreign credit institutions implemented and offer now Internet banking services. The continuous development of the supporting technology, information security and e-banking strategy are reflected on the increasing number of the Internet banking customers.

## 3. Research Methodology

We used in this study statistical data according to Eurostat for Romania and MSI (Ministry for Information Society) for the period 2009-2013 and the average of these indicators, respectively:

- Internet users - whether they use it from home, work or from anywhere else and whether it was for private or work/business related purposes- in million people
- average number of Internet Banking users- in million people
- average number of transactions (in LEI) made by Internet Banking
- average value of transactions made by Internet Banking, in billions of LEI

In order to establish a model up to the entire surveyed population, we have applied the linear multiple regression method. It is an analytical method of studying the link between two or more variables with the means of a mathematical function which expresses the form of the relationship between the variables.

The regression function has the general form:

$$Y = f(x_1, x_2, \ldots, x_n) + \varepsilon$$

where: Y-is the dependent variable, the effect phenomenon

$x_1, x_2, \ldots, x_n$ - is the independent variable, the influence factors

*n*- number of independent variables

$\varepsilon$ – a constant factor that synthesizes the influence of the unrecorded factors.

## 4. Main findings

I proposed two models to highlight the existence of a relationship between the variables. Within the first regression model, the dependent variable is provided by Internet Banking users, the Internet users variable represents the independent variable. To process the data we used Excel that provides a set of tools for data analysis.

**Table 2** Regression results for the first model

| MODEL SUMMARY | R | R² | Adjusted R² | Standard error | |
|---|---|---|---|---|---|
| Model | 0.860 | 0.739 | 0.653 | 0.579 | |
| **ANOVA MODEL**[a] | *Sum of squares* | | *Mean square* | *F* | *Sig. F* |
| Regression | 2.866 | | 2.866 | 8.528 | 0.061 |
| Residual | 1.008 | | 0.336 | | |
| Total | 3.874 | | | | |
| **COEFFICIENTS**[b] | **Unstandardized coefficients** | | t-Stat | P-value | |
| | *B* | *Std. error* | | | |
| (Constant) | -3.064 | 1.865 | -1.643 | 0.198 | |
| Internet users (IU) | 0.564 | 0.193 | 2.920 | 0.061 | |

Notes: [a]Dependent variable: Internet Banking users (IBU). [b]Predictors: (constant variable), Internet users.
Source: made by the author

The value of $R^2$ statistic is 0.739 (Table 2) and it shows the goodness of fit, 73.9% of total variance of the dependent variable. Internet banking users (IBU) is explained by independent variables, respectively Internet users (IU). The equation of the linear regression model has the following form:

$$IBU = -3.064 + 0.563 \cdot IU + \varepsilon \qquad (1)$$

The increase of the Internet users by one unit value (one million people) leads to an increase of Internet Banking users with 563.000 mil people.
Figure 1 for model (1) shows a linear dependence trend (straight shape) between the two variables which justifies the choice.
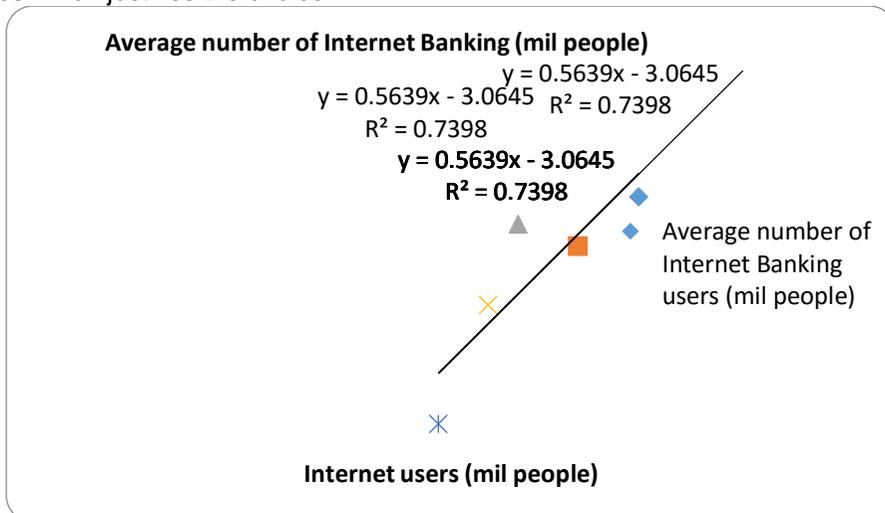


**Figure 1: The relationship between the** Internet users and the average number of Internet banking users
Source: made by the author

Within the second regression model, the dependent variable is provided by the average value of transactions (in billions of LEI) made by Internet Banking, the average number of Internet Banking users (ANIBU) and average number of transactions (in LEI) made by Internet Banking (ANTIB) representing the independent variables.

**Table 3** Regression results for the second model

| MODEL SUMMARY | R | R² | Adjusted R² | Standard error | |
|---|---|---|---|---|---|
| Model | 0.988 | 0.976 | 0.953 | 28.087 | |
| **ANOVA MODEL[a]** | Sum of squares | | Mean square | F | Sig. F |
| Regression | 65466.229 | | 32733.114 | 41.491 | 0.023 |
| Residual | 1577.818 | | 788.909 | | |
| Total | 67044.047 | | | | |
| **COEFFICIENTS[b]** | Unstandardized coefficients | | t-Stat | P-value | |
| | B | Std. error | | | |
| (Constant) | -63.110 | 35.799 | -1.762 | 0.219 | |
| ANIBU | 75.414 | 50.433 | 1.495 | 0.273 | |
| ANTIB | 12.345 | 11.140 | 1.108 | 0.383 | |

Notes: [a]Dependent variable: average value of transactions (in billions of LEI) made by Internet Banking. [b]Predictors: (constant), average number of Internet Banking users, average number of transactions (in LEI) made by Internet Banking.
Source: made by the author

The value of $R^2$ statistic is 0.976 (Table 3) and it shows the goodness of fit, 97.6% of total variance of the dependent variable. The average value of transactions (in billions of LEI) made by Internet Banking (AVTIB) is explained by independent variables, respectively average number of Internet Banking users (ANIBU), average number of transactions (in LEI) made by Internet Banking (ANTIB). The equation of the multi-linear regression model has the following form:

$$AVTIB = -63.11 + 75.414 \cdot ANIBU + 12.345 \cdot ANTIB + \varepsilon \qquad (2)$$

This model shows that an increase with one unit value (one million people) in the number of Internet Banking users leads to an increase on average with 75.414 billions of LEI in the value of transactions made by Internet Banking. At an increase with one unit value (one million) of the number of transactions (in LEI) made by Internet Banking, the value of transactions made by Internet Banking increases on average with 12.345 billions of LEI.

## 5. Conclusions

Nowadays, the Internet has penetrated every aspect of life. Internet banking is gaining ground and has affected people's lives in many ways.

Internet banking has become an important phenomenon in the banking industry and it will continue as more progress is made in information technology. Another aspect is the continuous development of the user interface. With the growing amount of information and transactions, the development of Internet technologies and increasing experience of users, the simplicity and logic of the Internet banking environment needs continuous updating and overlooking to ensure that the offered solution is as client-friendly as possible.

The Romanian banking industry needs to change in order to keep up with the globalization movement. There are still a few banks that need to move from traditional distribution channel banking to electronic distribution channel banking.

The results of the model (1) have pointed out the fact that the rise of the number of Internet users leads to an increase of the number of Internet banking users. The results of the model (2) showed how the indicators influenced Internet Banking users and the number of transactions made by Internet Banking influenced the value of transactions made by Internet Banking.

The usage of Internet banking has a future in a country with an emerging economy such as Romania.

This study may contribute to the development of strategies for Romanian managers on how to maximize the rate of Internet banking usage.

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# PROJECT-DRIVEN SOFTWARE BUSINESS IN TRANSILVANIA – A CASE STUDY

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**Abstract:** *The fairly low salaries of the IT workers compared to the Western countries, the skills and the location have supported outsourcing become one of the most competitive Romanian sectors. IT sector in Romania maintains a steady growth favoured by outsourcing companies. Moreover Romania is highly competitive when you take into account the level of technical proficiency and soft skills in the country. Romanian labour force can drive relevant projects even in small teams. This case study explores the realty of Romanian IT companies profiles. It presents in comparison two companies bases on organizational and strategic dimensions: project approach orientation, leadership, project value driven, and social responsibility. The corporate goal of the first company presented in the case study - Fortech - is to achieve the best adaptive organizational structure which can sustain its competitive advantage. This advantage results from combination of three main ingredients: scaled up human resource capital, versatile knowledge management and adaptability to customer needs. Fortech manages and administrates and execute their business activities using project management methodologies and practices in order to achieve the strategic goals. On the other hand Dolphin Kiss Company is a "Python boutique agency" created around a single contract and organized on a single project. The project was contracted with a top company from telecommunication industry. The company is a small team of creative software engineers focused on developing a very innovative software business solution. This case study is an empirical qualitative research intended to depict the main differences between two relevant company profiles present in the actual economic context: small team – results oriented – highly skilled VS large structure of outsourcing teams – matrix organized – customer oriented. The case study constructs a space for debates regarding the potential evolution of the IT labour market on the mid and long run: How IT companies can adapt their strategies to global demand? Is outsourcing viable on the long run? can be just few questions for debates and interactive learning.*

**Keywords:** outsourcing, project value, strategic orientation, software business, labour force, project management

**JEL classification: J2, D4, L1**

## 1. Context and Companies

The case considers two software developing companies from Cluj-Napoca, Romania.

The first company is Fortech SRL and from the description of the company on their website, Fortech SRL *"… is a top Romanian IT outsourcing provider, offering customized software development solutions and IT support services (www.fortech.ro). […] Fortech is an IT outsourcing services provider. With a team of more than 260 software engineers and more than 10 years of experience in the field, Fortech is a reliable partner for collaborations in the area of IT outsourcing. We have proven expertise in a wide range of technologies, complemented by strong processes and methodologies for successfully*

*managing software projects."* The Fortech slogan is "+IT high quality, near shore price". Fortech has international business partnerships in USA and Europe.

The second company is DolphinKSS SRL from Cluj-Napoca, Romania. Accordingly with company's website presentation, *"Dolphin Kiss is a small company founded in 2007 in Hong Kong. We first started doing web projects, but two years later, new business opportunities led in the relocation of the company to Finland. In 2011, we have decided to expand the company and start a new team in Cluj-Napoca. Currently we are a team of 9 people, 7 located in Cluj-Napoca and 2 abroad. We develop smart software solutions, by Keeping It Simple Stupid, focus on our customers' demands by being smart and reactive and don't enforce stupid processes that slow things down."*

| # of companies | Turnover | | | | |
| # of emplyees | [ 107K, 448K) | [ 448K, 961K) | [ 961K, 2242K) | [2242K, 1210K] | Total |
|---|---|---|---|---|---|
| [10, 16) | 48 | 21 | 8 | 1 | 78 |
| [16, 28) | 24 | 39 | 12 | 2 | 77 |
| [28, 57) | 5 | 17 | 39 | 16 | 77 |
| [57,2276] | | | 18 | 58 | 76 |
| Total | 77 | 77 | 77 | 77 | 308 |

Source: Register of Commerce, 2013

For Fortech and Dolphin Kiss companies the strategic intent, organizational design and operational actions are the reflection of their management analysis and decisions.

Fortech organizational goal is to achieve the best adaptive organizational structure in order to gain competitive advantage combining three main ingredients: scaled up human resource capital, versatile knowledge management and adaptability to customer needs. They plan, administrate and execute their business activities using project management methodologies and practices in order to achieve the strategic goals.

Dolphin Kiss is a "Python boutique agency". I prefer to use this label because it encapsulates very well the company's characteristics regarding organizational design and strategic goals. Actually, the term "boutique agency" is largely used in advertising. A boutique agency is a small advertising company focused on creative aspects of developing advertisements, but the term was also imported in other fields (Darr, 2003). Boutique agencies work is highly creative; they are small teams and the members may work contract based or as freelancers to get a specific task for particular projects. They are qualified and paid accordingly. The clients, a small list in general, approach boutique agencies to ask high quality creative work or niche products and services. "Python", in the label, states for the high-level, structured, open-source programming language created by Guido Van Rossum in the early 1990s. Python was used by Dolphin Kiss for a wide variety of programming tasks during the product development. Nevertheless in the company were used many state-of-the-art technologies for the project product development; I opt for this 'Python' label to emphasize the preference of the company for the open source technical solutions in general.

Dolphin Kiss was created around a single contract and has organized its business activities on a single project around this contract. The project was contracted with a top company from telecommunication industry. The project had a well defined triple constraint: Time – the estimated duration of the project was three years and it took in fact three years and four months. The scope of the contract was to build a software web application for data analysis and content management of the telecommunication operations and data. The company owner, who was the project manager in the same time, hired employees and contracted freelancers to build a small team of creative software engineers focused on developing a very innovative software business solutions.

## 2. Case Companies Classification

Accordingly with CAEN (National Classification of Economic Activities, code 620), NACE (Classification of Economic Activities in the European Community) and ISIC (International Standard Industrial Classification) both companies Fortech (Figure 1) and Dolphin Kiss (Figure 2) are part of the same industry: Information Technology and Communications. According with information from Registry of Commerce, and based on profit accounted in the annual balance sheet of 2011, Fortech is on the 3rd position in Top 5 profit of the big IT&C companies in Cluj County, and on position 40 overall IT&C companies at national level. Dolphin Kiss is on 2nd position in the Top 5 profit of the small companies in software business from Cluj and on position 130 overall IT&C in Romania.
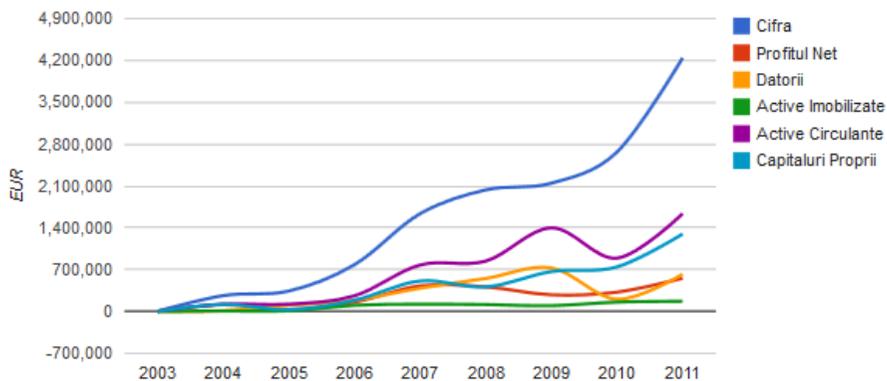


**Figure 1:** Fortech SRL financial public information
Source: Register of Commerce, 2011
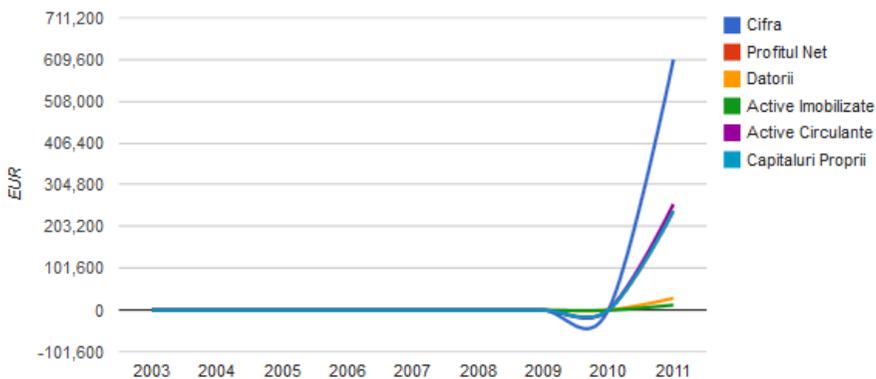


**Figure 2:** Dolphin Kiss SRL financial public information
Source: Register of Commerce, 2011

## 3. Organizational Design of Project Driven Organizations

To achieve their objectives, companies may organize their resources and effort based on two main broad approaches: projects and operations. Operations are repetitive processes and activities for undefined period of time; projects at their kernel are defined by the triple constraint: time – they are temporary, scope - create a unique result, and cost. An

expanded definition of triple constraint includes moreover the risk and the quality (Mulcahy, 2005). A program is a group of projects with a coordinated management because they use the same resources pool, are interrelated or are part of a bigger project (Mulcahy, 2005). Considering authority, responsibility, resources distribution and information flow in organization there are three distinct categories in the market structure (Figure 3):

- Functional Organization;
- Matrix Organization;
- Projectized Organization (Greene and Stellman, 2009);
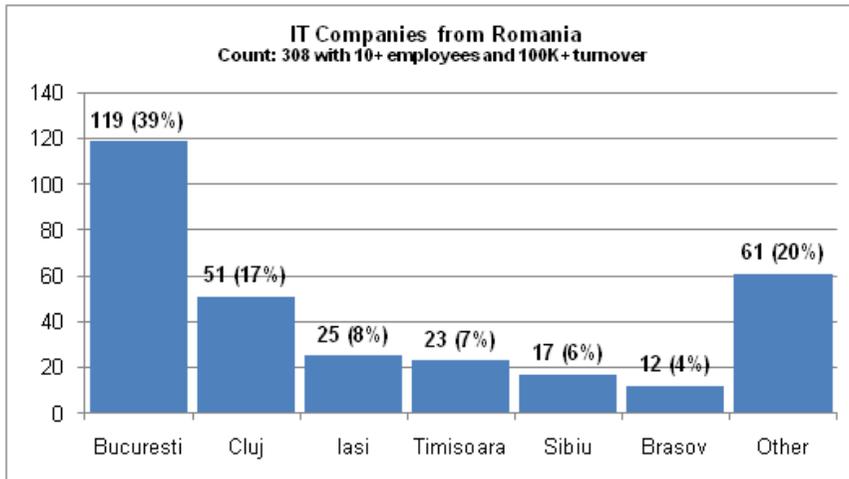


**Figure 3** IT Companies financial public information
Source: Register of Commerce, 2011

In functional organization the departmental managers have all the power over resources; in project organizations the authority is given to project manager by the sponsors of the project; in matrix organization there is a share of authority and responsibility between functional managers and project manager. The matrix organizations purpose is to take advantages from both designs, functional and projectized. The matrix organization on its turn might be polarized on the same dimension such as we talk about week matrix when the authority and decisions are balanced in favor of functional managers, and we talk about strong matrix when the authority is balanced in favor of project managers.

In project-driven organizations teams are organized around projects. They might come from different departments in a matrix organization. In highly projectized companies personnel is contracted independently or hired just for a specific project development.

In project-driven organizations project managers have the whole responsibility and authority over the project in terms of budget and schedule. Project managers choose the team members and release the team at the end of the project. In management literature it is made a distinction between projectized organization which has no hierarchical structure and project-driven organization which includes both matrix and projectized organizations, also called pure product organizations (Kerzner, 2009).

The project manager reports to the project sponsor and she is accountable to the stakeholders. A stakeholder is anyone who is positively or negatively affected by the project.

Fortech is organized by units which are managed by program managers. Fortech has a strong matrix design. Each unit manager has a portfolio of projects. All activities from a unit of the company are organized by projects and all project managers report directly to both unit managers and sponsors. Units (or program) managers have authority and

responsibility over the scope, budget and resources of the projects. Program managers' work concentrates in initiating and managing process groups. Also their role is very important at the end of the projects in closing process group. They have to release the team from project and in the same time to find another project for them to be allocated onto. This is a key responsibility of the program managers. At this point they become a sort of functional managers responsible for the human resource component of the organization. The main management drivers of the organizations are the unit managers. They report to CEO. Between unit managers, CEO, functional managers there exists a high level of cooperation and communication, aiming to optimize the effort of the organization.

Project managers are positioned in the third hierarchical layer. They are more coordinators of the project teams. Project managers assure good communication in the project between the sponsor, team members and program manager. Moreover they are technical leads of the teams. The project managers' work is concentrated in executing, monitoring and controlling processes groups.

On the other hand, the company design has in the top of the organizational matrix a simple and small functional structure with a dozen of people. The chief executive officer, who is also the main shareholder of the company, concentrates his work on business strategy, growth opportunities and corporate partnerships. The company has a human resources department, a marketing department, a financial department and IT department responsible for the information technology infrastructure. The functional department's roles are to support the unit managers for the projects and programs managed in the organization. The functional departments supply services, support and resources (personnel recruitment and training, financial management and accountancy, IT maintenance, etc.) for the whole organization.

Dolphin Kiss is a highly projectized company, a pure product organization. The team is managed by a full profile project manager. He is also the owner of the company. All supportive business activities, as accountancy, logistics, etc. are externalized. The company was built in 2009 having as a prerequisite a certain contract signed between the company owner and the sponsor of the project. The scope of the project was highly innovative and risky, but somehow counterintuitive, the critical points of the business have been the initialization phase of the project and not the execution of the project. The Dolphin Kiss owner, helped by a freelancer software architect, proposed a highly technical software solution to a leader company from telecommunications industry. Initiating processes have been difficult due to contract issues, business need documentation, stakeholder identification made. I estimate that the closing phase of the project will be another critical point for the Dolphin Kiss evolution.


## 4. Distributed Leadership - Authority and Decision in Flat Organization

Responsibility in the organization is the duty or obligation to complete a specific act or assignment. Authority is the power to exact obedience and make decisions to fulfill specific obligations. From these two results, accountability means: being answerable for success or failure (Forsberg et al., 2005).

Obtaining the optimum mix of vertical and horizontal accountability structure within one company is not an easy task. Frank Ostroff, a consultant at A.T Karney's Transformation Practice, identifies a set of principles to follow for the design and management operations of horizontal organizations. Regarding the horizontal companies organizations he mentions:

"Make teams, not individuals, the cornerstone of organizational design and performance";

"Decrease hierarchy by eliminating non-value-added work and by giving team members the authority to make decisions directly related to their activities within the process flow" (Hodge, 1999);

Also Ostroff emphasizes that the flat organization is unique and he states clear that horizontal organization is not cure-all but can be a reputable solution for certain contexts. He shows that horizontal structure has been applied with success to diverse organizations as Ford and Health Administration (Rouse, 1998). An important bet and hypothesis in the new 'flat' world is: that a network-centric organization will be about superior decision-making by those closest to the action. The networked, matrix and project-driven organizations distribute the accountability and leadership to entire people structure of the organization.

On the other side there are conservative opinions that the latest trend of horizontal organization that promised to reduce the cycle times, to lower the cost and increase the quality, may not be the anticipated panacea. Even though there are two things accepted:

Decentralization is going to be the standard in the new organizations;

Every organization will use a hybrid mix of functions, processes, strategic business units and business teams (Stalk and Black, 1994);

Historically, people are trained to follow directions, and let others make decisions, but nowadays, when data and information can be highly available to all, local decision–making should be taught and encouraged (2003). Management expert Tom Peters in his book 'Liberation Management' describes the emergent organizations of the next century. One of his central questions is: What will replace the traditional ladder of success in "these flat, flexible, and furiously changing organizations? […] There's not going to be much of a pyramid left to climb. So how will people get their kicks?" (Peters, 1993).

When it comes to payment systems things are quite different from a flat to an horizontal designed organizations. Brown research concluded that the choice between a flat and hierarchical structure is important, and he noticed that workers under a flat rate structure perceived their pay to be fairer; these workers experienced higher levels of satisfaction (Brown, 1999).


## 5. Value-driven Project Management and Value-driven Organizations

Regarding the corporate goals and value aimed, we assist nowadays to a swift from a unitary focus on returns to shareholders to a multi-dimensional focus on the value for multiple organizational and project stakeholders. Inside the organization, people are more and more considered an asset that should be developed, cultivated and coordinated and not commanded and controlled (Malone, 2004). Theory Y of McGregor is gaining more acceptance and implementation surpassing Theory X which states that people are a cost that should be monitored and controlled (2003).

Projects do not operate in vacuum. Projects are developed into organization with a matrix design or are run outside of a well structured organization but in a certain socio-economic context or specific industry e.g. film industry, software business, pro-bono projects, etc. When run into matrix organizations projects are influenced by the organizational culture, management policies and procedures. In the same time organizations can be seen as a shell medium between individuals and socio-economical context. Organization acts as a protective buffer against socioeconomically uncertainty; in turn the people business effort concentrates on the organizational goals. Opposite in projectized organizations companies may not support, not even short and medium term, job security. Career concept does not exist specifically in projectized organization. The career concept might be a personal perception regarding work and personal development and is not a social perception at organizational level, a ladder that can be accessed. In a projectized organization when the project is over, team members and project manager do not have a department to go back to. They need to find another project which usually means another job or another employer (Mulcahy, 2005).

When we are to talk about value in project management, the first question that pops up is: "The value to whom?". A well articulated answer should take into consideration the perspectives all of the different types of stakeholders of the project.

To understand better the organization value, there should be answered the following questions:

- What are the goals of the organization?
- Whose interest are being served by organization? (Management et al., 1999)

Charles Handy, an Irish author and philosopher, specialized in organizational behavior and management, developed a series of ideas around these two important questions. Among the ideas Charles Handy has advanced are the "portfolio worker" and the "Shamrock Organization". Regarding the question "whose interest are served by organization?" Handy identifies six kinds of "stakeholders" of the organization: Customers, Employees, Investors, Suppliers, Environment, Society as a whole (1995).

By identifying the value of the organization for each of these stakeholders we will determine an overall value of the organization.

When it comes to general project management frameworks a stakeholder is anyone who is affected by the cost, time, or scope of the project (Greene and Stellman, 2009). A stakeholder may impact project positively or negatively. The main stakeholders are:

- The project manager;
- Project team;
- The performing organization;
- The customer;
- The sponsor;
- The project management office (Mulcahy, 2005);

In project-driven organizations the role of stakeholders is very important. The overall value of a project is influenced by stakeholder's actions. Mulcahy specified that to manage the stakeholders the project manager has to:

- identify all the stockholders of the project;
- determine their requirements expectations;
- communicate with stakeholders;
- manage their influence over the project (Mulcahy, 2005);

Moreover to maximize the value created, captured and delivered by project management, a project manager has to:

- understand their perceived value of the project;
- manage the impact on the organization, the impact on company strategy and long term objectives;
- go beyond the immediate expectations; go beyond transactional elements; project managers have to see in perspective to the whole value chain of the organization not only to the triple constraint of the project.

Ideally the definition of value is aligned with the strategic objectives of both the customer and the contractor (Kerzner et al., 2009). This is not always the case. Furthermore, we need to define more detailed the value of the project. Considering points of view of the different kinds of stakeholders of a project we understand that value driven by projects can have many definitions. Different stakeholders with different perceptions for the project value can influence differently the project outcomes in particular and the company strategy in general. Not all the projects are strategic but many times they are part of a value chain and part of the company performance. Therefore projects should not be treated separated when counting value in project driven organizations.

## 6. Project Value, Future Organization and Psychological Contract

To understand the value of new forms of organization and the value of organizations driven by projects we have to understand the changes during the last decades. In attempt to draw these changes we rise following questions:

- What are people for organization culture: a labor force with a certain cost or human assets?
- Decision is empowered 'a priori' by the design of organization hierarchy or decision distributed and based on knowledge?
- Organizational strategy and objectives are centered on shareholders priorities or depend on value delivered to the all stakeholders?

The knowledge-based organizational perspective understands workers as human assets who create the value of the organization. These organizations invest and put at risk some of their human capital. Making an explicit link between people's personal needs and business goals can be a catalyst for changing work practices. In the end, both the company and the employees benefit. These kind of organization people oriented shouldn't' choose between the goals of the business and people's needs. They have to go beyond and connect work and personal lives of their people through a dual agenda that reframe the conflict into an opportunity for innovation and change (Bailyn et al., 1997).

O'Neill and Adya in their research sought to better understand the different psychological contract perceptions of knowledge workers at various stages of employment. Different psychological contracts exist at various stages of employment. An employee's willingness to share knowledge may be contingent on whether the organization equitably fulfills its reward obligations. Managers must properly assess the nature of psychological contracts maintained by such workers so that knowledge-sharing messages address employees' key motivators. They find that workers are keenly aware of the impact of their knowledge. Moreover an effective management for sharing rather than hoarding is a critical success factor for knowledge-intensive organizations (O'Neill and Adya, 2007).

Fortech organizational structure is highly flexible. The company has a well defined organizational design, but members can move from a project to other, from a unit to other, from a technical position to a management position and vice versa, and all of these depending on their interests, values, and career scope; on the other side there are limitations in this sense imposed by work performance, by the company goals, strategy and nevertheless by the ongoing projects processes.

## 7. Project Management Tools and Techniques in Matrix Organizations

Project management as practical discipline and scientific domain developed tremendously in the last decades. There are dozens of membership-based organizations and non-member affiliations dedicated to promoting, developing and certifying project managers. There are a number of approaches to managing project activities including lean, iterative, incremental, and phased approaches. Regardless of the methodology employed, the core project traits are: objectives, timeline, and cost, as well as the roles and responsibilities of all participants and stakeholders.

Another main characteristic of the projects is that they are progressively elaborated. The things change to enhance better the project objectives (Greene and Stellman, 2009). To keep track of the project work elaboration there have been developed many tools and techniques. These tools and methods evolved rapidly. Technologies as the internet, web, networking, PM software programs, groupware assist project management a great deal to improve efficiency. Thomas Malone states that the dominant business organization of the future may not be a permanent corporation but rather an elastic network. Dolphin Kiss can be considered a small dynamic working network. From this perspective Dolphin Kiss is a temporary company where people are organized around a project, which is based more on an electronic network and less on social contact. In fact project team is partially dislocated

and the contact with the main stakeholders (sponsor and business owner) is realized via internet tools and means like Skype and WebEx.

Both Fortech and Dolphin Kiss use 'agile' management. Agile management or agile project management is an iterative method of determining requirements for engineering and information technology development projects in a highly flexible and interactive manner, for example agile software development. It requires empowered individuals from the relevant business, with supplier and customer input. Agile techniques are best used in small-scale projects or on elements of a wider program of work, or on projects that are too complex for the customer to understand and specify before testing prototypes (2013).

Both in Fortech and Dolphin Kiss, the project work coordination and control is supported by software technologies as: version control systems (VCS), source code management systems (SCM), issue tracking, bug tracking, and project management software tools. Nevertheless there are main differences in how these two companies uses tools and technologies to conduct their businesses. These differences are given not only but the scale and diversity of the businesses and human resources but also by their strategic goals and inherent organizational design. So, Fotech is more interested than Dolphin Kiss to capture the benefits of people connections and lessons learned; Fortech are interested not only in the good workflow process of certain project, which is a basic request, but they aim to improve the means of organizational learning. For Fortech the people, the knowledge and innovation are the main sources of competitive advantage. They manage people in the long term approach. Dolphin KISS seeks a strictly tactical relation with people. This relation is centered on immediate project results. Fortech invests continuously in people relations, and soft people network infrastructure is supported with powerful technical solutions. By this I mention not only the IT network infrastructure, but a set of specialized software applications developed for organizational relations with their teams and individuals. Technology sustains knowledge management to be a competitive advantage of the organization and supports decision making of the workers.

Fortech is a cooperative environment. The management executives accept that whenever there is a trade-off between immediate profits and investment for breeding the competitiveness, the latter has to prevail. The Company invests continuously in training and personal development and they understand the value of cooperation: leveraging the knowledge of one another creates a greater wealth and sustainability for entire company. Furthermore, this idea is captured in company strategy.


## 8. Conclusion

If we can consider an extrapolation, social responsibility could be in the top of Maslow's pyramid correspondent of the corporate ecosystem. Social responsibility represents how well an organization serves the interests of society as well as itself. Regarding the value driven by projects in organizations, the social responsibility is the broadest and the less measurable goal that can be aimed.

Howard R. Bowen states in his book 'Social Responsibilities of the Businessman' that public responsibility, social obligations, and business morality are synonyms for social responsibility (Jr, 1989). He describes the term social responsibilities of businessmen: "It refers to the obligation of businessmen to pursue those policies, to make those decisions, or to follow those lines of action which are desirable in terms of objectives and values of our society."

Fortech in contrast with Dolphin Kiss is highly active regarding social responsibility, especially philanthropic giving. Philanthropic giving actions are organized with regulation by the company through human resource department activities. For example all major holydays implies preparation of giving acts. These acts imply both organization founds and people gifts for the benefit of social categories with special needs or under-privileged.

These two companies do not see Social responsibility as an investment. Actually, social responsibility can be hardly seen as an investment in Eastern Europe countries due to the lack of information, effort and legal framework for such social practices. Even Milton (Jr, 1989), a promoter of social responsibility concept, stipulates that a company may participate in social responsibility activities if the marginal gains exceed the marginal costs. A popular major argument against a Romanian company becoming involved in social responsibility activities is if the government wants businesses to support social activities, it should give them adequate incentives to do so.

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# THE CONVERGENCE OF ROMANIA WITH THE EUROZONE IN TERMS OF FINANCIAL INSTITUTIONS

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**Abstract:** *This study examines the integration of Romanian monetary system into European one and the transmission of liquidity shocks from eurozone to Romanian monetary market. Since Romania become a member of European Union, most of the Romanian banks are mainly provided by financial institutions placed in Europe. With the accession of Romania to the European Union, has started a process of integration of the national banking system into the eurozone banking system and thus, domestic financial institutions has began to be increasingly more subject to liquidity conditions and external contagion liquidity risk in the eurozone. In some periods, between EU accession and until the beginning of 2014, Romania has managed to reduce the volatility of the daily rates of monetary policy, compared with the eurozone, where, in the same periods, were recorded high volatility of monetary policy interest rates. Partial decoupling of the two money markets can be explained by economic stabilization policies adopted by Romania by improving the liquidity of the financial institutions and national measures taken by monetary policy makers in Romania. The main conclusion of this study is that the domestic banking sector is only partially integrated in the European banking sector in terms of money market liquidity and liquidity risk, and creating a stable framework for liquidity in Romania requires a mix of fiscal and monetary policies conducive to the development of financial instruments in long-term. However, the analysis shows that the sensitivity of liquidity in the Romanian banks to adverse developments on the European money market has increased and the ability of the internal factors to predict the liquidity conditions in national banking institutions is still high. Considering these aspects, we can say that, when we analyze liquidity risk in the Romanian banking system, we must take into consideration the influence of the external factors.*

**Keywords:** Monetary integration, liquidity risk, financial markets, eurozone, EURIBOR, ROBOR, financial crisis

**JEL classification:** F62, O11

## Introduction

An important condition for Romanian banking system to finance the real economy is represented by a strong position of banking liquidity. To outline some conclusions regarding liquidity risk in Romanian banking sector is essential to analyse the interbank markets. Along with Romania's accession to the European Union in 2007, the integration of Romanian banking sector in the European banking sector has accelerated. Due to this increasingly powerful integration, Romania exhibited to negative outlook brought by the international financial crisis in emerging European markets through the external contagion risk, thus bank liquidity decreased a lot. By evaluating external contagion it is provided a separation of the influences that internal factors have on the national interbank market liquidity to shape up the measures necessary to implement locally in order to stabilise the banking sector in terms of liquidity. Because the financial markets ability to incorporate

new information in a relatively short time, they were the first component of the national financial system to react to external shocks.

The financial turmoil triggered in late 2008, along with the bankruptcy of Lehman Brothers, were rapidly transmitted to domestic financial markets, but their effect in the banking sector in Romania was felt in early 2009. For a more accurate understanding of the context in which the liquidity risk in the national interbank markets is analysed I have to mention that along with Romania's accession to the European Union a process of privatization of the Romanian banking institutions began, and at this point the majority of banks in our country are held by European financial institutions. The purpose of this research is to identify whether liquidity shocks in the European financial system are transmitted to the Romanian banking system through money market.

**Litereature review**

Ashcraft A. McAndrews and J. Skeie (2009) studied the liquidity for banking groups in the developed countries, in terms of interbank markets. Beirne J., Caporale G.M., Schulze-Ghattas M., Spagnolo N., Diebold F. Yilmaz, K (2009), Ehrmann M., Fratzscher M., Rigobon R. (2010) and Kadow A., Cerrato M., MacDonald R., Streaetmans S. (2013) studied the contagion from developed capital markets to emerging capital markets.

**Methodology**

To assess the degree of integration of the Romanian banking system into the European banking system and to analyse the money market liquidity, I model the volatility of interest rates EURIBOR3M and ROBOR3M with GARCH and EGARCH models. I use these interest rates because are representative for the two money markets and their direction of evolution provides important clues about the behavior of investors in the two financial markets.

In order to determine the liquidity conditions in the domestic banking sector relative to the degree of liquidity developments in the euro area banking sector, is required to model the interest rate volatility in the two areas. The GARCH model implies that changes in volatility time series in financial markets can be expected due to the nonlinear dependence of the historical and present volatility.

$$\varepsilon_t{}^2 = \alpha_0 + \sum_{i=1}^{q} \alpha_i \varepsilon_{t=1}^2 + \sum_{i=1}^{p} \beta_i \sigma_{t=1}^2$$

EGARCH model identify periods of volatility and captures asymmetrical variations. Using EGARCH model, we can get clear information about the evolution of the Romanian and euro area banking sector liquidity during the financial crisis.

$$\varepsilon_t = \sigma_t Z_t$$
$$\log(\sigma_t^2) = \omega + \sum_{j=1}^{p} \beta_j \log(\sigma_{t=j}^2) + \sum_{i=1}^{q} \alpha_i g(Z_{t=i})$$
$$g(Z_t) = \theta z_t + \lambda(|z_t| - E(|Z_t|))$$

**Data**

In order to apply this methodology, I selected the following indicators: the interest rate on euro area money market with 3 months maturity, EURIBOR3M and the interest rate on Romanian money market with 3 months maturity, ROBOR3M.

The time series have daily frequency, between January 2007 and April 2014. The sources from which the data were collected are the website of the central banks from Romania and Finland.

**Empirical results**

The eurozone interest rate with a maturity of over 3 months, EURIBOR3M, evolved on an upward trend before the global financial crisis begun (2008), due to inflationary pressures and robust economic growth, but immediately after the bankruptcy of Lehman Brothers in 2008 entered into a stressed downtrend because of the successive reduction of interest rate monetary policy made by the the European Central Bank.
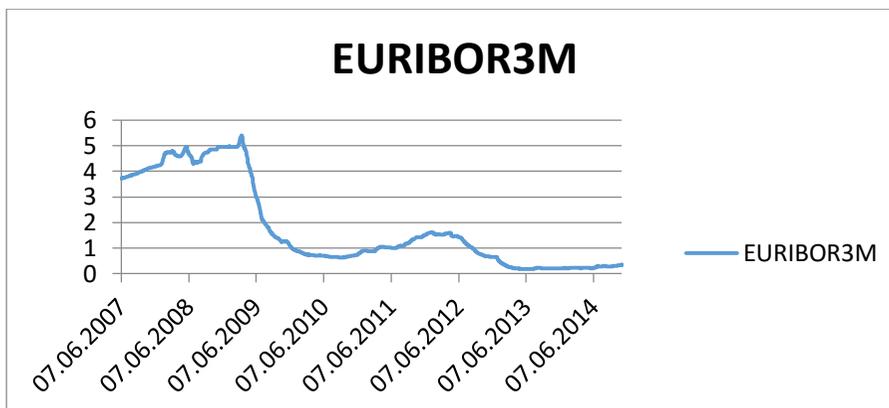


**Chart 1. The dynamic of EURIBOR3M**
Source of data: http://www.suomenpankki.fi/

Althrough the monetary policy used by the European Central Bank reduced interest rates and the volatility in the euro money market, there were new periods of high volatility due to sovereign debt crisis in some European countries and international financial shocks. As of 2010, EURIBOR3M interest rate returned to an upward trend due to economic recovery in the eurozone and due to the international financial markets stabilisation.

Due to foreign contagion from developed markets, the interest rates on the national money market recorded a strong upward trend at the beginning of the global financial crisis (Chart 2). The monetary policy interest rate, ROBOR3M stabilised and entered on a slightly downward trend as of 2011, remaining at a higher interest rate compared to EURIBOR3M.
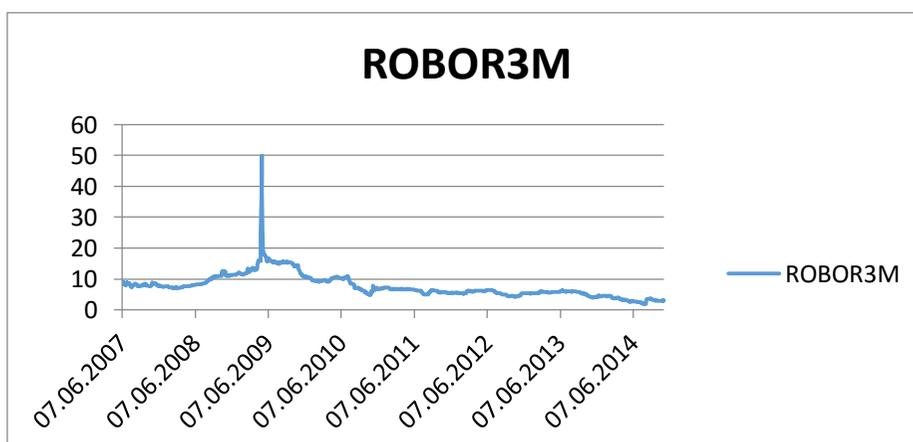


**Chart 2. The dynamic of ROBOR3M**
Source of data: www.bnr.ro

Charts 3 and 4 shows that the two interest rates registered large variations during the analysed period and the reason of why these movements have been recorded in a short time is the global financial crisis that emerged in late 2008.
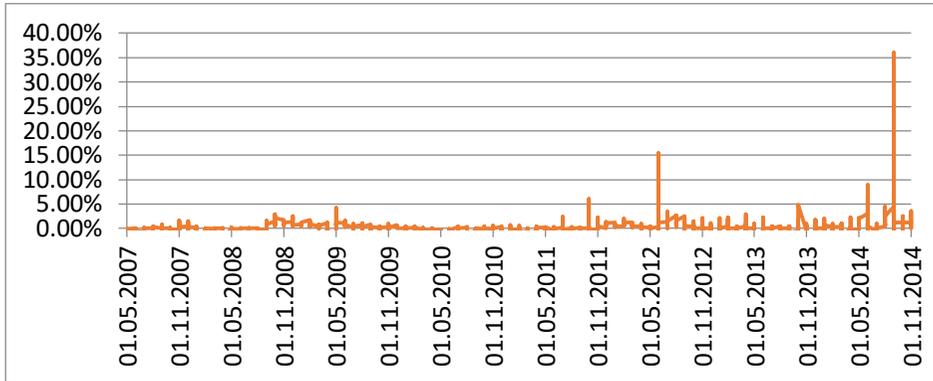
**Chart 3. Daily variation for EURIBOR3M**
Source of data: http://www.suomenpankki.fi/
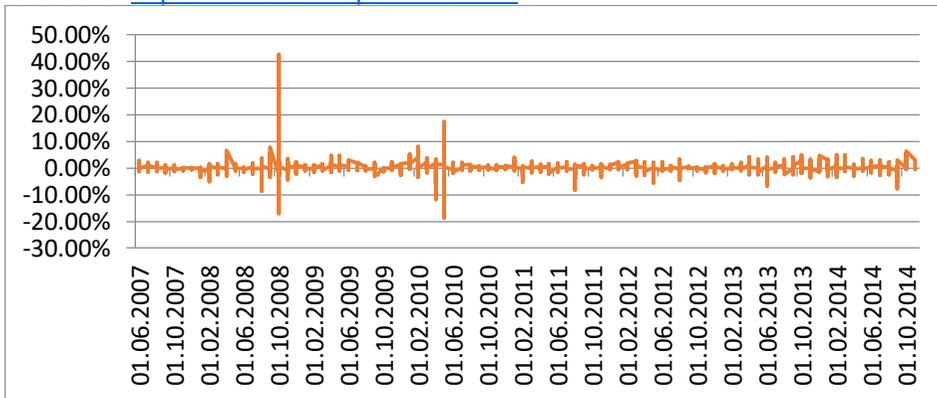


**Chart 4. Daily variation for ROBOR3M**
Source of data: www.bnr.ro

In order to determine the values of parameters *p* and *q* of the GARCH model, we will assign certain successive values, starting with p = q = 1, until I obtain a model in which the coefficients will be positive and their sum nil. GARCH coefficients (1, 1), estimated for the two time series are shown in Table 1.

**Table 1. GARCH model estimated for ROBOR3M and EURIBOR3M**

|  | Robor3M | Euribor3M |
|---|---|---|
| $\alpha_0$ | 0.0600 | 0.0600 |
| $\alpha$ | 0.16603324 | 0.09956060 |
| $\beta$ | 0.70504602 | 0.83362535 |
| $\alpha+\beta$ | 0.87107926 | 0.93318594 |

The models that we have estimated are valid because the coefficient conditions are met and the value for *p* and *q* considered in this analysis is 1. The next step is to estimate the EGARCH model (1.1) for EURIBOR3M and 3M ROBOR interest rates. The estimation results can be found in Table 2.

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**Table 2. EGARCH model estimated for ROBOR3M and EURIBOR3M**

|  | Robor3M | Euribor3M |
|---|---|---|
| $\alpha$ | 0.108359 | 0.163041 |
| $\beta$ | 0.883325 | 0.836959 |
| $\omega$ | 0.000004 | 0.000001 |
| $\theta$ | 0.277038 | 0.000000 |

The value of the coefficient for the EURIBOR3M interest rate indicates that negative and positive shocks leads in the same manner the interest rate volatility in the euro money market. Regarding the domestic money market rate, 3M ROBOR, we obtained a value greater than 0 for $\theta$, which indicates that positive shocks creates a higher volatility. This result obtained for the domestic money market is explained by the fact that the National Bank of Romania in 2008 imposed an upper limit on the interest rates in the money market.
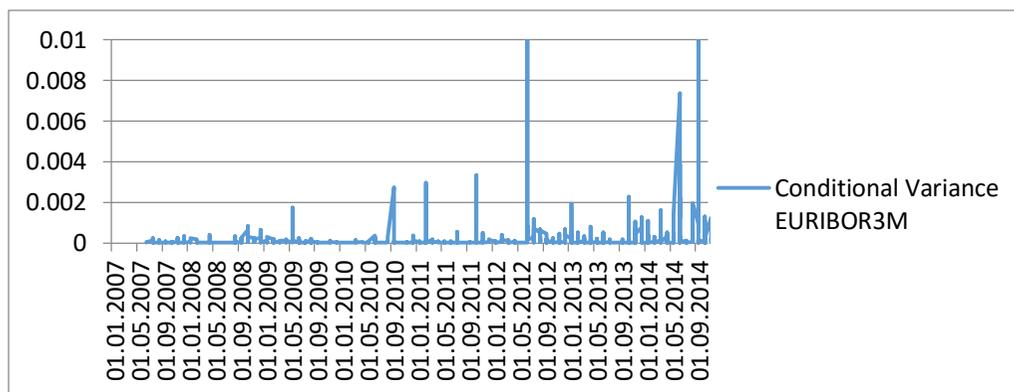


**Chart 5. Conditional variance EURIBOR3M estimated with GARCH model**
Source of data: http://www.suomenpankki.fi/
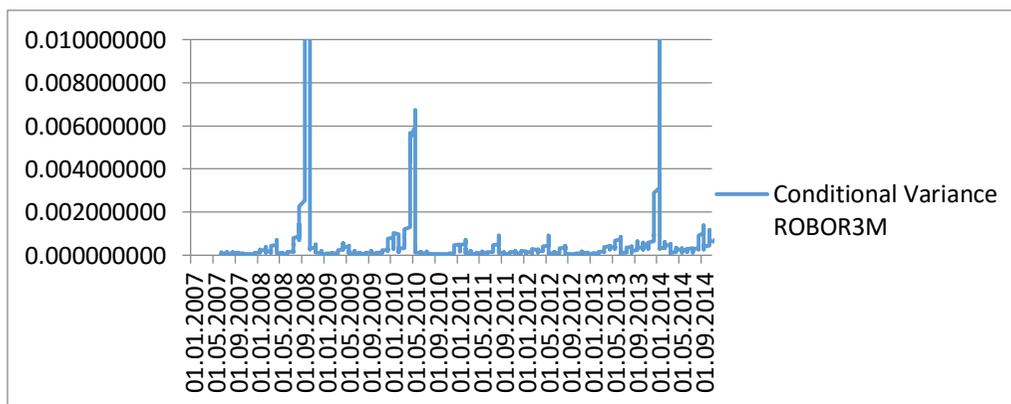


**Chart 6. Conditional variance ROBOR3M estimated with GARCH**
Source of data: www.bnr.ro

The evolution of GARCH (1, 1) conditional variance for ROBOR3M rates and EURIBOR3M rates explain changes in the liquidity conditions in the Romanian banking sectors and in

the eurozone (see Charts 5 and 6). Volatility tends to be lower in the euro money market, compared to that in Romania, a phenomenon that suggests broader changes for liquidity conditions in the domestic banking sector.

The results of EGARCH (1, 1) model estimation, i.e. EGARCH conditional variance for ROBOR3M and EURIBOR3M interest rates are presented in Charts 7 and 8.
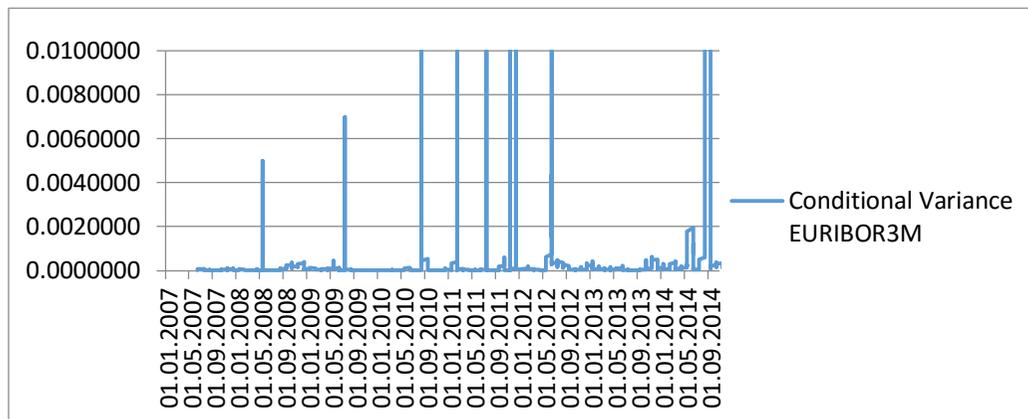


**Chart 7. Conditional variance EURIBOR3M estimated with EGARCH model**
Source: http://www.suomenpankki.fi/
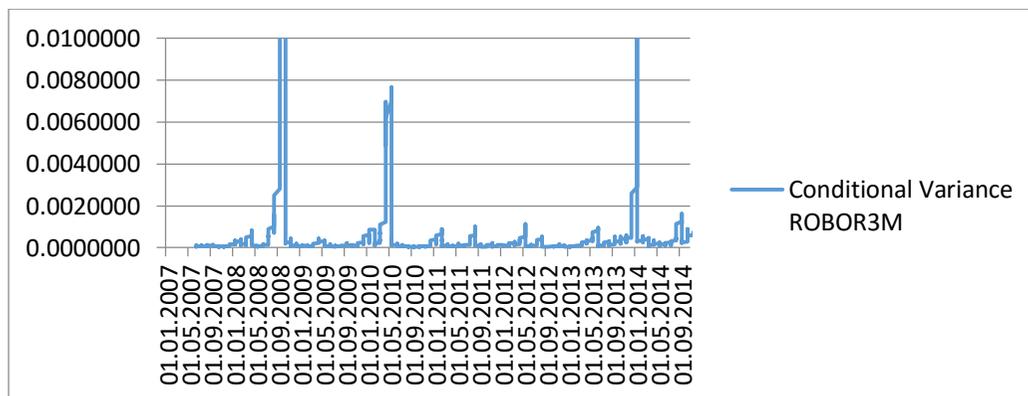


**Chart 8. Conditional variance ROBOR3M estimated with EGARCH model**
Source of data: www.bnr.ro

In the euro area there were large variations of EGARCH conditional volatility from the last quarter of 2010 until mid-2012. This phenomenon was due to heightened sovereign debt crisis in some euro area Member States such as Italy, Greece, Portugal and Spain. In our country, there was a high volatility of money market interest rates in mid-2010, but the shocks were lower than in the euro area. The sovereign debt crisis that manifested in the euro area affected money markets in the area and in Romania, but the volatility was more pronounced in the euro area.

Financial shocks in the euro area only affected Romania partially as the domestic economic activity stabilised after the declining in 2009, and banking sector liquidity was adequate. High risk in the European banking system are highlighted by periods of pronounced instability in the money market in 2010, 2011 and 2012. During the same period, the domestic money market has detached largely by developments that took place in the European money market. The analysis of the integration of the banking system in Romania in the banking system of the euro area in terms of risk liquidity that characterise

the international financial and banking institutions, highlights the fact that convergence began with the accession of Romania to the European Union and led to an increase in the degree of integration. However, the sensitivity analysis shows that liquidity in banking institutions in Romania to adverse developments in the European money market has increased and the ability to predict the internal factors of the liquidity conditions in the national banking insituţiile is still high.

Considering these aspects, we can say that it is necessary to analyse the liquidity risk in the banking system in Romania in order to include external factors. The models for measuring the liquidity risk of financial and banking institutions in Romania and the strategies to reduce this risk must reflect how the expectations of the liquidity conditions in the Romanian banking sector reacts to external factors.


**Conclusion**

In some cases the liquidity impact of external shocks are transmitted to the banking financial institutions in Romania is perceived with a delay because the domestic banking system is only partially integrated into the European banking system. This partial integration is demonstrated by the lack of a strong correlation of the daily developments among the money market from the euro area and from Romania.

If liquidity shocks have a structural impact and a high magnitude, the sensitivity of the national banking financial institutions to external developments becomes high.

The implementation of certain policies to reduce the impact of external developments in the domestic banking sector has limited the effectiveness because there is a strong presence of foreign capital, but these policies can bring benefits if they pursue structural objectives and are not neutralised by strong external liquidity shocks. Encouraging the use of local sources of funding for national banking financial institutions can be done through the development of policies to stabilise the expectations of liquidity conditions in the banking system.

Thus the diversification of funding national banking and financial institutions, and reducing the risk of bank liquidity, involves creating a mix of fiscal and monetary policies that shodul led to the development of long-term financial instruments, with which to create a liquidity stable climate.

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# TESTING MASTER STUDENTS PERCEPTION REGARDING JUDGMENT AND DECISION MAKING IN ACCOUNTING

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**Abstract:** *The human mind is amazing. Judgment and reasoning is also a fascinating and complex world. The purpose of this paper is to link the perception of master students to professional judgment and decision making in accounting and to analyze and test some correlations between endogenous human variables and the act of reasoning. The variables were selected after studying psychology cognition literature based on works conducted by researchers interested in matters like economics or financial reporting. Our research was carried out based on a questionnaire and the investigation was conducted in October-November 2014, being elected economics master students from University of Oradea, Faculty of Economics, majors AABM and FBI. These majors were chosen because their academic curricula contain accounting disciplines. We have received answers from 106 students. Intentionally, the study was conducted on economic master students rather than on professional accountants because for the former making logical judgments for assigning an appropriate accounting treatment of an event requires more effort, more attention. Taking into account works done by previous researchers interested in the topic of heuristics for making accounting judgments we have statistically tested our research hypotheses. The obtained results showed that there is a weak influence between the master students' age and the way they make decisions and their perception on the necessity of existence of a theoretical conceptual framework for professional JDM in accounting and there is a correlation between master students' ability to assume risks and their opinion on the choice of accounting handling. The main finding of this empirical study is that such research topic is worth to be continued to investigate and develop other possible links between psychological triggers and JDM in accounting.*

**Keywords:** accounting, professional judgment, master students, human variables, statistic tests

**JEL classification:** M41, M410

## 1. Introduction

The interest for the present study lies in our previous concerns regarding the impact of psychological factors in accounting and financial reporting and the analysis of the elements that define and determine the exercise of quality professional judgment in accounting. This article describes only part of the study and considers testing the perception of economics master students on the professional accounting judgment. The professional accounting judgment suggests the set of logical judgments usually exercised by a professional accountant (meaning a chartered accountant or a financial auditor) to identify the appropriate accounting treatment assigned to an economic and / or financial event or transaction. Of course, an accounting professional judgment will be influenced by a number of factors or endogenous human variables and exogenous variables that come from the environment. The study carried forward tested mainly some of the correlations between the endogenous human variables and the exercise of a professional accounting judgment. Intentionally, the study is conducted on economics master students rather than on accountants because for the former making logical judgments for assigning an

appropriate accounting treatment of an event requires more effort, more attention. In the case of professional chartered accountants the exercise of professional accounting judgments for economic events frequently encountered in practice represents a professional routine and does not require much attention and sustained effort. To achieve our approach we used the study of some of the endogenous human variables that we considered they could have an influence on a professional accounting judgment and we designed a questionnaire that was given to the master students of the Faculty of Economic Sciences, first and second year of study, majors AABM and FBI. These majors were chosen because their academic curricula contain accounting disciplines. We were interested in investigating whether the master economists of the mentioned majors have a job in the field that relates to accounting, how old they are and how they perceive the professional accounting judgment. A number of questions were focused on the personality traits of an individual, the aim being to analyze the results from a psychological perspective.

This article further summarizes a theoretical foundation for the study proposed and carried forward by us, a description of the methodology and tools of research, the formulation and testing of research hypotheses and in the end the outlining of findings and notes regarding future research on this topic.

## 2. Background of the study

It is well known the interdisciplinary character of professional judgment. It is to be found in all fields of activity, from medicine, chemistry, physics, law, psychology to accounting. Given that this study relates to the field of accounting at the intersection with cognitive psychology, we care to understand the professional accounting judgment in terms of its positive valences as a concept and decision-making act. As Cernuşca rightly noticed (2015), in the field of accounting, the professional judgment, by its nature, is a concept that induces the idea of subjectivity and the way in which it is understood by professional accountants may lead to the proliferation of accounting phenomena of intent. Cernuşca (2015) makes this observation in the context of conducting a study whose central objective is to investigate the perception of professional accountants on the manifestation of professional judgment within the accounting perimeter. The results of research conducted by Cernuşca (2015) confirms that most of the professional accountants surveyed consider that the current Romanian accounting regulations provide sufficient opportunities for the expression of professional judgment within the accounting field and that most respondents would not respond favorably to the request of the entity's management to manipulate the accounting figures in order to fix the outcome or for tax optimization reasons. The target group used by Cernuşca (2015) in his research is made up of the professional accountants members of the Arad CECCAR (BELAR – The Body of Expert and Licensed Accountants of Romania) subsidiary, and the variables that he takes into account in their influence on the exercise of professional judgment, have been identified by us as being the exogenous variables. The results of a study conducted by Cernuşca and Balaciu (2014) show that the accounting students believe that modern IT technology working in the accounting area cannot replace professional judgment. It is important the perspective emphasized by Feleagă and Malciu (2002) regarding the manifestation of accounting judgment in designing and developing the company's accounting policies. They noted that the development and substantiation of the company's accounting policies cannot be achieved except by using the judgment, stating that a modern accounting requires the use of accounting policies and estimation techniques and, to an acceptable extent, the use of accounting options. An interesting study is that conducted by Bunea (2015) which analyzes the exercise of professional accounting judgment in the recognition, measurement and use of provisions under the new accounting regulations, such as those approved by Order of the Ministry of Public Finance, n. 1802/2014. The study involves a thorough analysis of exogenous variables, to understand changes in the local accounting regulation, in its

influence on the manifestation of the professional accounting judgment on a case, that of the provisions. In the context of the same action of this exogenous variable, meaning the accounting regulation, is also Groşanu's vision (2013) who considers that the professional judgment is the concept that is found in the application of accrual accounting and in ensuring the business continuity and in this context the professional accountant is the one on which on which the proper application of accounting regulations depends fundamentally in order to accurately represent the economic reality. Unlike the studies mentioned above, our research is based on the fundamental premise that the judgment before being connected to a domain and then to a particular guild, is exercised by an individual. Obviously, the individual has certain characteristics and personality traits, is usually rational in his choices and decisions, lives in a community, has a certain amount of general and specialized knowledge and some living and professional experience. The central idea is that no matter how rational the individual would be in exercising a judgment it involves a certain degree of subjectivity. In our opinion subjectivity is connected to those human endogenous variables we mentioned above. This vision has to do with the fact that the economic reality is only one yet the individuals' perception on it is nuanced / shaped in relation to that system of human endogenous variables. These are related to the individual personality, motivation, knowledge and skills, his beliefs and the pressure of the environmental factors. Thus, our study is based on the international guide for preparers, auditors, regulators and standard setters regarding the professional judgment framework for financial reporting ICAS (2012) and the studies undertaken by Bonner (1999), Ashton R.H. & Ashton A.H. (1999), Kahneman & Frederick (2002; 2005), Libby and Luft (1993) Stanovich and West (2002) and Schiller (2013).

In agreement with the provisions of the ICAS (2012) theoretical framework, a professional judgement is a key skill for preparers, auditors and regulators of financial statements, especially under a principle based accounting regime, but making a judgment can be difficult and there is not necessarily one correct answer. ICAS (2012) pleads for the existence of a theoretical framework based on principles which can be used by preparers, auditors and regulators of financial statements, in order to exercise good judgments within which the economic substance of transactions can be faithfully represented, especially in a complex and changing environment. The definition of such a framework according to ICAS (2012) is the following: "*a professional judgment framework sets out a structured process by which preparers and auditors, with an appropriate level of knowledge, experience and objectivity, can form an opinion on an accounting matter based on the relevant facts and circumstances within the context provided by applicable accounting standards*". As Bonner (1999) highlighted, JDM researchers strived to measure individuals' performance when carrying out judgment and decision making tasks and they examined the determinants of both high and lower quality JDM. In our opinion is relevant what Libby and Luft (1993) and other researchers emphasized that in an accounting and financial reporting setting, errors in JDM may have major significance at a more far-reaching level that the individual level. Schiller (2013) observed that from a preparers' perspective, individual accountants make accounting judgments, while the CEO's make formal decisions regarding accounting and financial reporting; so it is important to make a distinction between judgment and decision. We agree with Bonner's opinion (1999), who considers that the term of judgment characteristically refers to "*forming an idea, opinion, or estimate about an object, an event, a state, or another type of phenomenon*", whereas the term decision refers to "making up one's mind about the issue at hand and taking course of action". Yet, of course if the professional accountants are also the financial managers or chief accountants they are practically in a double situation/position. Hence, they need to make up an opinion as objective and neutral about the event as possible but will have to also make decisions on the accounting treatment applied to the event. On the other hand, the research carried out by Kahneman & Frederick (2002; 2005), Stanovich and West (2002) and Schiller (2013) brings to attention issues related to the two systems making up the cognitive process, i.e.

system 1 based on intuition and system 2  based on judgments. Stanovich and West (2002) described that the operations of system 1 are fast, automatic, effortless, associative and difficult to control or modify, whereas the operations of system 2 are slower, serial, effortful and deliberately controlled, but are also relatively flexible and potentially rule-governed. In Schiller's (2013) opinion the two mentioned systems indicated that heuristics are experience-based and by studying processes on which accounting judgments are founded we can learn more about how accountants reason in relation to various accounting standards given different economic situations. In view of the above, our study is characterized by interdisciplinary issues related to professional accounting judgment and cognitive psychology.

## 3. Research design

Our research is qualitative in nature and aims to investigate and test the perception of economics master students on professional accounting judgment. As shown in the above a professional accounting judgment is influenced by a number of human endogenous variables that refer to the individual's cognitive abilities, personality traits, age, accumulated knowledge, professional experience, etc., and exogenous variables related to influences coming from the environment, such as: accounting standards and regulations, financial reporting framework, code of ethics, accounting policies and procedures manual, code of corporate governance, corporate culture, financial reporting practices, etc. In the present study we analyzed the correlations aimed at the perception of economics master students on professional accounting judgment influenced by several human endogenous variables. The research was carried out based on a questionnaire structured in 2 parts: one part requesting general information on professional status, the existence of a job in accounting or a related field, age and gender and one part containing questions on professional accounting judgment, accounting options and the ability of individuals to make decisions, take risks, choose from options, find creative solutions, etc. The first part contains a number of 7 questions and the second 22 questions. Based on previous similar studies made by us, Bogdan et al (2009), the investigation was conducted in October-November 2014, being elected economics master students from the majors AABM and FBI, for reasons outlined above, forming a total population of 106 students. The questionnaire was applied directly to the classroom and online to ensure an adequate rate of response. A total of 82 AABM students and 24 FBI students answered our survey. Please note that the questionnaire was administered only to FBI students, second year of study, as they are the only students having in their curricula the discipline called IFRS. Over 95% of the master students investigated are between 18 and 25 years old and over 80% of them are women and only 23% of the students investigated are considered to be very optimistic. The questionnaire contains mostly closed questions and a few open questions. For most questions the Likert scale was used with 5 response categories. The economics master students investigated showed interest in the topic of the questionnaire and made direct or written questions where unclear or concerned about the content of the questions. There were selected master students and not undergraduate students because the master students have accumulated more knowledge in the field of accounting and some have jobs related to accounting.

## 4. Hypotheses development and validation

Taking into account the above mentioned ideas and works we have elaborated the following research hypotheses.

**H1: The master students' professional experience in accounting is directly correlated to their perception regarding an accountant's ability to make a professional JDM in accounting.**

To test this research proposition, we analyzed the distribution of answers to questions: *I.Q2. Have you ever had an accounting related job?, I.Q3. Do you work at the moment?,*

*I.Q4. If the answer to the previous question was yes, is your job related to accounting? -* on one hand and *II.Q2. In your opinion, the succesful implementation of principles-based accounting standards or regulations depends on the accountants' ability to produce a quality professional JDM in accounting? II.Q16 The profesional JDM in accounting is a key ability for the accountants, auditors and regulators?* and *II.Q17 Do accountants have to question economic events and transactions and be able to issue professional JDM in accounting? -* on the other hand. In order to test this research hypothesis, we will assign 0 points to the students that were never employed, 1 points to those that have had a job in other domains than accounting, and 2 points to those that are or were employed in accounting related jobs. For the answer choices to the questions II.Q2, II.Q16 and II.Q17 characterizing their perception regarding an accountant's ability to produce a professional accounting reasoning are *Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree*, we will assign respectively 1 to 5 points to these answers, and then we will compute the average. We will construct the cross tabulation between the points associated to the 2 sets of questions, and we'll use Chi-Square method to validate the research hypothesis, in the sample as well as in the total population. The Chi Square value in the sample is 9,03, and since this value is higher than 0, our conclusion is that there is a correlation at the sample level between the two aspects. To expand our result on our total population we'll use the following hypothesis test:

$$H_0 : \chi^2 = 0$$

$$H_1 : \chi^2 \neq 0$$

In order to decide whether the $H_0$ hypothesis can be rejected, the calculated value, 9,03, is compared to the critical one, for 12 degrees of freedom and a probability of 95%, which in our case is 21,05. As the calculated value is smaller than the critical one, hypothesis $H_0$ cannot be rejected, therefore, there is no correlation between the two variables at the level of total population.

Research hypothesis H1 is validated in the sample but not in the total population.

**H2: The master students' age and the way they make decisions in ordinary life influence their perception on the necessity of existence of a theoretical conceptual framework for professional JDM in accounting.**

This research proposition will be split into 2 sub-hypothesis. First we analyzed the distribution of answers to questions: *I. Q6. What is your age?* and *II.Q9 A professional JDM in accounting can be issued only after all the information regarding the economic/financial event or transaction have been collected and analyzed. II.Q10 A professional JDM in accounting can be issued only within the applicable conceptual accounting framework, accounting standards or regulations and other accounting guides? II.Q11 A professional JDM in accounting can be issued only after an appropriate assesment? II.Q12 A professional JDM in accounting must be very well documented?*

The master students' perception on their ability to make decisions will be measured by assigning values between 1 to 5 to the answers to questions II.Q9 to II.Q12., the higher the score, the stronger they agree to them. We computed an average score and we constructed a distribution table between the average score and the students' age. In order to validate our hypothesis, we used the Chi Square method. The calculated value in the sample is 9,75, and since this value is higher than 0, our conclusion is that there is a correlation at the sample level between the two aspects. To expand our result on our total population we'll use the Chi Square test. In order to decide whether the null hypothesis can be rejected, the calculated value, 9,75, is compared to the critical one, for 4 degrees of freedom and a probability of 95%, which in our case is 9,48. As the calculated value is higher than the critical one, hypothesis $H_0$ will be rejected, therefore, there is a correlation between the two variables at the level of total population but the correlation is quite weak, since the difference between the calculated and critical value is small.

**The first part of research hypothesis H2 is validated in the sample and in the total population as well.**

Second we analyzed the distributions of answers to questions: *II.Q5 Do you take knowledge, intuition or patterns based decisions?* and *II.Q9 A professional JDM in accounting can be issued only after all the information regarding the economic/financial event or transaction have been collected and analyzed. II.Q10 A professional JDM in accounting can be issued only within the applicable conceptual accounting framework, accounting standards or regulations and other accounting guides? II.Q11 A professional JDM in accounting can be issued only after an appropriate assesment? II.Q12 A professional JDM in accounting must be very well documented?*

We constructed a distribution table based on the average score reflecting the master students' perception on their ability to take decisions and their taking decisions way. In order to validate the second part of our research hypothesis, we used the Chi Square method. The calculated value in the sample is 17,88, and since this value is higher than 0, our conclusion is that there is a correlation at the sample level between the two aspects. To expand our result on our total population we'll use the Chi Square test. In order to decide whether the null hypothesis can be rejected, the calculated value, 17,88, is compared to the critical one, for 12 degrees of freedom and a probability of 95%, which in our case is 21,02. As the calculated value is lower than the critical one, hypothesis $H_0$ cannot be rejected, therefore, there is no correlation between the two variables at the level of total population. The second part of research hypothesis H2 is validated in the sample but not in the total population.

**H3: The master students' ability to assume risks is correlated with their perception regarding a professional JDM and with their opinion on the choice of accounting policies.**

This research proposition will be split into 2 sub-hypothesis. The first is: **H3a. The master students' ability to assume risks is correlated with their perception regarding a professional JDM.**

First we analyzed the distribution of answers to questions: *II.Q4. Supposing the weather forecast said today might be a rainy day, will you take the umbrella with you? II.Q6. Two fans of a rock group plan to go on a 250 km trip in order to take part at their favorite group's concert. One of them (John) has already bought his ticket. The other (Vasile) wanted to buy a ticket as well, but he got one as a gift from a friend. The weather forecast said it will snow on the concert's evening. Which of the two friends is more likely to go to the concert? (Respondents were asked to choose only one answer).*

and *I.Q1. Which aspects do you think influence the professional JDM when choosing an accounting handling for booking economic and/or financial events and transactions. (Respondents were asked to select the degree of agreement to a maximum 3 of the possible answers).*

Students that are not likely to take risks will consider that observing the accounting and financial framework, the general accounting principles and the manual of policies and procedures is crucial when carrying out a JDM process. This is why we computed an average score that measures the aversity towards risk (taking into account responses to questions IIQ4 and IIQ6). that ranges from 0 to 1 (propensity – adversity towards risk). We have also computed an average score that measures the perception regarding the proffesional JDM, using a weighted arithmetical mean of the scores of each item from the above mentioned question.

In order to validate the second part of our research hypothesis, we used the Chi Square method. The calculated value in the sample is 24,93, and since this value is higher than 0, our conclusion is that there is a correlation at the sample level between the two aspects. To expand our result on our total population we'll use the Chi Square test. In order to decide whether the null hypothesis can be rejected, the calculated value, is compared to

the critical one, for 36 degrees of freedom and a probability of 95%, which in our case is 50,99. As the calculated value is smaller than the critical one, hypothesis $H_0$ cannot be rejected, therefore, there is no correlation between the two variables at the level of total population. The first part of research hypothesis H3 is validated in the sample but not in the total population.

**H3b. The master students' ability to assume risks is correlated with their opinion on the choice of accounting handling.**

Then we analyzed the distribution of answers to questions: *II.Q4. Supposing the weather forecast said today might be a rainy day, will you take the umbrella with you? II.Q6. Two fans of a rock group plan to go on a 250 km trip in order to take part at their favorite group's concert. One of them (John) has already bought his ticket. The other (Vasile) wanted to buy a ticket as well, but he got one as a gift from a friend. The weather forecast said it will snow on the concert's evening. Which of the two friends is more likely to go to the concert? (Respondents were asked to choose only one answer).*

and *II.Q13.The choice of an accounting policy as a result of a JDM process will be taken after consulting the manager? II. Q14. A quality JDM will conduct to relevant financial information?*

We have constructed a correlation table between the average scores to questions II.Q4 and II.Q6, computed as mentioned above and the average score associated to questions II.Q13 and II.Q14, as presented below:

**Table 1. Cross-tabulation between average scores associated to questions used invalidation of H3b research hypothesis**

| | | Average scores associated to IIQ13 and IIQ14 | | | | | Total |
|---|---|---|---|---|---|---|---|
| | | 3,00 | 3,50 | 4,00 | 4,50 | 5,00 | |
| Average scores associated to IIQ4 and IIQ6 | 0,00 | 0 | 0 | 0 | 0 | 3 | 3 |
| | 0,50 | 1 | 9 | 17 | 7 | 1 | 35 |
| | 1,00 | 8 | 21 | 24 | 6 | 9 | 68 |
| Total | | 9 | 30 | 41 | 13 | 13 | 106 |

As seen in Table 1, there is a correlation between the average scores associated to questions used invalidation of H3b research hypothesis, as most of the frequencies are grouped in the lower half of the table, under its second diagonal. In order to validate the second part of our research hypothesis, we used the Chi Square method. The calculated value in the sample is 29,9, and since this value is not close to 0, our conclusion is that there is a correlation at the sample level between the two aspects. To expand our result on our total population we'll use the Chi Square test. In order to decide whether the null hypothesis can be rejected, the calculated value, is compared to the critical one, for 8 degrees of freedom and a probability of 95%, which in our case is 16,91. As the calculated value is higher than the critical one, hypothesis null will be rejected, therefore, there is a correlation between the two variables at the level of total population. **The second part of research hypothesis H3 is validated in the sample and in the total population as well.**

**H4: Master students' free thinking and their optimistic attitude is correlated to their perception regarding the factors influencing a proffesional accounting JDM process.**

We analyzed the distribution of answers to questions: *I.Q1. Which aspects do you think influence the professional JDM when choosing an accounting handling for booking economic and/or financial events and transactions. (Respondents were asked to select the degree of agreement to a maximum 3 of the possible answers).*

and *II.Q15. Do you account yourself as being an optimist? II.Q20. Your personal and professional day to day life choices are taken by yourselves?*
We have assigned scores from 1 to 5 to answers to question II.Q15 (1 for the less optimist students, 5 to the optimist ones) as well as to question II.Q20 (1 for the ones that take their choices by letting themselves influenced by others, 5 to the independent ones) and we have computed the average score for each respondent. The scores were used to construct cross tabulations that were used to validate our research hypothesis. In order to validate this hypothesis, we used the Chi Square method. The calculated value in the sample is 78,22, and since this value is much bigger than 0, our conclusion is that there is a strong correlation at the sample level between the two aspects. To expand our result on our total population we'll use the Chi Square test. In order to decide whether the null hypothesis can be rejected, the calculated value, is compared to the critical one, for 90 degrees of freedom and a probability of 95%, which in our case is 113,14. As the calculated value is smaller than the critical one, hypothesis null cannot be rejected, therefore, there is no correlation between the two variables at the level of total population. Research hypothesis H4 is validated in the sample but not in the total population.

## 5. Conclusion and future works

Our study conducted on master economic students at University of Oradea studying Accounting, auditing and business management (AABM), and Finance, banking and insurance (FBI) aimed to analyze and investigate their perception on professional accounting judgment and decision making process in correlation with several endogenous human variables. The topic of psychological factors affecting judgments and decision making in accounting was in our attention and focus in previous works too, hence the present research continued our ideas in this research field. It is very intriguing in our vision the study of human variables influencing JDM in accounting in the context of heuristics and biases in relation to accounting reasoning. Regarding the validation of research hypotheses that we have elaborated in this study the obtained results from statistical non-parametric tests showed that there is no correlation between master students' professional experience in accounting and their perception regarding an accountant's ability to make a professional JDM in accounting and also there is no correlation between master students' free thinking and their optimistic attitude and their perception regarding the factors influencing the proffesional accounting JDM process. Our results also showed that there is a weak influence between the master students' age and the way they make decisions and their perception on the necessity of existence of a theoretical conceptual framework for professional JDM in accounting and there is a correlation between master students' ability to assume risks and their opinion on the choice of accounting handling. Our main finding is that there is much interest in investigating these type of variables in JDM in accounting so we could learn more about how judgments and professional reasonings can be improved in order to obtain more qualitative informations to deliver in financial reports. We intend to continue our work by extending our research sample to professional accountants and auditors and to explore other correlations regarding human variables and intangible assets disclosure practices.

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# THE IMPORTANCE OF CONCEPTUAL MAPS IN ACCOUNTING CURRICULUM

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**Abstract:**This paper provides a model for using conceptual maps in accounting courses. While this notion is commonly used in natural science education, it is less known inaccounting education. Conceptual maps are tools that raise significant learning in the classroom. As teachers, we are challenged to change our curriculum and teaching methods. We are going to present a literature review of this concept, identifying its basic principles and strategies of development. Reading them in accounting education academic perspective will allow us to evaluate to what extent is a method that is suitable for teaching and learning in this field. Following Trébucq and Noel (2006), the set of selected information will be the basis of a study applied on some students in Romanian space in order to observe the extent to which the use of conceptual maps to help structuring and strengthening specialized concepts. This work seen as a qualitative research shows that by using conceptual maps we both improve what students learn and develop higher-order skill competencies demanded by the accounting profession. This paper brings the following contributions to knowledge. First it adds to a limited number of education papers that puts conceptual maps in an accounting context. Second, it is the first paper in Romanian context that show how concept maps can be used for both the students and the teachers in accounting education field by promoting self-learning and life-long learning skills. The main conclusion of the study conducted consists in the fact that this concept should be integrated into the Romanian accounting curriculum. Hence we outlined a three-dimensional approach on using conceptual maps advantage for students: first is the fact that reflects their own knowledge at the beginning of an accounting course, second show the progress made during the course and finally helps students to synthesize information gained.

**Keywords:**Conceptual maps, accounting education, self-learning, skill competencies,curriculum

**JEL classification:**M41, I24

## 1. Introduction

Conceptual maps were developed in the 1970s by Joseph Novack and are tools of organizing and presenting knowledge. They rely on the theory of assimilation of new knowledge brought by Ausubel (1968). Acquire new knowledge theory assumes that every learner has a cognitive structure as a prior condition for acquisition of new ideas. On this basis, we find concepts (Novak & Gowin, 1984). A concept is a perceived regularity in events or objects captured, in most cases, by a word. The relations established between concepts are indicated by the lines and connecting words (Novak & Cañas, 2006). In addition, the concepts must be hierarchically arranged, at the top of the map being found the general ones, and the particular ones, on the lower part. The hierarchical structure is different from one field of knowledge to another and depends on the context in which they are considered knowledge. Once completed, they can be expanded to accommodate new concepts, thereby allowing individuals to add new knowledge to the existingones (Passmore, 2004) and to build "a structure of interrelated concepts with several hierarchical levels, junctions and cross-linking "(Quinn et al., 2003).

It should be noted, however, that the use of conceptual maps is not simple. Since the textual representations are clearly favored in education, familiarization with a new way of knowledge representation based on graphic approach becomes difficult (Basque &Pudelko, 2004). Studies have shown that many types of knowledge confused subjects (Basque et al., 2003), fail to break down sentences in concepts and relationships between concepts or reverses relations (Faletti & Fisher, 1996).

The objective of this study is to provide a model for the use of conceptual maps in accounting courses. Conceptual map is a tool that significantly raises the amount of learning in the classroom. As teachers, we are challenged to change curricula and teaching methods. So knowing that this device has a profound psychological basis, in the documentation phase approach I relate these theories to accounting peculiarities as there are ways of learning that are specific to the economics, and within it is learned in different ways themanagement, the marketing etc. and other ways the accounting. The stakes, the implications are different, the interrelationships are different, and the issues are different. We intend to present some of the literature review on this issue and identify the principles and basic strategies.

## 2. Background of the study

Conceptual maps can capture the manner in which an individual perceives relations between things, ideas or people (White and Gunstone, 1992), solving problems he/she faces and use their memory. In the last 10 years, conceptual maps were used as tools to support meaningful learning / teaching eloquent in science and to help students and experts to represent and to visualize knowledge in a structured manner. (Novak, 2002). Through conceptual maps, trainees will be able to outsource their initial knowledge and combine them with new ones to rearrange and internalize the old ones and the new ones (Erdogan, 2009; Lim, Lee, and, Grabowski, 2009; Trundle and Bell, 2010). Akinsanya and Williams (2004) say the conceptual maps are effective tools for students to clarify their knowledge structures. Therefore, they encourage teachers to consider conceptual maps in order to design their course plans.

According to Novak &Cañas (quoted by Feleagă L., 2013) conceptual maps help students learn, researchers create new knowledge, structure and administrators to better manage their organizations, writers write and the evaluators to assess knowledge. Most studies aim at the educational applications of conceptual maps, as these tools inspire creativity (Chevrier and Charbonneau, 1992) and evaluate the effectiveness of learning (Strahan, 1989). Other studies use conceptual maps as tools for collecting and / or the method of data analysis.

 According to Jackson and Troche (2002), they can be regarded as a suitable method for the analysis of responses to open-ended questions and questions referring to a conceptual scheme or a coded scale, in a shorter time and with greater analytical rigor, compared to other techniques. Also, we can identify studies that refer to practical use of conceptual maps. We mention here the development of expert systems, as well as capturing and storing know-how (Coffey and Hoffman, 2003)

Due to the popularity of information technology, the use of computerized maps concept became popular. Several previous studies have shown that students who learned using the computer system conceptual maps have better achievements than those who learned through traditional approaches (Kim & Olaciregui, 2008). Advantages of using the conceptual computerized maps include the ease to make corrections, flexibility and willingness to present the content, to promote interaction between teachers and students (Liu, Chen Chang, 2010; Reader and Hammond, 1994; Shin, Deno, Robinson and Marston, 2000).

Meanwhile, several studies have highlighted the importance of providing prompt feedback to students (Dentonet al, 2008; Draper, 2009; Jordan and Mitchell, 2009; Li, Liu and Steckelberg, 2010). Unfortunately, although learning with conceptual maps looked

promising, the researchers pointed out a critical problem in using conceptual maps to support learning; that is, that an additional burden is placed on teachers who must assess individual maps drawn by students currently .Teachers need days or weeks to complete evaluation of the conceptual maps. Therefore, students cannot receive immediate feedback (Ingeç, 2009). Therefore, providing instant feedback and meaningful learning for complex tasks such as the development of conceptual maps has become an important and challenging issue (Denton et al, 2008; Hwang et al. 2010).

To cope with this problem, Wu (2011) developed a study that proposed a concept map oriented computer-based learning approach with real-time assessment and feedback instantly. So, having this immediate feedback, students can reflect and make amendments to conceptual maps. They should not wait for results of the evaluation of teachers before continuing the learning process.

In our country, Feleagă N.and Feleagă  L. (2013) examined the relationship between gender and perception of ethics among students. The sample consists of 10 Romanian auditors, operating in one of the Bigcabinets .Results demonstrated that men and women have different perspectives regarding how to define the ethics and the importance given to it in everyday life. These are but complementary perspectives, and audit firms can rely on the mixed nature of the teams to create a balance in terms of the degree of relationship and trust, both inside the cabinet and in the relationship with customers.

### 3. Proposal of a theoretical framework for the implementation of conceptual maps in the process of accounting education

While this notion is commonly used in the process of natural science education, it is less known in the academic accounting system of education.  Their approach in terms of accounting education will enable us to evaluate the extent to which this method is appropriate for teaching and learning in this area. Regarding the use of conceptual maps in accounting, Jane D. Maas & Leauby  (2005) provided a model for their use. Relying on their classroom experience, they affirm that such an experience was positive and extremely fruitful for the students involved. Similar concerns on this issue can be found to authors such as Irvine HJ (2006), Trébucq and Noel (2006) (2009),Jon Simon (2009).

As shown above in its simplest form, a concept map has the form of two concepts connected by a linking word, for example "Accounting is the language of business" which is a simple map on which a valid claim is made about the concepts "Accounting" and "business language". In this case, the art of outsourcing knowledge through drawings and diagrams in conceptual maps can be presented as follows:
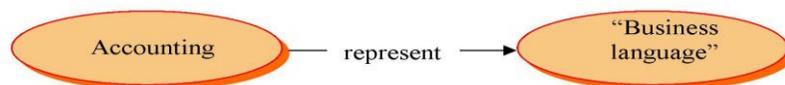


Figure 1 Illustration of a simple concept map
Source: Own Projection

Key components of conceptual maps the are interrelationships or the connecting words, two or more concepts linked by words that are regarded as one unit. The connecting words are usually related to action words explaining the meaning of the relationship. In the first stage of developing the skills, the related words may be less important than identifying the concepts .In Figure 1 linking word "is" is connecting the concepts "Accounting" and "business language" in a significant statement. Validity of the networking is also important.

Ku (2014) integrates the ideas of conceptual maps in a dynamic model for evaluation of accounting education at secondary vocational high-school level. The results show that this system offers clear benefits for high- school students who learn accounting using traditional methods: paper and pencil. They also recommended a training session for both teachers and students for a successful implementation.

The method of the conceptual maps is versatile and brings added value that can be used in different ways in accounting courses, bothin teaching and assimilation. The main idea of this paper is to use conceptual maps to implement this concept in education as a method applied in a specific educational unit, meaning accounting.

The chart below shows the three main points of convergence of the notion of conceptual maps, using this method directly in the classroom, as emerges from figure 2:
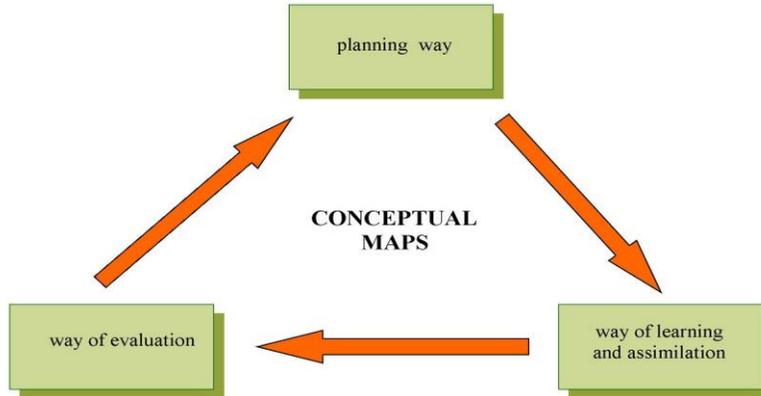


Figure 2. Conceptual maps triangle
Source: Own projection, inspired from MaasandLeauby (2005:84)

- as a planning way of teaching knowledge and provide a visual image of what is to learn and how knowledge interconnect between them
- as a way of learning and assimilation by reinforcing concepts learned in a teaching unit
- as a way of evaluation by a conceptual map that emphasizes the perception of this mode of learning

Using preset conceptual maps is good precisely because of accounting educators do not yet have enough experience and enough empirical data and published studies on this topic. This lack of experience is due to the long time that has to be to be allocated to the learning of this methodology, the effort to teach students to build their own conceptual maps and complex process of integrating these techniques in the teaching.

Using a preset conceptual drawing of maps will allow accounting educators to use a larger resource of time to implement them in the classroom, eliminating the need for each institution to do pioneering work for the same thing, both in terms of teachers and students. This base allows educators to take what directlyfits their needs and generates ideas for creating and experimenting with conceptual maps for a purposeful learning. Entering conceptual maps ever since the introduction courses, allow students to develop a skill that can be used throughout the entire educational process and even after school.

### 3.1. Stages of implementation

In the following, we will try to give a concise picture of how the method of conceptual maps can be implemented and applied in the classroom. We will use some ready-made concept map, as the simplest way of introducing the concept mapping as a method of teaching / learning in accounting. As part of this process in stages,we will analyze how students are learning and are able to apply this technique, precisely because the greatest benefits and best results occur when using conceptual maps they create their own maps themselves.

The aim in using any conceptual maps is to help even further what was already taught by educatorduring the course. Students learn from many sources and environments, and fail to see the major beneficial impact that can have the use of conceptual maps in learning.

**The first stage** is to provide some guidance for the next steps, which is extremely important for the success of the exercise of using conceptual maps in the classroom. Thus, it is necessary during the semester for the planning to allocate some time for activities related to conceptual maps. The first step is that one should understand that the use of

conceptual maps takes time. To introduce this method to course, curricula must be prepared in advance. There is the possibility to skip some activities that were already planned or to use some time from the normal activities, in exchange for benefits that can be obtained from this approach. Also, in the curriculum development, we haveto identify the key concepts of the module, to be subsequently used in the schematic representation.

**A second stage** would be to introduce students to the field of conceptual maps and presentation of the benefits you can get from learning theproperties of this system. Using a ready-made concept map can provide a better picture at first sight and perspective, so students understand better the purpose and uses of maps, even before experiencing directly through exercise.

**A third stage** would be to create a concept map through a home –work subject in which students use concepts that are familiar to them, just to not feel limited by uncertainty of knowledge in a particular topic. Now they only need to understand how a conceptual map works by visually-representative and interconnection of schematic key concepts used in a relation. This approach is meant to make students feel comfortable with using drawing and schematic conceptual elements of a map before you go deeper into more complex topics related to accounting.

A home-work would be suitable for **the fourth stage**, only this time it must be chosen a simple concept in the field of accounting. This step enables students to familiarize themselves better with drawing a conceptual map in a familiar area by adding simple maps of accounting. These last two steps are designed to make students understand the conceptual mapping and give them confidence that a theme group on this issue can be achieved.

**The fifth stage** would be the formation of working groups on a specific topic to reach a unified conclusion. This requires advance preparation for this endeavor by placing the theme structure. The purpose of this exercise is to show a specific structure to the working groups, because students are still inexperienced in making conceptual maps. By identifying key components of the map, they will be able to organize their own thinking and to streamline the preparation mode. Ideally, it should not be placed any structure of the map, but this approach, though giving the most spectacular results, at the beginning, it may present a risk factor for confusion and failure. Therefore, to have a successful educational experience, the placement of structures requirement creates benchmarks for homework.

Mapping enables creativity of the students and expressiveness of conceptual ideas and concepts without having to formalize thoughts and phrases in sentences grammatically correct, as it is traditionally require a written work. Any working themes ask from the students to organize their ideas and to prepare their group map as soon as they start to learn from one another. This leads to better collaboration in knowledge representation and increase the degree of assimilation of what is to be learned. Such, information is facilitated, and also understanding and synthesis before being forgotten. The ongoing learning process equips students with the ability to obtain knowledge and skills that can then be used in many other ways. Some educators use conceptual maps as an evaluation tool, while others use them as a teaching tool or encourage students to use them in learning. Regarding our approach, activities related to the use of conceptual maps help students organize what they know and prepare better than traditionally taught homework, precisely because it facilitates structuring knowledge.

**The sixth stage** would be the assessment and qualitative assessment of the working groups, without going into too much detail. One of the concerns related to the use of such a group work is related to the topic of reporting to a module level scale. This scale is not structured; it is not made by itself, as if traditional. So, it is important to consider the big picture of the whole group activity based on quality, without going into too many details on the ideas or concepts emphasizing differences of each group or form. One has to consider some aspects of the execution to the end of the theme, or if all group members

participated equally and worked, if the conceptual map gives a clearer picture of the elements of the requirement, if ideas and concepts are valid situations.

**A seventh stage** would be to obtain a written feedback linked to work on conceptual maps. This approach requires total anonymity just to have an answer as valid as can be. Students should be asked whether they think it was helpful their participation in the working group that helped to focus better on their work and, not least, how this activity could be improved for next working group.

If they comply with these steps, students will be able to understand what it means to use conceptual maps, basically just by following a few simple steps in the non-accountant or accountant field, and will have a positive and educational experience in the working group. Of course, each class will be a different experience, and each educator will enrich his/her experience and their own level of comfort, especially to the extent that it is willing to spend more time on these activities, and this will dictate how much can and how much do students benefit from this approach.

### 3.2. Advantages versus constraints

While the benefits of using conceptual maps in introductory accounting courses seem obvious, yet there are several limitations that should not be overlooked. There are a limited number of situations in classroom hours that can be covered using course materials. As teachers, we already feel the pressure of the need to include much material from accounting specialists, to update with the increasing complexity of the subject, to add many other skills that our program emphasizes (oral and written communication, research skills, and worksheets).

The biggest constraint implied by the use of conceptual maps as a resource consists of time that trainers are willing to spend on this relevant educational process and development in learning this technique. Obviously, to use this innovative method we must rigorously plan our courses so as to allow more time for reflection during the semester.

Conceptual maps require a certain period of adjustment to the classroom to teach and give visible results. Once students learn with this method, they nevertheless need time to complete the task. To get the most from these skills, they need to be improved and used consistently throughout the course.

Planning and using of this kind of learning activities entails less coverage rates through textual information.

Another constraint arises from the very nature of the activities imposed by the use of conceptual maps. They are an individual and creative process that involves a high degree of seriousness and responsibility of the user. Although it was tried to develop a system of evaluation in this area, however no solution to express a quantitative manner in assessing a conceptual mapping exercise was found. The beauty of this method is given by the fact that each student or each group of students will achieve something different. This is due to the unique way in addressing personal thinking and free and creative approach to the same object / phenomenon. Thus, there may be a certain limitation in the ability of the instructor to accept and feel comfortable with this creative process, although they realize that students will create differently, though validly. In many respects, it is necessary that the instructor to develop more visually oriented abilities and encourage students' skills in creative work. Please note that not every instructor will feel comfortable in the use of this method in terms mentioned above.

### 4. Conclusion and future works

This approach suggests that the use of conceptual maps on the one hand, improves what students learn and on the other hand, is developing higher order skills qualifications required by the accounting profession.

This paper makes the following contributions to knowledge. First, it is added to a limited number of works that place conceptual map learning in the full accountant learning context.

Second, it is the first work in the Romanian context, showing that the conceptual maps can be used for both students and teachers in accounting education by promoting self - learning and skills for lifelong learning.

After Trébucq and Noel (2006), who had one of the rare initiatives of building conceptual maps in accounting with a connection to creative accounting, we wrote this theoretical approach to underpin a study that will be applied to students in the Romanian space to observe the extent to which the use of conceptual maps help structuring and consolidating accounting concepts. The quality of the work performed by the student will depend on the student's familiarity with this tool. Of course, they must be involved voluntarily, being finally able to produce representations that are products of their own reflections and not asystematic reproduction of the thinking of the teacher. So, our goal is that of bringing the student to acquire autonomy in thinking, critical and creative imagination, to enable him/her to resolve issues.

As next steps, we want the development of a research study to test the usefulness of this system of teaching and learning through conceptual maps among students in Romania.

## 5. Acknowledgements*

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# THE IMPORTANCE OF THE QUALITATIVE CHARACTERISTICS OF ACCOUNTING INFORMATION FOR DECISION MAKING . EMPIRICAL STUDY CONDUCTED IN THE HOSPITALITY INDUSTRY IN ROMANIA

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**Abstract**: *Hospitality industry is a sector of the national and world economy facing one of the most dynamic developments of the third millennium as if against the fact that it does not only face challenges of the economic crisis, but also the changes in the market, the perception and consumer behavior and of technological trends .*

*The contribution of accounting to the accomplishment of strategic objectives of the business managers in hospitality and tourism industry, is manifested in the form of ensuring the information necessary for monitoring, determining the degree of liability and the effect, at various jobs, which allows the detection of internal reserves, of uneconomic and unnecessary expenses and of losses.*

*Convinced of the vital importance of accounting information for all sectors of activity, and hence the hospitality and tourism industry, but also motivated by the unexplored potential in this sector we wanted to find "live" the perception of Romanian hospitality industry managers on the usefulness of accounting information, especially of that provided by management accounting, and how to exploit it in decision making process.*

*Therefore, we pondered it was time to get into the "natural environment" of managers in the hospitality industry and find "at home in the field", for we can say that work is a second home, which is the importance given to the accounting information, which management accounting practices apply to survive in a market that offers many opportunities, yet many challenges, too.*

*The entry into the natural environment was made by empirical research and is based on a survey conducted between November 2012 and January 2013, using a questionnaire as a tool consisting of 38 questions, administered online and on location to managers in the Bihor hospitality industry. The total population consisted of 146 entities in this sector, the sample being made up of 91 tourism entities, with a response rate of 62.33%, due to movements in the field.*

**Keywords:** *accounting information, qualitative characteristics, managers, hospitality industry*

**JEL classification: M 41**

**Introduction:** The beginning of the third millennium is dominated by the production and possession of a fundamental resource: INFORMATION (Horomnea 2008:148)

The economic and financial power of economic entities, regardless of the sector, lies in their ability to use and control any information to achieve the objectives. The world competition is currently ongoing in the realm of best use of knowledge, information and new communications technologies (Briciu et al, 2003:29).

*Information* can be defined, in the broadest sense, as "what is communicated" and "what is communicated" refers to people, objects, place, or time, or different relationships with the external environment.

According to the Dicţionarul explicativ al limbii române (Explanatory Dictionary of the Romanian Language, n.t.), information is communication, news, news that informs

someone of a situation; all information and documentary material; each of the new elements, in relation to prior knowledge contained in the meaning of a symbol or group of symbols (written text, spoken message) (DEX 1998, p 491)

According to Business Dictionary, information is relevant because of these qualities, these being the following: it has been checked and provided on time, it is specific to an end, it is presented in a context that gives meaning and relevance, it results in increased process of understanding and decreasing uncertainty. The value of information lies exclusively in its ability to affect a behavior, a decision or a result.

In the literature the research summarizes the information as such: information as a material object; information as a mental object; information as an abstract entity (is neither material nor mental, it is simply there) (Vreeken, A., 2002).

The information has made and still is the subject of several investigations and the perception varies according to the authors: it is the result of thought, (Belkin 1978), character data or significant data (Mingers in 2003), information is knowledge, communication (Callaos and Callaos 2011, Floridi 2012).

Our opinion is that the information is once processed and interpreted with great "art" by a certified person, a message that produces an elucidation in a problem with a certain degree of uncertainty. We believe that information is ultimately the result of human labor, the result of teamwork of specialists in various fields, therefore it must be a mental object.

The term information is used in many areas, but as far as we are concerned, we will focus on accounting information and the impact that it produces on managerial decisions in the hospitality industry.

Eager to find out the answer to some questions in relation to managers' perception about the importance of the information provided by accounting , we have started an exploratory empirical research which presents and analyzes the human behavior on this issue and is based on a questionnaire applied to managers in the hospitality industry. For this step, out of the 230 establishments of tourist entities with functions of accomodation facilities, authorized to operate according to the regulations published on the ministry's website   http://www.mdrt.ro/ro/turism/unitati-clasificate, there were selected 146 economic entities which were legally constituted as stock companies and limited liability companies. We have removed from our research a number of 84 economic entities which were created as individual enterprise, individuals, family business.

As I stated, the working instrument used was a questionnaire containing 38 questions closed and semi-closed divided into four parts as follows: Part I and Part IV contains questions covering general questions regarding the economic entity and the personal profile of managers, Part II aspects of the importance of accounting information and Part III aspects of the organization of managerial accounting and of the cost management with questions regarding the perception of managers in this sector regarding the usefulness of accounting information, the qualitative characteristics of accounting information, the existence and organization of management accounting information system, perception of performance in this sector in the view of managers, capitalizing such information for decision making and good management of available capacities.

**Descriptive analysis of responses**
The general questions of the questionnaire focused, on the one hand, on the aspects that shape the identity of respondents, and on the other hand, on the characteristics of the surveyed entities.
We begin by describing the sampled companies.
The general aspects highlighted by the questions from Part I of the questionnaire concerned the distribution of the entities included in the sample regarding the classification

and category in which they were allowed to operate, the turnover, the value of total assets, the number of the employees.

Of those who were open to our study, a number of 35 managers were from rural and urban touristic guesthouses and 56 managers from the economic entities with functions of authorized accommodation as hotel complexes, hotels, hostels, minihotel, mansions, tourist cottages. With respect to entities in the sample class situation is as follows: the percentage of 4-star accommodation in total is 13.18%. Of these, half are hotels and one third are hotel complexes. Most pensions are classified as having 3 stars (51.4%), 4 entities with 2 daisies, 5 with 2 or 3 stars, but there are one among them with 4 stars.

Regarding the size of turnover, 54.9% of the entities have a turnover between 35,000 and 7.3 million Euro, 37.4% have a turnover less than 35,000 Euro and 5.5% of the entities have a turnover bigger than 7,300,000 Euro. A percentage of 2.2% of the managers surveyed considered that the answers to these questions are confidential, so they did not answer.

Note that in accordance with the current regulations the classification of the entities by criteria of size have other thresholds limit: micro-entities total active 350,000 EUR, 700,000 EUR turnover, number of employees 10; small entities are those that do not fall into the category of micro-entities and at the date of closing of the fiscal year do not exceed 2 of the 3 size criteria; medium and large entities are those which at the date of closing of the fiscal year exceed the limit of at least two of the three size criteria: assets worth 4,000,000 Euro, net turnover of 8,000,000 Euro, average number of employees 50; total assets

Regarding the number of employees 41 entities had less than 10 employees, 30 between 10 and 49 employees, eight had between 50 and 99 employees, 10 entities said they have a number of employees between 100 and 249, and two economic entities claimed over 250 employees.

**The accounting information – a source of information for the managerial process in hospitality industry**

A unique character of the information circulating in an economic entity is held by economic information which are the main sources used in the management process, allowing the critical examination of the way in which material, human and natural resources are used in order to make the decisions required [Pop A., 2002, p 13].

Any information appears and is used in the economic entities in the management or operational activities and its movement is two-way, between these two levels. Thus, the suppliers and the consumers of information in an entity can be positioned at the level of decision or at the level of information.

At the macroeconomic level, more economic information means more economic power and at the microeconomic level, of an entity, more information can be translated into:

•knowing the directions of technology development, but also new techniques that can be applied immediately,

• signaling of new market segments or the identification of the best segments for investment,

• knowledge of the evolution of employment in general and, particularly, its personnel needs,

• lower production costs and lower distribution etc. (Bătrâncea et al, 2010, p 43).

Despite the fact that it is vital for the management of the business, the accounting can not substitute the management team, but provide it with essential information in decision-making process, so that the accounting information is not only "raw material" ,

indispensable in management , but also constitutes the "thread link "between the two processes (Briciu 2006, p 12).

From the perspective of users what information is useful? or How we appreciate the quality of accounting information? The usefulness of information is intended to increase the knowledge of the user, to reduce in this way its uncertainties and help in decision making.

The Romanian legislation by Order 3055/2009 specify the quality characteristics or the attributes that determine the usefulness of the information provided by the financial statements, attributes that we believe that can be extrapolated to all economic information. The four principal qualitative characteristics are intelligibility, relevance, reliability and comparability.

*Intelligibility.* This qualitative characteristic means feature in understanding the information presented. The users receive information for decision making process, and their expectation is that this information to reduce their uncertainty. But are there "convergence" between the content of information transmitted and the way of its interpretation by the recipient (user)? It is not insignificant the presentation of information, because sometimes the quality of accounting information is influenced by the manufacturer. It is he who decodes the reality and it recreates through the accounting language. (Minu 2002, p.138)

*Relevance.* To be useful, the information must be relevant for decision making by users. The relevance of the information will be appreciated on its ability to allow users to evaluate the events in the past, present, and future by facilitating their process of making decision and their work is influenced by its nature and the significance threshold (Danescu 2007, p 53).

*Credibility (reliability).* To be useful, the information must be credible. The information is reliable when it does not contain significant errors, it is not biased, and users can have confidence that it is correct what they have proposed to represent or what they expect, in reasonably way to represent.

*Comparability* requires that financial information to be comparable across time and space to identify trends in the financial position and performance of the economic entity. So, the comparability appeal to consistency in presentation of the events, of the accounting policies used within an economic entity and over time for that entity and in a consistent way for different entities.

Currently through OMPF 1802/2014 the fundamental qualitative characteristics are the relevance and the exact representation, but the utility of the financial information is enhanced if you apply the additional four qualitative characteristics namely comparability, verifiability, expediency and intelligibility. For a representation to be accurate, a description must be complete, neutral and without errors.

A description is complete if it includes all the information necessary for the user to understand the phenomenon described, including the necessary explanations. A neutral description is the one that does not support influences in the selection and the presentation of the financial information. The neutral information does not means information without purpose or no influence on their comportment. The relevant financial information is, by definition, those who have the ability to generate a difference in the decisions made by users.

The representation without error means that there are no errors or omissions in the description of events, and the process used to generate the reported information has been selected and applied without error.

As we have already said not all the economic information supplied and circulating in an entity is useful in the operational or decision-making process. The management team is forced, in many cases, to refine the information to make it useful. Not infrequently, at the decision making process level, there is too much data and too little information. The question is to identify those characteristics that make information useful. It should be

*consistent*, that is sufficiently comprehensive to provide as much knowledge as possible necessary in the management activity; *relevant*, that is to provide the knowledge missing in the decision making process; *accurate*, that is its contents reflect the real situation of the economic phenomenon or process, a feature also called informational accuracy; *complete and sufficient*, that is it should come from a source close to the entity or to the phenomenon and possibly to cover the desired area of the decision maker; *appropriate and accessible*, that is to come at the right time for the decision making process, and to be used when needed, in a most efficient way (the presentation of information is of particular importance); *concise*, that is to have the level of aggregation necessary in the decision-making process.

Therefore, in decision making process a particular attention should be given to the qualitative aspects and, equally, to the quantitative aspects aiming at "measuring" information.

**Testing of the research hypothesis**

To cope with the competitive environment and with the changes in hospitality industry, it is important for managers to implement an information system at the level of entity, a system that would relieve and facilitate the process of making decisions. The importance granted to financial and accounting information is reflected also by the frequency that managers are turning to such information.

**Figure 1**. The frequency with which the managers use the accounting information at the level of sample
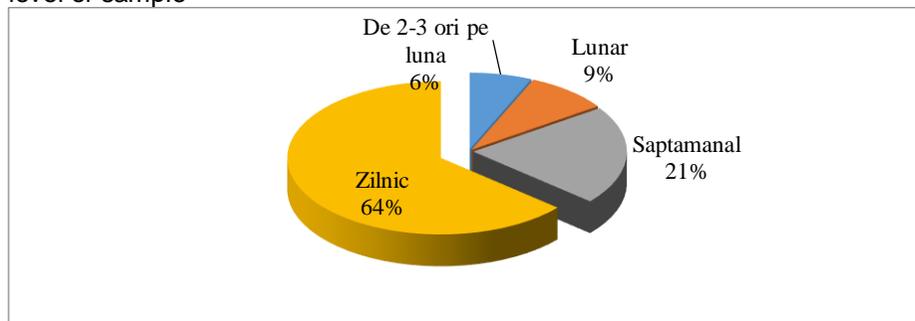


Source: own elaboration based on the responses from questionnaires

So 64% of the managers from our sample are stating that they use daily the accounting information, 21% use this information weekly, yet there is a large percentage that appeals to this information only monthly.

To view the extent to which managers in the hospitality industry give importance to the qualitative characteristics of the information provided by accounting, especially for the managerial accounting , in the questionnaire it was introduced a question to make reference to these aspects (*How do you evaluate the importance of the following quality characteristics of the information provided by the managerial accounting?)* and also we wanted the identification and the evaluation of the connection that exists between the importance given to these characteristics and the frequency with which a cost calculation is made.

Thus it was formulated the following hypothesis:

**Hypothesis H1: Among the qualitative characteristics of information provided by management accounting and the cost calculation frequency a link can be identified.**

*The questions on which we test the validity of this research hypothesis are II.3. and III.5. These are:*

*II. 3. How do you assess the importance of the following qualitative characteristics of information provided by management accounting?*

- *Intelligibility*            *- Relevance*
- *Credibility*              *- Opportunity*

*III.5. What is the cost calculation frequency?*

- *Monthly*         *Twice a month*
- *Quarterly*       *Every semester*
- *The introduction of a new product in the offer*
- *The introduction of a travel package*
- *When there is a specific problem*

For the beginning, we will analyze the distribution of responses of the managers in the sample, for each of the two questions.

**Figure 2.** Opinion of managers about the importance of qualitative characteristics of information provided by management accounting
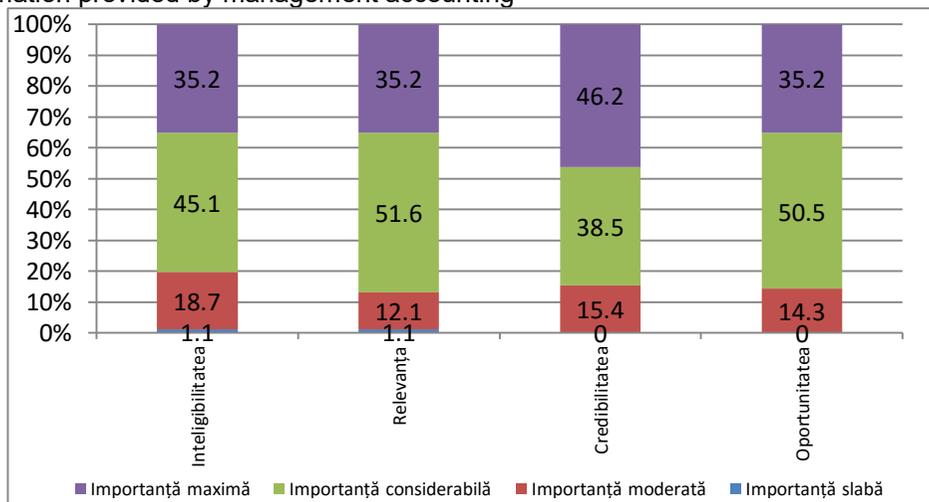


Source: authors' processing based on the responses to the questionnaires

Regarding the importance of the qualitative characteristics of information provided by management accounting, the most appreciated is credibility, 46.2% of the managers believe that it is of utmost importance. The less appreciated is intelligibility – a percentage of 18.7% of the managers believing that this feature is of moderate importance.

The opinion of managers about the importance of qualitative characteristics of information provided by management accounting category was considered separately, on categories. To use this information, we gave scores of importance to each answer in part, associating 1 point to managers who consider the characteristics of low importance up to 5 points to those who consider the characteristics of the utmost importance. We then determined the average scores for each manager individually and we distributed these scores by frequency of performing cost calculation.

As regarding the latter, given the objective of our research, we decided to grant some scores of importance as following:

- 3 points for those managers who use cost calculation often enough and when appropriate – therefore for those who have chosen at least one response option to

the introduction of a new product in the offer, or a package holiday, or when there a specific problem
- 1 point for those managers who use monthly cost calculation
- 0 points for those who chose the quarterly or every semester response options

The same perspective of the frequency measurement of costs is found in the literature, this issue being addressed by several authors (Hilton, 1979; Chenhall and Morris 1986; Simons, 1987). They found that the more frequent measurement and reporting of costs gives managers feedback on recent events, problem solving, and opportunities to improve aspects that should be considered for future actions grounding. Also, it should not be neglected one of the qualitative characteristics of information provided by management accounting, namely the opportunity. In our view, the high frequency of cost calculation, especially "when there is a specific problem" gives the managers confidence that they can respond promptly to problems that arise.

Table of the distribution between the scores to the two questions is presented below:

**Table 1.** Distribution of average scores on the managers' opinion on the importance of qualitative characteristics of information provided by management accounting in relation to the cost calculation frequency

| | | Cost calculation frequency | | | Total |
|---|---|---|---|---|---|
| | | **0** | **1** | **3** | |
| *Distribution of average scores on the managers' opinion on the importance some qualitative characteristics of information provided by management accounting* | **3** | 0 | 2 | 4 | 6 |
| | **3.5** | 0 | 1 | 3 | 4 |
| | **3.75** | 2 | 1 | 12 | 15 |
| | **4** | 0 | 5 | 16 | 21 |
| | **4.25** | 0 | 1 | 8 | 9 |
| | **4.5** | 2 | 2 | 7 | 11 |
| | **4.75** | 1 | 0 | 4 | 5 |
| | **5** | 2 | 0 | 18 | 20 |
| Total | | 7 | 12 | 72 | 91 |

Source: authors' processing based on the responses to the questionnaires

The validation of the hypothesis will be carried out with Pearson's correlation coefficient. Its value is generally between -1 and 1, its sign indicating the meaning of the link, and the distance from 0, the intensity thereof. In our case, we determined the value of this coefficient using SPSS v. 20, being 0.059. As shown in Table 4.38., for a significance level of 5%, the value is not significantly different from 0, which denies the existence of any link between the two variables at both the sample and the total population level.

**Table 2.** Pearson's correlation coefficient between the distribution of average scores on managers' opinion on the importance of qualitative characteristics of information provided by management accounting and cost calculation frequency

| | | *Distribution of average scores on managers' opinion on the importance of qualitative characteristics of information provided by management accounting and cost calculation frequency* | *Cost calculation frequency* |
|---|---|---|---|
| ***Distribution of average scores on managers' opinion on the importance of qualitative characteristics of information provided by management accounting and cost calculation frequency*** | Pearson Correlation | 1.000 | 0.059 |
| | Sig. (2-tailed) | - | 0.581 |
| | N | 91 | 91 |
| ***Frecvenţa calculaţiei costurilor*** | Pearson Correlation | 0.059 | 1.000 |
| | Sig. (2-tailed) | 0.581 | - |
| | N | 91 | 91 |

Source: authors' processing based on the responses to the questionnaires

**Conclusion:**

*The research hypothesis H1: Between the qualitative characteristics of information provided by management accounting and the cost calculation frequency there can be identified a link - not validated, either at the sample level or at the total population sample .*

If the surveyed managers considered of the utmost and considerable importance all four qualitative characteristics of the accounting information (Intelligibility 80.3%, Relevance 86.8%, Credibility 84.7%, Opportunity 85.7%), we wanted to find out, from the perspective of managers, which are the factors that may affect the quality of the accounting information. So, we considered appropiate to introduce in the questionnaire the following question: What are, in your opinion, the factors that may affect the quality of the accounting information provided by the management accounting? The managers could choose one or more of the following factors: the dynamic of the accounting regulations, the opinions in applying the principles of accounting, the lack of a system of cost calculation and the subjectivity of the accountants.

The managers of the most entities in our sample (46.2%) consider that the most important factor that can affect the quality of the accounting information provided by the management accounting is the lack of a cost calculation system, in the second place with a percentage of 41.8% are the errors in the application of the accounting principles and the least count the dynamics of the accounting regulations by 4.4%.

*The results*

☐ 62.63% of the surveyed managers believe that the information provided by the financial accounting are very useful in the process of making decision, and regarding the managerial accounting, the percentage of those who said that this provides useful information to substantiate the decision-making process was 65.93% ;

64% of the managers say that they use accounting information daily, 21% are using this information weekly, the opposite is a percentage of 6% of managers which are using the accounting information monthly only.

 Between the qualitative characteristics of the information provided by the management accounting and the frequency with which a cost calculation is made, a connection cannot be identified, neither at the sample level, nor in the total population

We believe that this research adds value to domestic investigations on accounting issues in the hospitality industry, although we are aware that has its limitations (the questionnaire used only in one county, using a questionnaire with a large number of questions) . We will continue our efforts to investigate other aspects and features regarding on how to exploit accounting information in the hospitality industry, our intention being to extend the research to the entities listed in this economic sector.

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